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AGS Geriatrics Healthcare Professionals
Leading Change. Improving Care for Older Adults.

About the American Geriatrics Society

WHO WE ARE

Founded in 1942, the American Geriatrics Society (AGS) is a nationwide, not-for-profit society of geriatrics healthcare professionals dedicated to improving the health, independence, and quality of life of older people. Our members include thousands of geriatricians, advanced practice nurses, social workers, family practitioners, physician assistants, pharmacists, and internists who are pioneers in advanced-illness care for older individuals, with a focus on championing interprofessional teams, eliciting personal care goals, and treating older people as whole persons.

The Society provides leadership to healthcare professionals, policymakers, and the public by implementing and advocating for programs in clinical care, research, professional and public education, and public policy that can support us all as we age.

OUR MISSION

To improve the health, independence, and quality of life of all older people.

OUR VISION FOR THE FUTURE

We are all able to contribute to our communities and maintain our health, safety, and independence as we age.

We all have access to high-quality, person-centered care informed by geriatrics principles and free of ageism.

We all are supported by and able to contribute to communities where ageism, ableism, classism, homophobia, racism, sexism, xenophobia, and other forms of bias and discrimination no longer impact healthcare access, quality, and outcomes for older adults and their caregivers.

STRATEGIES FOR ACHIEVING OUR VISION

1. Expanding the geriatrics knowledge base by disseminating basic, clinical, and health services research focused on the health of all older people.
2. Increasing the number of healthcare professionals employing geriatrics principles when caring for diverse older persons by supporting the integration of geriatrics concepts into health professional education.
3. Recruiting diverse healthcare professional trainees into geriatrics by focusing on the rewards and potential of a career caring for older people.
4. Advocating for public policy that promotes the health and independence of diverse older Americans, with the goal of improving health, quality of life, and healthcare systems serving us all as we age.
5. Creating awareness about the ways geriatrics can support diverse older people remaining active, independent, and engaged in our communities.
6. Working across our other strategic priorities in health care to identify and eliminate ageism, ableism, classism, homophobia, racism, sexism, xenophobia, and other forms of social and structural bias/discrimination given their impact on health, safety, and independence as we age.

LEARN MORE

Visit *www.americangeriatrics.org* to learn more about the Society and its programs.

AMERICAN GERIATRICS SOCIETY OFFICERS AND STAFF LEAD

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Dear Annual Meeting Attendee:

The American Geriatrics Society Annual Scientific Meeting is the premier educational event in geriatrics, providing the latest information on clinical geriatrics, research on aging, and innovative models of care delivery. The 2023 Annual Meeting will address the professional and educational needs of geriatrics professionals from all disciplines through state-of-the-art educational sessions and research presentations.

This supplement of the *Journal of the American Geriatrics Society* is devoted to abstracts of the scientific presentations that are scheduled for the 2023 AGS Annual Scientific Meeting. We are hopeful that this supplement will be helpful to those of you who are planning to attend the meeting so as to maximize your attendance at educational, research, and clinical presentations of interest to you.

We are also pleased to provide these abstracts to subscribers of the Journal. We believe that they are an important way of keeping JAGS readers up-to-date on the latest advances in the field.

Sincerely,

Aanand D. Naik, MD
Program Chair

G. Michael Harper, MD, AGSF
President

AMERICAN GERIATRICS SOCIETY 2023 ANNUAL SCIENTIFIC MEETING

May 3 - 6, 2023

LONG BEACH CONVENTION & ENTERTAINMENT CENTER
LONG BEACH, CA

RESEARCH PRESENTATIONS SCHEDULE AT A GLANCE

THURSDAY, MAY 4, 2023

9:30 AM – 10:15 AM
PLENARY PAPER SESSION

When Should Electronic Medical Records Stop Reminders for Cancer Screening in Older Adults? – A National Physician Survey
Nancy L. Schoenborn, MD, MHS

Personalized Life Expectancy Years Spent in Dementia Progression Stages Vs Normal Cognition
Lillian Min, MD, MSHS

An Outcome Comparison Between Geriatric and Non-Geriatric Emergency Departments
Cameron Gettel, MD, MHS

11:30 AM – 12:30 PM
GERIATRIC EDUCATION PAPER SESSION

Impact of Workforce Interprofessional Education and Telehealth Training on Care Plans and Financial Outcomes of Nevada Frail Older Adults
Ji W. Yoo, MD& Peter Reed, PhD, MPH

Quality Improvement Curriculum for Geriatric and Palliative Care Fellows: A Triple Win for Patients, Learners, and Institution
Rebecca Masutani, MD & Christine Chang, MD, AGSF

Outcomes of a Geriatric Mini-Fellowship: An Age-Friendly 4M Curriculum Addresses the Quadruple Aim
Colleen M. Casey, PhD, ANP-BC, CNS

"Living with Dementia": Comprehensive Dementia Education and Training for Care-Partners to Improve Skills and Preparedness
Rollin M. Wright, MD, MS, MPH

12:30 PM – 1:30 PM
POSTER SESSION A

1:30 PM – 2:30 PM
UNDERSTANDING FRAILTY AND ITS IMPACT ON OLDER ADULTS PAPER SESSION

Human Interleukin-6 Drives Complement System Expression in The Brain of a Mouse Model of Frailty
Alessandra Merino Gomez, BS

Effect of Frailty Status on Clinical Outcomes in Participants with Congestive Heart Failure and Coronary Artery Disease Treated with Medical Therapy Plus Surgical Intervention vs Medical Therapy Alone: A Post Hoc Analysis of the STICH Trial
Lajjaben J. Patel, MBBS

Development of a Crosswalk between Claims-Based Frailty Index and Commonly Used Clinical Frailty Measures
Stephanie M. Sison, MD

Change in Frailty Among Older COVID-19 Survivors
Benjamin Seligman, MD, PhD

2:45 PM – 3:45 PM
ADDRESSING HEALTH DISPARITIES FOR OLDER ADULTS: A FOCUS ON DIVERSITY, EQUITY AND INCLUSION PAPER SESSION

Implementing a Hospital Policy Requiring Palliative Care Consult Before PEG Placement Reduced PEG Insertion Among Racially/Ethnically Diverse Patient Groups
Cynthia X. Pan, MD, AGSF, FACP

Recognizing Barriers to Care through a Social Determinants of Health Curriculum
Elizabeth Degnall, MD

COVID-19 Booster Vaccination by Race, Ethnicity, and Frailty Among 11.3 Million Older Adults
Kaley N. Hayes, PharmD, PhD

Frailty Among Sexual and Gender Minority Older Adults: The All of Us Database
Chelsea N. Wong, MD

5:00 PM – 6:00 PM
PRESIDENTIAL POSTER SESSION B

FRIDAY, MAY 5, 2023

10:30 AM – 11:30 AM
HEALTH SERVICES AND POLICY RESEARCH PAPER SESSION

Treatment of COVID-19 in Nursing Home Residents with Monocloncal Antibodies
Brian E. McGarry, PT, PhD

Effectiveness of a Community-Based Version of the Collaborative Dementia Care Model Delivered by Area Agencies on Aging
Steven R. Counsell, MD

Readmissions and Mortality by Race and Ethnicity Among Medicare Beneficiaries with Multimorbidity
Melissa Y. Wei, MD, MPH, MS

Differences in Nursing Home Staff COVID-19 Testing Rates and Odds of Vaccination Across Work Shifts
Elizabeth M. White, APRN, PhD

12:30 PM – 1:30 PM
POSTER SESSION C

1:30 PM – 2:30 PM
DEMENTIA MATTERS: INNOVATIONS IN RESEARCH AND CLINICAL PRACTICE PAPER SESSION

Detecting Dementia in Electronic Health Records Systems for Pragmatic Trials: A Structured Approach
Michelle L. Bobo, MS

Comparing Cognitive Classifications based on Digital Clock and Recall (DCR) and the Mini Mental Status Examination (MMSE)
Ali Jannati, MD, PhD

What Medicare Advantage Plans Older Adults Living with Dementia Were Enrolled in?
Lianlian Lei, PhD

The Impact of Federal Policies on Hospice Use for People with Dementia
Lauren J. Hunt, PhD, RN, FNP-BC

2:45 PM – 3:45 PM
CLINICIAN-SCIENTISTS TRANSDISCIPLINARY AGING RESEARCH (CLIN-STAR) PAPER SESSION

Functional Trajectories Over the 6 Months After a COVID Hospitalization Among Older Adults
Lauren E. Ferrante, MD, MHS

Association of an Emergency Department Care Transition Program with Healthcare Outcomes Among Older Veterans
Colleen M. McQuown, MD

Reducing Behavioral and Psychological Symptoms of Dementia for Acutely-Ill Persons with Dementia via Patient Engagement Specialists
Liron Sinvani, MD

Pharmacist-Led De-Prescribing Pilot for Frail Older Adults with Intensively Controlled Type 2 Diabetes
Kathryn E. Callahan, MD, MS

2:45 PM – 3:45 PM
POSTER SESSION D (Students & Residents)

SATURDAY, MAY 6, 2023
7:30 AM – 8:30 AM

IMPROVING CARE FOR OLDER ADULTS: OPPORTUNITIES FOR TRANSLATION PAPER SESSION

An Innovative Clinical Pathway to Improve Fall-Related Primary Care after an Emergency Room Visit for A Fall
Colleen M. Casey, PhD, ANP-BC, CNS

A Sweet Spot for Intervention: Deintensifying Diabetes Medication in Hospitalized Older Adults
Rebecca M. Lazarus, MD; Megan E. Rau, MD, MPH; Yael R. Zweig, NP

A Multicenter Randomized Trial of a Group-Based Yoga Program for Ambulatory Older Women with Urinary Incontinence
Alison J. Huang, MD, MAS

Accelerated Biological Age Is Associated with Increased Delirium Prevalence and Plasma Neurofilament Light in Acute Geriatric Hip Fracture Pilot
Sara C. LaHue, MD

10:30 AM – 11:30 AM
EPIDEMIOLOGY PAPER SESSION

Unnecessary and Harmful Medication Use in Community Dwelling Persons with Dementia
W. James Deardorff, MD

Development and Validation of an Intracranial Hemorrhage Risk Score in Older Adults with Atrial Fibrillation Treated with Oral Anticoagulant
Lily G. Bessette, MS

Cognitive Impairment and Trajectories in Chronic Kidney Disease: The REGARDS Study
Katharine L. Cheung, MD, PhD

Claims-based Frailty Index (CFI) as a Measure of Dementia Severity in Medicare Beneficiaries with Alzheimer's Disease and Related Dementia (ADRD)
Chan Mi Park, MD, MPH

11:45 AM – 12:45 PM
IMPROVING AMBULATORY CARE FOR OLDER ADULTS PAPER SESSION

Action Plans Increase Advance Care Planning Documentation and Engagement among English and Spanish-Speaking Older Adults
Clarissa M. Ferguson, MPH

Montefiore-Einstein Center for the Aging Brain (CAB): The Impact of an Electronic Medical Record Template for Comprehensive Geriatric Assessment on Primary Care Provider Management of Geriatric Syndromes
Rachel B.R. Chalmer, MD

Implementing an Automated Gait Speed Measure in a Geriatric Clinic and the Impact on Clinic Workflow
Thomas M. Johnson, MD

A Tailored Outreach Program to Engage Patients and Physicians in Deprescribing Chronic Benzodiazepines in Primary Care
Sul Gi Chae, PharmD, BCPP

Paper Session
PLENARY

Thursday, May 4
9:30 am – 10:15 am

P1

When should electronic medical records stop reminders for cancer screening in older adults? – A national physician survey

N. Schoenborn, C. Pollack, C. Boyd. *Johns Hopkins University, Baltimore, MD.*

Background: Many older adults are screened for breast and colorectal cancers beyond guideline recommended age or life expectancy thresholds. Electronic medical record (EMR) reminders are commonly used to prompt cancer screening. Behavioral economics theory suggests that changing the default settings for these reminders can be an effective strategy to reduce over-screening. We aimed to examine physician perspectives about thresholds for stopping cancer screening EMR reminders.

Methods: In a national mailed survey of 1200 primary care physicians (PCP) and 600 gynecologists randomly selected from the AMA Masterfile, we asked physicians to choose whether EMR reminders for cancer screening should stop based on a list of criteria that included age, life expectancy, specific serious illnesses, and functional limitations. One could choose multiple responses. PCPs were randomized to breast or colorectal cancer screening questions.

Results: Excluding 394 undeliverable surveys, 761/1406 (54.1%) responded; 592 provided outpatient care to older adults and were eligible. 50.4% were men, 67.4% were white. Responses are shown in Table. When asked about age thresholds, only 52.4% endorsed age 75 for stopping EMR reminders, 42.0% chose a threshold between 75-85, 5.6% would not stop reminders even at age 85. Regarding life expectancy thresholds, only 32.0% endorsed stopping EMR reminders when life expectancy is <10 years, 53.1% chose a threshold between 5-9 years, 14.9% would not stop reminders even when life expectancy is <5 years.

Conclusions: We found surprisingly high reluctance to stop EMR cancer screening reminders, even in light of older age, limited life expectancy, serious illnesses and functional limitations. This may reflect reluctance to stop cancer screening or reluctance to stop EMR reminders so physicians can have more control over the decision. Physicians may be unlikely to support interventions that reduce over-screening by suppressing EMR cancer screening reminders.

Criteria for stopping EMR reminders for cancer screening	% of physicians choosing each criterion (n=592)
Age	323 (54.6%)
Life expectancy	425 (71.8%)
Functional limitations (e.g. difficulty in self care)	181 (30.6%)
Dementia	370 (62.5%)
Advanced cancer	462 (78.0%)
Advanced congestive heart failure	409 (69.1%)
Oxygen-dependent lung disease	300 (50.7%)
End-stage renal disease	320 (54.1%)

P2

Personalized life expectancy years spent in dementia progression stages vs normal cognition

L. Min,[1,2] J. Kang,[1] C. Cigolle.[1,2] *1. University of Michigan Michigan Medicine, Ann Arbor, MI; 2. VA Ann Arbor Healthcare System, Ann Arbor, MI.*

Background: Life expectancy predictions can assist older adults and their caregivers with decision-making and future-planning, especially when older adults have dementia. Knowledge about total life years and dependent life years can inform decisions about adequacy of informal care and timing and affordability of formal care. However, cognitive status, function, and mobility are not included in standard life expectancy tables. Our goal was to tailor life expectancy prediction to include relevant features of function and cognitive status to a population-based sample.

Methods: We used data from waves 2014-18 of the Health and Retirement Study, a nationally-representative longitudinal health survey. The sample included adults ≥70 years (n=8,636). Variables included age, self-reported function and mobility, cognitive status (performance-based measure), and mortality. We compared dementia and normal cognition subgroups, using weighted multinomial logistic regression to generate multistate life tables by Markov process, stratified by age, gender, baseline function and mobility, and cognition.

Results: The Table shows an excerpt of our findings (adults at age 70, 78, and 86) from modeling the transition probabilities between 4 states: (A) independent, (B) mobility impaired only, (C) ADL (Activity of Daily Living) impaired, and (D) death. Differences in independent and mobility and ADL impaired years were substantially different when comparing dementia versus normal cognition; e.g., for a 70-year old who is independent now, 5.2 years of independence would be expected for someone with dementia vs 14.7 years for someone with normal cognition.

Conclusion: Dementia and function are critical factors in life-expectancy predictions that are not available in life tables such as Social Security. Future population research (e.g., targeting of home- and community-based services and supports) may be enhanced by these more precise estimates in older adults with dementia.

		Life Expectancy in Each State							
		Normal cognition				Dementia*			
Age	Initial Function	Indep Years	Mobility Disabled Years	ADL Disabled Years	Total Years	Indep Years	Mobility Disabled Years	ADL Disabled Years	Total Years
70	Independent	14.7	3.0	1.9	19.6	5.2	1.0	2.6	8.7
	Mobility disabled	9.2	5.1	1.8	16.1	2.2	2.5	2.8	7.5
	ADL disabled	7.0	2.4	4.6	14.0	0.6	0.4	2.7	3.8
78	Independent	10.0	2.5	1.7	14.2	3.8	0.9	2.5	7.2
	Mobility disabled	4.8	4.7	1.9	11.4	1.1	2.6	2.6	6.3
	ADL disabled	2.7	1.5	4.6	8.7	0.3	0.2	3.3	3.8
86	Independent	6.9	2.0	1.4	10.3	3.0	0.9	1.9	5.8
	Mobility disabled	2.5	4.2	1.8	8.4	0.6	2.7	1.9	5.1
	ADL disabled	1.0	0.8	4.0	5.9	0.1	0.1	3.6	3.9

P3

An outcome comparison between geriatric and non-geriatric emergency departments

C. Gettel,[1] U. Hwang,[1] A. Janke,[2] C. Rothenberg,[1] D. Tomasino,[1] A. Venkatesh.[1] *1. Emergency Medicine, Yale University School of Medicine, New Haven, CT; 2. Institute for Healthcare Policy & Innovation, University of Michigan, Ann Arbor, MI.*

Background: Certification by the Geriatric Emergency Department Accreditation (GEDA) Program is a way for EDs to be recognized for their commitment to delivering emergency care to older adults. To date little is known about whether EDs participating in geriatric efforts differ in characteristics or common emergency care metrics. Understanding these differences would allow for identification of modifiable sources of practice variation.

Methods: We conducted an observational study of ED visits included in the Clinical Emergency Data Registry (CEDR), a national emergency medicine registry with 2021 calendar year data. After linking to the GEDA Program's list, 38 ED sites were identified as accredited geriatric EDs (GEDs). These were matched on 6 variables in a 4:1 fashion to like non-GEDs within the CEDR. Visits were grouped by age into three categories for older adults: aged 65–74, 75–84, and >85. Comparing GEDs to non-GEDs across age categories, our primary outcome of interest was ED visit-level diagnosis rates (X/1000) for four geriatric syndrome conditions of interest: fall, urinary tract infection (UTI), dementia, and delirium / altered mental status. We also assessed ED site-level utilization metrics of ED length of stay, 72-hour revisit rates, and discharge rates.

Results: There were a total of 6,444,110 ED visits during the 2021 calendar year across 190 included EDs. Across all age categories, older adults at GEDs had higher diagnosis rates for three of the four geriatric syndrome conditions of interest (UTI, dementia, delirium / altered mental status) in comparison to older adults visiting non-GEDs. ED length of stay was lower in GEDs, and 72-hour revisit rates were similar between groups across all age categories.

Discharge rates were largely similar between GEDs and non-GEDs, aside from the oldest population, which exhibited greater discharge rates at non-GEDs.

Conclusions: After matching GED to non-GED sites on key variables, older adult patients seen at GEDs had higher rates of diagnosis for UTI, dementia, delirium / altered mental status in comparison to non-GEDs. This work provides foundational data outlining practice variation by GED status.

Paper Session
GERIATRIC EDUCATION

Thursday, May 4
11:30 am – 12:30 pm

P4

Impact of workforce interprofessional education and telehealth training on care plans and financial outcomes of Nevada frail older adults

R. Sabangan,[2] I. Chaudhry,[3] J. Shen,[4] J. Park,[9] M. Chong,[3] S. Oh,[7] S. Kang,[6] M. Kang,[8] M. Tabrizi,[5] J. Yoo.[1] *1. Kirk Kerkorian School of Medicine, University of Nevada Las Vegas, Las Vegas, NV; 2. College of Sciences, University of Nevada Las Vegas, Las Vegas, NV; 3. VA Southern Nevada Healthcare System, Las Vegas, NV; 4. School of Public Health-Healthcare Administration and Policy, University of Nevada Las Vegas, Las Vegas, NV; 5. School of Dental Medicine, University of Nevada Las Vegas, Las Vegas, NV; 6. Orthopedic Surgery, Catholic University of Korea School of Medicine, Seoul, Korea (the Republic of); 7. Occupational and Environmental Medicine, Yonsei University Wonju College of Medicine, Wonju, Korea (the Republic of); 8. Howard Hughes College of Engineering-Computer Science, University of Nevada Las Vegas, Las Vegas, NV; 9. West Carrier & Technical Academy, Las Vegas, NV.*

Background: In a provider shortage area, an Interprofessional Education and telehealth training curriculum (IEHTC) for geriatrics workforce was developed using the Age-Friendly Health System 4M framework. To analyze the impact of IEHTC on (1) measured health outcomes defined by the CMS defined quality measures - dementia caregiver education/referral and advance care plan, and (2) financial outcomes by estimating healthcare cost savings from reducing hospitalization.

Methods: Fifty community-dwelling adults aged 67 to 94 with mild to moderate dementia were selected in an urban safety-net primary care clinic. Propensity - demographics and level of physical impairment was matched. Main outcomes were (A) hospitalization-related healthcare cost estimates from the Nevada State Inpatient Dataset using the ICD-10 codes of principal diagnosis and hospital length of stay between January-December 2021. Twenty five patients were cared by primary care providers who received the IEHTC training; 25 patients were by those who did not have the IEHTC training; (2) CMS quality measures were compared between 2019 (baseline) and 2021.

Results: An average cost-saving of $22,135 per patient was observed among those treated by the healthcare providers who received the IPE/telehealth curriculum training than those treated by the providers without the training. CMS quality measures improved from 15.6% to 51.0% in dementia caregiver education/referral; 10.8% to 42.8% in discussed and documented advance care plans.

Conclusions: The 4M-based IEHTC training program has shown some potential in improving caregiver burdens and care plans for Nevada frail older adults by reducing the public healthcare cost.

P5

Quality Improvement Curriculum for Geriatric and Palliative Care Fellows: A Triple Win for Patients, Learners, and Institution

C. Chang,[1] A. Menon,[1] R. Masutani,[2] W. Hung,[3] S. Chow,[2] B. Shah,[3] H. Fernandez.[1] *1. Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai, New York, NY; 2. Geriatric Medicine, Icahn School of Medicine at Mount Sinai, New York, NY; 3. Mount Sinai Health System, New York, NY.*

Background: Accreditation Council for Graduate Medical Education (ACGME) mandates that programs teach quality improvement (QI) concepts and skills, and requires their participation in interprofessional QI initiatives that address disparities, as well as geriatric-palliative QI milestones and competencies. Programs struggle to meet mandate due to lack of time, faculty with QI expertise and departmental investment.

Methods: A 9-month project-based QI curriculum employed a flipped classroom model using four online Institute for Healthcare Improvement modules to teach QI concepts and four 1-2 hour protected class time in small and large group sessions to reinforce application of QI concepts. QI roadmap with resources, accountability contracts, presentation templates were created to guide project workflow. 1st year fellows worked with faculty and fellow QI coaches on departmental prioritized team-based QI projects, which were presented to the department at midterm and end-of-year. Dissemination of QI project efforts to regional and national academic meetings were encouraged. Program evaluation consisted of a prospective pre-post survey that included demographics and 8-item questionnaire on comfort with QI concepts, 3 cases from the QI Knowledge Application Tool (QIKAT), and a 2-question open ended course evaluation. Qualitative QI project outcomes and dissemination were measured.

Results: 85 geriatric and palliative medicine fellows worked on 20 QI initiatives from 2019-2022. 87.1% fellows completed both PRE and POST survey. Post curriculum, 1st year fellows (n=54) demonstrated improved comfort with utilizing all 5 QI concept/tools ($p<0.00002$) and improved QI knowledge ($p< 0.003$) (QIKAT PRE 19.7, POST 22.7; Paired t-test $p <0.003$). QI project AIMs and outcomes improved for all 20 teams leading to 75% (15) of QI teams submitting abstracts to national and regional presentations with with 80% (12) acceptance rate. Course evaluations based on end-of-year qualitative surveys were positive.

Conclusion: A project-based QI curriculum that engages fellows in prioritized departmental QI initiatives is an effective method for teaching QI skills to fellows and a WIN for patients, learners and institution.

P6

Outcomes of a Geriatric Mini-Fellowship: An Age-Friendly 4M curriculum addresses the quadruple aim

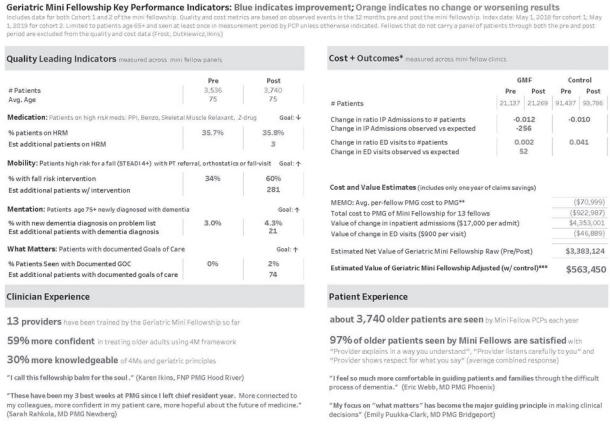
C. M. Casey, A. Fox, S. Leigh, J. Caulley, M. O. Hodges. *Senior Health Program, Providence Health & Services, Portland, OR.*

Background: Despite a growing number of older adults in the U.S., there is a lack of primary care providers (PCPs) who specialize in geriatrics. In response to this growing need, a large health care system created a 4-week geriatric 'mini-fellowship' (GMF) to increase the health system's capacity of their employed PCPs to better care for its older adults and be cost neutral. The GMF is structured using the Age-Friendly Health System 4M principles of care.

Methods: Data from the first two cohorts of learners were collected using a pre- and post-test design and organized according to quadruple aim metrics. Quality and cost metrics were based on observed events in the 12 months pre and post the GMF for the patients aged 65+ seen at least once in the measurement period by a GMF graduate.

Results: 13 PCPs from separate clinics participated in the first 2 years of the GMF starting in 2018. Results from ~3,600 patients cared for by graduates showed improvement in select metrics for the 4M domains of Mobility (34% to 60%), Mentation (3% to 4.3%), What Matters (0% to 2%), and Medication (34% discontinuation of high-risk medication) and a cost savings for the health care system of at least $560,000/year.

Conclusions: The GMF was successfully implemented in a large health care system by training PCPs using the 4M framework. Scores in most of the 4M domains of care were higher for GMF alumni when compared to untrained PCPs. Furthermore, the GMF provided net savings to the system. The GMF serves as an innovative workforce training model for diffusing geriatric best practices across primary care.



P7

"Living with Dementia": Comprehensive Dementia Education and Training for Care-Partners to Improve Skills and Preparedness

R. M. Wright,[2] J. M. Whitaker,[1] E. K. Husser.[1] *1. Ross and Carol Nese College of Nursing, The Pennsylvania State University, University Park, PA; 2. Division of Geriatric Medicine/Dept of Medicine, Penn State Health Milton S Hershey Medical Center, Hershey, PA.*

Families living with dementia receive little information from providers about how to 1) navigate daily challenges, 2) communicate effectively, 3) access care-partner resources, 4) conduct future planning, and 5) maximize quality of life. We measured the influence of a four-part interactive in-person community education series on attendees' use of new skills, sense of preparedness, and self-efficacy on these five dimensions of living with dementia.

Penn State's Ross and Carol Nese College of Nursing's Age-Friendly Care, PA (AFCPA) and the Tressa Nese and Helen Diskevich Center of Geriatric Nursing Excellence (CGNE), partnered with the Penn State Health Hershey Medical Center's Division of Geriatric Medicine to design, market, recruit, and implement the series in 3 central Pennsylvania communities (2 rural, 1 suburban). Evaluations were collected at the end of each session (*Understanding Dementia-Related Brain Changes, Understanding Behaviors as a Form of Communication, Resources for Dementia Caregivers, and Planning for the Future with Dementia)*. A concurrent optional Memory Café featured Opening Minds Through Art® (OMA), which enabled care-partners to bring their person with dementia (PWD) to the event. OMA trained faculty and staff facilitated the café, engaging nursing students and community volunteers. Outcomes were evaluated pre- and post-OMA activity.

Over 13 weeks, 308 people attended 12, 2-hour education sessions. All reported trying at least one new skill, the most prevalent of which were communication techniques (19%) and "not showing the agenda" (11%); 98% reported a high level of confidence detecting unmet needs; 89% reported a high level of confidence in ability to describe brain change; 97% reported recognizing retained abilities in their loved ones because of the program; and all attendees reported they would recommend the series. Seventy PWD attended the Memory Café (staffed by 95 nursing students and 29 volunteers) and PWD reported pre-to-post mood improvement of 0.6 on a 5-point scale.

Care-partners reported using new skills, better preparedness, and improved self-efficacy. We plan to extend this innovative interactive series and create a sustainable plan for this much-needed dementia community education.

Paper Session
UNDERSTANDING FRAILTY AND ITS IMPACT ON OLDER ADULTS

Thursday, May 4
1:30 pm – 2:30 pm

P8 Student Presentation

Human interleukin-6 drives complement system expression in the brain of a mouse model of frailty

A. Merino Gomez,[1] T. Bopp,[2] N. Milcik,[1] Y. Wu,[1] J. Walston,[1] L. Nidadavolu,[1] P. Abadir.[1] *1. Division of Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine, Baltimore, MD; 2. Department of Physical Medicine and Rehabilitation, Johns Hopkins University School of Medicine, Baltimore, MD.*

Background: Frail older adults are at a higher risk of accelerated cognitive decline. Evidence supports a prominent role for the chronic low-grade elevation of IL-6 in this steeper cognitive decline; however, the molecular underpinning by which IL-6 drives the progression of brain pathology in frailty remains unclear. Here we hypothesized that higher levels of IL-6 will alter patterns of gene expression linked to the hallmarks of aging in the brain and will be associated with accelerated physical and cognitive decline.

Methods: To test this hypothesis, we created a conditional human IL-6 (hIL-6) knock-in transgenic mouse (TetO-hIL6mtQC), using CRISPR/Cas-mediated genome engineering technology. Basic molecular and phenotypical (physical and cognitive) profiling in 4-month-old female mice was done at baseline and following 8 weeks of hIL-6 induction. Frontal cortex transcriptional level of 84 genes correlated with aging was analyzed using an RT^2 Profiler PCR Array.

Results: Using a modified mouse clinical frailty index, we observed significant increases in scores in induced mice compared to uninduced mice ($p = 0.002$). Mechanistically, induction of human IL-6 led to the upregulation of complement system proteins C1qb (Fold change, $FC = 4.46$; $p = 0.009$), C1qc ($FC = 1.50$, $p = 0.009$), and C1s1 ($FC = 1.83$, $p = 0.004$) in mouse frontal cortex, highlighting abnormal expression of this cascade in the brain. Our targeted array of genes linked to hallmarks of aging showed increased expression of genes with roles in mitochondrial dysfunction, cellular senescence, laminopathies, epigenetic alterations, as well as other inflammatory response changes.

Conclusions: Our data suggest a role for IL-6 induction in increasing complement system expression in the brain and in triggering age-related genetic alterations in the frontal cortex of young mice. We present this novel inducible mouse model of frailty that can be used in pre-clinical testing to identify targets for treatment and improve outcomes in older adults.

P9

Effect of frailty status on clinical outcomes in participants with congestive heart failure and coronary artery disease treated with medical therapy plus surgical intervention vs medical therapy alone:a post hoc analysis of the STICH trial

L. Patel,[1] M. Segar,[2] S. Singh,[1] T. Betts,[1] V. Subramanian,[1] N. Keshvani,[1] A. Pandey.[1] *1. The University of Texas Southwestern Medical Center, Dallas, TX; 2. Texas Heart Institute, Houston, TX.*

Background: Coronary artery bypass surgery (CABG) has been shown to reduce mortality among patients with heart failure (HF) and multivessel coronary artery disease (CAD). However, patients with HF and CAD also have a high burden of frailty, a syndrome of diminished physiologic reserve, and increased vulnerability to stressors such as surgery. Whether the mortality benefits of CABG in patients with HF and CAD are consistent among those with high frailty burden at baseline is not well-established.

Methods: Participants of the STICH trial, a randomized trial of CABG with medical therapy versus medical therapy alone among participants with CAD and HF with ejection fraction <35%, were included. Baseline frailty was assessed through a deficit accumulation approach (Rockwood Frailty Index [FI]). Participants were characterized as frail with an FI above the median vs. not frail below the median. A multivariable Cox proportional hazard model was constructed to evaluate the association between frailty status and risk of mortality adjusting for following covariates: age, sex, race, ejection fraction and 6-minute walk distance. The multiplicative interaction term for frailty*treatment arm was included in the adjusted model to evaluate whether frailty status modified the treatment effect of CABG on all-cause mortality.

Results: Of 1179 participants (12.3% female, 2.5% black), 588 were characterized as frail (median FI = 0.33 (IQR 0.24-0.4)). A higher frailty burden at baseline was associated with an increased risk of mortality on follow-up (HR 1.22,95% CI 1.03-1.44, p=0.019). Baseline frailty burden did not modify the treatment effect of the CABG, with a consistent reduction in all-cause mortality noted among the frail (P-interaction = 0.17). Furthermore, the relative reduction in mortality risk associated with CABG was nominally greater among frail (HR 0.69, 95% CI 0.55 - 0.87, p = 0.002) versus not frail (HR 0.88, 95% CI 0.70 - 1.11, p = 0.28) participants.

Conclusions: In this post-hoc analysis of the STICH trial, CABG was associated with consistent mortality benefits among non-frail as well as frail patients.

P10

Development of a Crosswalk between Claims-Based Frailty Index and Commonly Used Clinical Frailty Measures

S. M. Sison,[1,2] S. S. Shi,[1] K. Kim,[3] G. Oh,[1] S. Jeong,[1] E. P. McCarthy,[1] D. Kim.[1,4] *1. Hinda and Arthur Marcus Institute for Aging Research, Hebrew SeniorLife, Boston, MA; 2. Department of Internal Medicine, University of Massachusetts Chan Medical School, Worcester, MA; 3. University of Hawai'i at Manoa John A Burns School of Medicine, Honolulu, HI; 4. Division of Gerontology, Beth Israel Deaconess Medical Center, Boston, MA.*

Background:

The claims-based frailty index (CFI), a validated measure using Medicare data to identify frail individuals, has been used to study the benefits and risks of interventions. We created a crosswalk between CFI and clinically used frailty measures to enhance its clinical translation and adoption in healthcare systems.

Methods:

In this cross-sectional study, we identified 3,963 community-dwelling participants in the National Health and Aging Trend Study (NHATS) Round 5 whose CFI could be calculated from linked Medicare data. We calculated 9 commonly used clinical frailty measures: 40-item Frailty Index (FI), Study of Osteoporotic Fracture Index (SOF), FRAIL Scale, Frailty Phenotype, Clinical Frailty Scale (CFS), Vulnerable Elder Survey-13 (VES-13), Tilburg Frailty Indictor (TFI), Groningen Frailty Indicator (GFI), and Edmonton Frailty Scale (EFS). We then created a crosswalk between CFI and each frailty measure using a statistical procedure that links different scoring scales by equating percentile distributions.

Results:

Out of the 3,963 participants, 44.5% were 75 years or older, 54.9% were female, and 82.3% were non-Hispanic White. Participants considered frail on CFI (cut point = 0.25) corresponded to the following frailty scores per measure: 1.4 (SOF), 1.8 (FRAIL), 1.8 (Phenotype), 5.4 (CFS), 5.7 (VES-13), 4.6 (TFI), 4.5 (GFI), 6.0 (EFS), 0.26 (FI). The original cut points of CFS, TFI, and FI used to identify frail patients directly translated to a CFI score of 0.25. The crosswalk also showed that the original CFI cut points differentiating mild (0.25), moderate (0.35), and severe frailty (0.45) best corresponded with the original CFS scores used to determine frailty severity (CFS 5, 6, and 7, respectively).

Conclusions:

A crosswalk between CFI and clinically used frailty measures enhances the interpretability of CFI thus strengthening its use in translation research and encouraging its adoption and uptake in clinical care.

P11

Change in Frailty Among Older COVID-19 Survivors

B. Seligman,[2] K. Wysham,[3] T. A. Shahoumian,[1] M. B. Goetz,[2] A. R. Orkaby,[4] G. Ioannou.[3] *1. Veterans Health Administration, Washington, DC; 2. VA Greater Los Angeles Healthcare System, Los Angeles, CA; 3. VA Puget Sound Health Care System Seattle Division, Seattle, WA; 4. Veterans Affairs Boston Healthcare System, Boston, MA.*

Background

COVID-19 survivors face large burdens of morbidity and incident illnesses. For older adults, where multimorbidity and functional impairment are more common, frailty provides a tool for understanding how infection affects future health and prognosis beyond a one-disease-at-a-time approach. We investigated how infection with COVID-19 affected change in frailty.

Methods

Data were from the VA medical record (EMR) through the COVID-19 Outcomes Research Collaboratory. This included Veterans infected from March 1, 2020 to April 30, 2021 and matched controls with negative COVID-19 tests the same month. We excluded those <50 years at index date or who did not survive 12 months post-infection. Frailty was assessed at index date and at 12 months using the VA Frailty Index (VA-FI), a 31-item deficit accumulation frailty index that uses ICD and HCPCS codes from the VA EMR.

We assessed change in frailty by the number of new deficits over 12 months following infection. Analysis used R by Wilcoxon ranked-sum test and negative binomial regression adjusted for age, gender, race, ethnicity, and BMI. Coefficients are given as mean ratios: the ratio of the mean number of new deficits during follow-up.

Results

We identified 91,359 cases and an equal number of matched controls. 5% were female, 71% White, 23% Black, and 6.5% Hispanic. Median (IQR) age was 69.0 (60.3-74.2) and baseline VA-FI was 0.16 (0.10-0.26). Infected and control groups were balanced on other variables.

Median (IQR) change in frailty index was 0.03 (0.00-0.06) for cases and 0.00 (0.00-0.03) for controls. The mean ratio (95% CI) from regression for COVID-19 cases was 1.54 (1.52-1.56). Baseline frailty and age were also associated with greater mean ratios. The five most common new deficits among cases were fatigue (9.7%), anemia (6.8%), muscle atrophy (6.5%), gait abnormality (6.2%), and arthritis (5.8%).

Conclusions

We found a greater increase in frailty over 12 months in COVID-19 infected older Veterans compared to matched controls. The most common new deficits involved function and mobility impairment, suggesting disability is a particular issue for older survivors of COVID-19. COVID-19 has long-term implications for vulnerability among older adults.

Paper Session
ADDRESSING HEALTH DISPARITIES FOR OLDER ADULTS: A FOCUS ON DIVERSITY, EQUITY AND INCLUSION

Thursday, May 4
2:45 pm – 3:45 pm

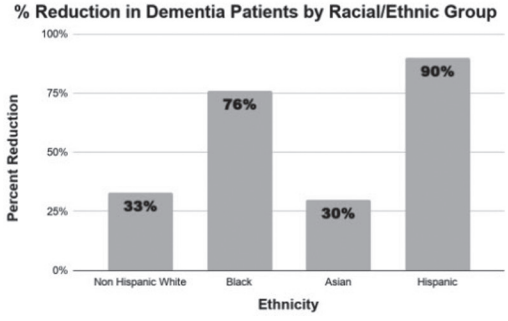
P12 Encore Presentation

Implementing a Hospital Policy Requiring Palliative Care Consult Before PEG Placement Reduced PEG Insertion Among Racially/Ethnically Diverse Patient Groups

B. C. Palathra,[1,2] C. X. Pan,[1,2] H. Abdelaziz,[1] M. Castillo,[1] C. Hwang,[1,2] S. A. Hussain,[1] R. Crupi.[1,2] *1. Medicine, NewYork-Presbyterian Queens, Flushing, NY; 2. Medicine, Weill Cornell Medicine, New York, NY.*

BACKGROUD: National High Value Care (HVC) Choosing Wisely guidelines support comfort feeding rather than Percutaneous feeding tubes (PEGs) insertion among patients with advanced dementia. An institutional retrospective review of patients admitted in 2018 who underwent PEGs, showed that 42% had a dementia ICD code, yet only 4% had goals of care (GOC) documentation and only 10% a Palliative Care Consult (PCC). OBJECTIVES: 1. Explain a hospital policy requiring PCC prior to PEG placement. Describe racial/ethnic (R/E) trends associated with PEG placement in diverse inpatients. 2. Measure changes in PEG insertion rates for dementia across R/E groups. METHODS: Retrospective study reviewing inpatient PEG insertions by radiologic or endoscopic technique in July2018-June2019 (pre-policy) and July2019-June2020 (post-policy). RESULTS: PEG insertions decreased post-policy implementation: Non-Hispanic Whites 65 vs 51 (21%), Asian 65 vs 46 (29%), Black 42 vs 27 (35%), and Hispanics 27 vs 12 (56%). In dementia patients, initial PEG insertions decreased by 90% in Hispanics, 76% in Blacks, 33% in Whites and 30% in Asians. CONCLUSIONS: This descriptive study found that all studied R/E groups were open to discussions about artificial feeding and feeding alternatives, and saw decreases in PEG insertion. Institutional support to ensure PCC-access for patients being considered for PEGs may be associated with opportunities for Shared Decision-Making and HVC across R/E groups.

Figure: Reduction in PEG Insertion by Racial/Ethnic Group in Dementia Patients



P13 Resident Presentation

Recognizing Barriers to Care through a Social Determinants of Health Curriculum

E. Degnall, L. Taffel, M. E. Young, R. Chippendale, K. Botsian. *Department of Internal Medicine, Section of Geriatrics, Boston University Chobanian & Avedisian School of Medicine, Boston University, Boston, MA.*

Background

Fourth year medical students at Boston University Chobanian & Avedisian School of Medicine complete a required 4 week geriatrics clerkship, during which they participate in home visits with faculty. The home care program serves approximately 500 patients, 60% from minority populations and 25% with low English proficiency. To increase education around social determinants of health (SDOH) we created an exercise using the Geriatrics 5Ms framework to assess how SDOH impact patients' care. We distributed a survey to evaluate the educational impact of this exercise.

Methods

Students were required to complete a structured observation of a patients' home using a standardized worksheet. They were asked to identify ways in which a patient was affected by the World Health Organization-defined categories of SDOH, and then connect those to SDOH with the 5Ms using a worksheet. 36 students to date have completed a voluntary, anonymous survey at the end of their clerkship. The survey contained both quantitative and qualitative questions focused on how this experience affected their approach to patient care. The results were reviewed by two independent reviewers to determine common themes.

Results

The survey participants reported two overarching themes in their open-ended responses: 1) the exercise prompted them to become more observant in the home and identify barriers to care they otherwise would have missed, 2) they were encouraged to assess how SDOH impact overall health and access to healthcare. After completing the exercise, 31 out of 36 students (86%) felt very or completely confident in identifying and discussing a patient's social risk factors and how those factors contribute to their health. Additionally, students prioritized having a future interprofessional session with a social worker to further supplement the exercise.

Conclusion

This exercise serves as an important tool to increase student confidence in identifying and addressing SDOH. Students became more observant and were more readily able to connect how SDOH impact overall healthcare. In the future, we hope to incorporate an organized discussion to help students further explore the complexities of SDOH in older adults.

P14

COVID-19 booster vaccination by race, ethnicity, and frailty among 11.3 million older adults

K. N. Hayes, D. Harris, A. R. Zullo, V. Mor. *Brown University, Providence, RI.*

Background: Racial and ethnic disparities existed in the initial uptake of COVID-19 vaccines. It is unknown whether these disparities persist for boosters, particularly among frail older adults. Frail patients are at an increased risk of morbidity and mortality from COVID-19. Our objective was to examine racial/ethnic disparities in booster vaccine receipt.

Methods: We conducted a cohort study using linked Medicare claims, CVS Health, and Walgreens data. We included community-dwelling Medicare beneficiaries aged ≥66 years who received 2 doses of an mRNA vaccine (BNT162b2/mRNA-1273) between 1/1/2021 and 8/1/2021 identified through Medicare Part B claims or pharmacy vaccination records. We followed beneficiaries from 8/1/2021 until the first of booster vaccine receipt, death, Medicare

disenrollment, or end of follow-up (4/30/2022). We estimated the cumulative incidence of booster vaccination using Kaplan Meier methods, and estimated hazard ratios (HRs) to compare booster uptake between Black, Asian, and Hispanic versus White patients using cause-specific Cox proportional hazards models that accounted for the competing risk of death and controlled for age, sex, and geographic region. We assessed differences in booster uptake by frailty (non-frail, prefrail, or frail per the Frailty Index) using interaction terms.

Results: We identified 11,346,298 eligible beneficiaries with 2 mRNA vaccines (mean age 76 years, 60% female, 78% White, 38% prefrail, 6.5% frail). Overall, 73% of the cohort received a booster, but we observed notable variation by race and ethnicity (White=74%; Asian=74%; Black=65%; Hispanic=62%). Compared to White patients, other patient groups had lower booster vaccine receipt, with differences being most pronounced among Black (HR=0.76 95%CI=0.75-0.76) and Hispanic patients (HR=0.70 95%=CI 0.69-0.70). Asian patients had slightly lower receipt compared to White patients (HR=0.98 95%CI=0.97-0.98). Racial and ethnic disparities were larger for non-frail patients vs. prefrail/frail patients.

Conclusions: Racial and ethnic disparities in COVID-19 vaccination persist when considering booster uptake among eligible patients. Health systems and providers should consider additional focused outreach to reduce inequalities.

P15 Encore Presentation
Frailty among sexual and gender minority older adults: The All of Us database

C. N. Wong,[1] M. Wilczek,[2] L. Smith,[2] J. Bosse,[4] J. Manjourides,[2] A. R. Orkaby,[3] B. L. Olivieri-Mui.[2] *1. Geriatric Medicine, Beth Israel Deaconess Medical Center, Boston, MA; 2. Health Sciences, The Roux Institute, Northeastern University, Boston, MA; 3. Brigham and Women's Hospital, Boston, MA; 4. Northeastern University Bouve College of Health Sciences, Boston, MA.*

Background: The prevalence of frailty among older sexual and gender minority adults (OSGM) is unknown despite associated disparities in mental health, morbidity, and physical function. The NIH-funded All of Us Program began in May 2018 aiming to enroll 1 million US participants focusing on those underrepresented in biomedical research, including OSGM. The aim of this study was to develop All of Us deficit accumulation frailty index (AoU-FI) to describe and compare frailty between OSGM and non-OSGM participants.

Methods: Using a standardized approach, the AoU-FI consisted of 33 concepts from baseline survey responses of adults aged 50+. Deficit domains included morbidity, function, geriatric syndromes, general health status, mental health, cognition, and sensory impairment. OSGM were self-reported as "not straight" or as having discordant gender and sex at birth. Descriptive statistics characterized the AoU-FI across groups by mean, range, and stratified by age and gender. AoU-FI was validated by assessing the association between frailty categories (robust < 0.15, $0.15 \leq$ pre-frail ≤ 0.25, frail > 0.25) and mortality with logistic regression.

Results: OSGM (n=9,197) and non-OSGM (n=67,430), were similar in age (mean [sd] = 65 [8] vs 66 [8] years), less White (53% vs 80%), reported lower income (Annual income >100k, 20% vs 35%), and fewer were married (35% vs 65%). The AoU-FI had an expected gamma distribution. OSGM frailty had a higher maximum 0.84 vs 0.78 and higher mean of 0.19 (0.11) vs 0.17 (0.1) compared to non-OSGM. Frailty among OSGM was not clearly associated with age or gender. Compared to robust, frail OSGM had 7.9 (2.6, 34.2) times the odds of mortality and frail non-OSGM had 4.2 (3.2, 5.5) times the odds of mortality.

Conclusion: To our knowledge, this is the first study quantifying frailty disparities between OSGM and non-OSGM. Findings suggest OSGM have a higher burden of frailty at younger ages than non-OSGM. Our novel AoU-FI creates opportunities to develop interventions targeting frailty in OSGM.

Paper Session
HEALTH SERVICES & POLICY RESEARCH

Friday, May 5
10:30 am – 11:30 am

P16
Treatment of COVID-19 in Nursing Home Residents with Monocloncal Antibodies

B. E. McGarry. *Division of Geriatrics and Aging, Deparment of Medicine, University of Rochester, Rochester, NY.*

Background:Policy efforts to protect skilled nursing facility (SNF) residents from COVID-19 have largely focused on preventing viral exposure. Less attention has been given to treatment following exposure with monoclonal antibodies (mAbs) that can reduce the risk of morbidity and mortality due to COVID. This study examines mAb use in US SNFs and the facility characteristics associated with use rates.

Methods:The CMS Nursing Home COVID-19 database was used to track the weekly rate of mAb use (i.e.,# of residents receiving mAb/# of new resident COVID cases) among 13,284 SNFs from May 2021-Oct 2022. Descriptive analyses examined differences in use rates by key SNF characteristics (e.g., shares of residents who are non-White race/ethnicity and have Medicaid, 5-star quality score, ownership status, average resident age) and a new measure (obtained from CMS Facility Affiliation data) of whether the SNF was affiliated with a physician who specialize in geriatrics. Linear regression with county-by-week fixed effects was used to test for associations between these characteristics and mAb use after adjusting for SNF location and time trends.

Results:On average, 11.8% of COVID-positive residents were treated with mAbs; 52% of sample SNFs reported never administering mAbs. SNFs in the top tertile of mAb use (mean use rate=40%) were more likely to be non-profit (33.9% vs. 17.0%), have a quality score of 5 stars (31.7% vs. 19.9%), and have an affiliated geriatrician (24.2% vs. 19.6%), and less likely to be part of a chain (46.9% vs. 57.3%) relative to SNFs that never used mAbs. High-use SNFs also had fewer non-White residents (13.5% of residents vs. 24.5%), fewer residents with Medicaid (56.2% of residents vs. 62.5%), and older residents (81.6 y.o. vs. 77.8) compared to never-users. After adjustment, higher quality scores, being non-profit and not chain affiliated, older resident age, having fewer non-White residents, and the presence of a geriatrician were associated with greater mAb use.

Conclusions:Fewer than 1 in 9 SNF residents with COVID-19 were treated with mAbs, consistent with underuse of a life saving treatment. SNFs with more non-White residents and low quality scores were less likely to use mAbs, indicative of disparities in treatment access. Affiliation with a geriatrician increased use rates, suggesting that expertise in the care of older adults may be an important determinant of initiating mAb treatment.

P17
Effectiveness of a Community-Based Version of the Collaborative Dementia Care Model Delivered by Area Agencies on Aging

S. R. Counsell, K. Frank, A. Burkhardt, M. Boustani. *Indiana University School of Medicine, Indianapolis, IN.*

Background: The collaborative dementia care model consists of four key components: a) dementia counseling and education, b) crisis plan development, c) weekly caregiver time off, and d) support group participation. The model has been proven to reduce dementia symptoms and caregiver stress. Our objective was to evaluate the effectiveness of a community-based version of the model delivered telephonically by staff of Area Agencies on Aging (AAA).

Methods: The Indiana University Center for Health Innovation and Implementation Science provided training and support to Dementia Care Coaches from five of Indiana's 15 AAAs. In addition to initial intensive and subsequent booster trainings, virtual case conferences were held twice monthly for Care Coach guidance and support. Care Coaches delivered the intervention to Medicaid Home and Community Based Services Aged & Disabled Waiver recipients living with dementia and their informal caregivers. Care Coaches conducted telephone contacts as determined by dementia symptom and caregiver burden levels assessed using the Healthy Aging Brain Care (HABC) Monitor with a minimum of monthly visits the first three months and quarterly thereafter. Monthly dashboards were used to monitor enrollment, model fidelity, and HABC Monitor scores for continuous improvement initiatives.

Results: In the first 20 months of enrollment, the five AAA Care Coaches delivered the collaborative dementia care model in 385 participant/caregiver dyads with 96%/51% 60+, 66%/81% female, and 34%/35% minority. Implementation of the four key components exceeded targets except caregiver support group participation. Baseline and 3-month HABC Monitor scores were available in 184 dyads: dementia symptom subscale scores decreased from 8.3 to 5.9 (P<.001) representing a 29% reduction in dementia symptoms; and caregiver stress scores decreased from 23.3 to 17.2 (P<.001) representing a 26% reduction in caregiver stress and meeting criteria for a clinically significant change of 5 points or more. Reduction in caregiver stress scores at 3-months was sustained at 6- and 12-months (n=39).

Conclusion: A scalable community-based and telephonic version of the collaborative dementia care model was successfully implemented through a university-AAA partnership. Participants and their informal caregivers had significantly fewer dementia symptoms and reduced distress by 3-months, respectively.

P18

Readmissions and mortality by race and ethnicity among Medicare beneficiaries with multimorbidity

M. Y. Wei,[1] J. Cho.[2,3] *1. Medicine, University of California Los Angeles David Geffen School of Medicine, Los Angeles, CA; 2. Texas A&M School of Public Health, College Station, TX; 3. Baylor Scott & White Health, Temple, TX.*

Background: Medically and socially complex patients, including those with multimorbidity, disability, and unmet social needs, have among the highest rates of 30-day readmissions. Racial disparities in readmissions have yielded mixed results. We examined readmissions and post-discharge mortality by race and ethnicity after adjusting for multimorbidity, physical functioning, and sociodemographic and lifestyle characteristics.

Methods: We used Medicare Parts A and B between 1991-2015 to obtain ICD-9-CM diagnostic codes to compute the ICD-coded multimorbidity-weighted index (MWI-ICD). Participants must have had at least one hospitalization between January 1, 2000 and September 30, 2015 and continuous enrollment in fee-for-service Medicare Part A 1-year prior to hospitalization. We used multivariable logistic regression to assess the association of MWI-ICD with 30-day readmissions and mortality 1-year post-discharge. Using Health and Retirement Study data linked to Medicare, we adjusted for age, sex, BMI, smoking, physical activity, education, household net worth, and living arrangement/marital status, and examined for effect modification by race and ethnicity.

Results: The final sample of 10,737 participants had mean±SD age 75.9±8.7 years. Hispanic adults had the highest mean MWI-ICD (16.4±10.1), followed by similar values for White (mean 14.8±8.9) and Black (14.7±8.9) adults. A 1-point increase in MWI-ICD was associated with 2% statistically significant higher odds of readmission (OR=1.02, 95%CI: 1.02-1.03), and there was no significant effect modification by race and ethnicity. For post-discharge mortality, a 1-point increase in MWI-ICD was associated with 3% higher odds of mortality (OR=1.03, 95%CI: 1.03-1.04), which did not significantly differ by race and ethnicity.

Conclusions: Multimorbidity was associated with a monotonic increased odds of 30-day readmission and 1-year post-discharge mortality across all race and ethnicity groups. There was no significant difference in readmission or mortality risk by race and ethnicity after robust adjustment. To help reduce health disparities, interventions and policies must be implemented and targeted earlier in multimorbidity onset and progression, prior to less modifiable sequelae such as functional decline, hospitalization, and premature mortality.

P19

Differences in Nursing Home Staff COVID-19 Testing Rates and Odds of Vaccination Across Work Shifts

E. White,[1] J. Travers,[2] N. Gouskova,[3] G. Oh,[3] V. Mor,[1] S. D. Berry.[3] *1. Health Services, Policy & Practice, Brown University School of Public Health, Providence, RI; 2. College of Nursing, New York University, New York, NY; 3. Hinda and Arthur Marcus Institute for Aging Research, Boston, MA.*

Background: COVID-19 vaccination and regular testing of nursing home staff have been critical interventions for mitigating nursing home outbreaks. Little research has focused on structural variation in these processes. We examined whether one structural factor, the shift on which staff work, was associated with differences in COVID-19 testing rates and odds of vaccination among nursing home staff.

Methods: We used staff-level payroll, testing, and immunization data from July 2020 to March 2021 from a multi-state sample of 294 nursing homes. In negative binomial regression models with facility and month fixed effects, we examined the association of shift and other staff characteristics with monthly COVID-19 testing rate (tests per 100 person days worked). We conducted a similar analysis with logistic regression models and facility fixed effects to estimate the odds of employee vaccination.

Results: The sample included 20,503 employees (55.3% day shift, 24.3% evening shift, 20.5% night shift; 48.1% CNAs, 21% LPNs, 17.9% RNs; 53% White, 31.8% Black, 9.4% Hispanic; 87.6% female). COVID-19 testing rates varied significantly over time, from a mean of 12.6 (SD 12.6) tests per 100 person days in July 2020, to a high of 36.9 (SD 21.1) tests per 100 person days in December 2020. Adjusted testing rates for night shift were 0.71 times that of day shift (RR 0.71, 95% CI 0.70, 0.72), while evening shift testing rates were 0.91 times that of day shift (RR 0.91, 95% CI 0.90, 0.92). Testing rates were also lower among CNAs and housekeeping staff. Black employees had lower testing rates than White employees overall, although interaction models demonstrated that these differences were largely explained by shift. Compared to day shift staff, evening shift (OR 0.82, 95% 0.73, 0.92) and night shift staff (OR 0.50, 95% CI 0.44, 0.57) had significantly lower odds of vaccination.

Conclusions: Work shift is an important structural factor contributing to disparities in staff COVID-19 testing and vaccination in nursing homes. These findings highlight the need to coordinate resources evenly across shifts and departments when implementing large-scale public health initiatives in organizations with shift-based workforces.

Paper Session
DEMENTIA MATTERS: INNOVATIONS IN RESEARCH AND CLINICAL PRACTICE

Friday, May 5
1:30 pm – 2:30 pm

P20

Detecting dementia in Electronic Health Records Systems for pragmatic trials: a structured approach

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Background: Including patients living with dementia in research is challenging: from identification to enrollment and consent, many barriers exist. Pragmatic trials – those that can be performed in routine care settings – are particularly tricky, as dementia is under- and mis-diagnosed in routine care. As part of the IMPACT Collaboratory, we sought to enhance the identification of people living with dementia through the use of standardized computational phenotypes in EHR data.

Methods: A phenotype uses standard codes to identify persons with health conditions. Definitions are stored in standard repositories (e.g., PheKB) or in the literature. We identified a set of validated definitions and implemented them using EHR data, measuring their precision (probability of being diagnosed with dementia if the algorithm was positive). We then abstracted key concepts for dementia identification and implemented a structured validation technique. We took the least sensitive but most specific criteria – a brain autopsy performed plus clinical work-up – and created predictive models based on data adequacy. We re-annotated 40 additional patients with low and high model scores to assess performance.

Results: In all, 203 patients were in the training set; of these, 65% had confirmed dementia. Using this enhanced set, 2 algorithms had the highest precision (or PPV): Jaakamanian (PPV=.81) and Bynum (PPV=.82). Limiting the patient population sequentially by removing those with 1) inadequate data volume (< 5 known visits ever, PPV=.31), 2) short observation period (< 1 year, PPV=.48); and 3) no dementia specialty care episode (PPV=.45) generated the best LASSO model for classification (AUC=.77). Applying the derived model to the test set (N=10,761), the factors changed the estimated probability of dementia by up to .49. In the re-annotation, 20/20 'high' score and 8/20 low score patients had confirmed dementia.

Conclusions: Mixed performance in dementia identification in EHR data can be enhanced with models that identify both data quality and diagnostic issues. Trade-offs can be encoded directly in the models, allowing research and population management teams to make decisions across a wider selected cohort.

P21

Comparing Cognitive Classifications based on Digital Clock and Recall (DCR) and the Mini Mental Status Examination (MMSE)

A. Jannati,[1,2] R. Banks,[1] M. Ciesla,[1] S. Saxena,[1] W. Morrow,[1] S. Fecteau,[1] S. Tobyne,[1] J. Gomes-Osman,[1] J. Showalter,[1] D. Bates,[1] A. Pascual-Leone.[2,1] *1. Linus Health, Lynn, MA; 2. Harvard Medical School, Boston, MA.*

Background: Despite the great need, most primary care providers do not perform routine cognitive testing, in part due to a lack of access to practical cognitive assessments, as well as time and resources to administer and interpret the tests. Brief and sensitive digital cognitive assessments, such as the Linus Health Digital Clock and Recall (DCR™), consisting of DCTclock™ and a 3-word delayed recall, have the potential to address this need. Evaluating the cognitive classification of the DCR when traditional cognitive tests such as the MMSE indicate 'normal' performance can highlight the value of the DCR and, can help facilitate expanded use of this digital tool in primary care settings.

Methods: In 483 adults (> 60 yrs old) classified as cognitively normal (CN), mild cognitive impairment (MCI), or probable AD-related dementia (pAD), we evaluated the cognitive classification based on the DCR for individuals who were within the normal limit of the MMSE scores (> 28) using RAVLT as a gold standard.

Results: MMSE score < 28 and DCR score < 4 captured 86.2% and 87.9% of MCI / pAD individuals, respectively. However, among 61 individuals who were labeled as 'normal' by the MMSE (score > 28), DCR score ≤ 3 was able to identify 45 individuals (73.8%) in whom RAVLT confirmed impaired memory and cognitive performance

Conclusions: DCR outperforms the MMSE by detecting individuals who score in the normal MMSE range but are actually impaired as confirmed by RAVLT, whilst otherwise being as sensitive (or slightly more sensitive) as the MMSE in cases when the MMSE detects an abnormality.

P22

What Medicare Advantage Plans Older Adults Living with Dementia Were Enrolled in?

L. Lei,[1] H. Levy,[3] C. Ankuda,[2] G. Hoffman,[3] H. M. Kim,[3] J. Strominger,[4] D. Maust.[1,4] *1. Psychiatry, University of Michigan, Ann Arbor, MI; 2. Icahn School of Medicine at Mount Sinai, New York, NY; 3. University of Michigan, Ann Arbor, MI; 4. VA Ann Arbor Healthcare System, Ann Arbor, MI.*

Background: The proliferation of Medicare Advantage (MA) plans might overwhelm those with impaired decision-making capabilities, particularly older adults with dementia. Little is known about MA plan choice among older adults with dementia.

Methods: We used the 2010-2018 Health and Retirement Study (HRS) linked with Medicare enrollment data and publicly available MA plan characteristics. We included respondents ≥65 years with MA enrollment for ≥1 month during each interview year (n=13,873). Using conditional logistic regression, we examined characteristics of MA plans (e.g., plan type, premium, out-of-pocket cost limit, star rating) chosen by older adults living with versus without dementia, given plans available in their county. We stratified the analysis by Medicare and Medicaid dual status and further performed subgroup analyses stratified by education years within each dual status group.

Results: The average number of plans available to respondents was similar among those with and without dementia (34.2 vs. 34.7, p=.56). Among duals, compared to those without dementia, those with dementia had: higher odds of choosing a plan with premiums ≥$43 relative to $0 (odds ratio [OR]=1.8 [95% CI: 1.0-3.4]); higher odds of choosing a plan with maximum out-of-pocket cost of $6,700-$90,000 relative to $0-$3,400 (OR=1.5 [95% CI: 1.0-2.2]); and lower odds of choosing a high star rating plan (OR=0.5 [95% CI: 0.3-1.0] for 4-4.5 vs. 2-2.5 star rated plan). Among duals with lower education (≤12 years), those with dementia were more likely to enroll in plans with higher out-of-pocket cost ($6,700-$90,000 vs. $0-$3,400: OR=1.6 [95% CI: 1.0-2.4]), and less likely to enroll in plans with higher star ratings (4-4.5 vs. 2-2.5: OR=0.5 [95% CI: 0.3-1.0]).

Conclusions: Older adults with dementia, particularly those with lower education, may not be selecting the MA plans that best fit their health care needs and may benefit from plan selection support, particular as MA enrollment continues to rise.

P23

The Impact of Federal Policies on Hospice Use for People with Dementia

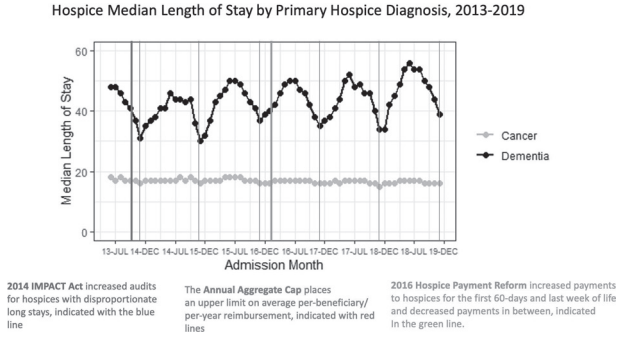
L. Hunt,[1] S. Gan,[1] K. Harrison,[1] M. Aldridge,[2] W. Boscardin,[1] K. Yaffe,[1] A. K. Smith.[1] *1. University of California San Francisco, San Francisco, CA; 2. Icahn School of Medicine at Mount Sinai, New York, NY.*

Background: Several federal policies have been implemented to disincentivize long length of stay (LOS) in hospice and reduce costs for Medicare: 1) The Annual Aggregate Cap instituted in 1983; 2) 2014 IMPACT Act; and 3) 2016 Hospice Payment Reform (Figure for details). These policies may have disproportionate impacts on hospice access for people with dementia (PWD), who have much longer hospice stays compared to people with cancer.

Methods: Observational study using 100% Medicare hospice claims data to identify hospice episodes of care, June 2013-December 2019 for individuals 65+. Principal hospice diagnosis (dementia or cancer) was identified using ICD-9/10 codes. Primary outcomes were median LOS and disenrollment calculated at the patient-month level.

Results: The sample included 6,041,513 patients with 6,718,217 hospice care episodes (19% for dementia and 27.5% for cancer). No substantial trends were observed related to the IMPACT Act or Payment Reform with either PWD or enrollees with cancer (Figure). For PWD, a cyclical pattern in median LOS was observed, such that it increased in the first half of each cap year up to a high of ~50 days and decreased in the second half to a low of about ~30 days (Figure). A similar cyclical pattern was noted for disenrollment. In other words, PWD who were enrolled in May had the longest LOS and highest rate of disenrollment. No such patterns were observed for cancer.

Conclusions: Cyclical variation for PWD but not cancer raises concerns about hospices disenrolling PWD with long LOS to stay below the Annual Aggregate Cap. In contrast, 2014 and 2016 policy reforms have no appreciable effects on LOS.



Paper Session
CLIN-STAR

Friday, May 5
2:45 pm – 3:45 pm

P24

Functional Trajectories Over the 6 Months After a COVID Hospitalization Among Older Adults

L. E. Ferrante,[2] T. E. Murphy,[1] G. J. McAvay,[2] T. Kaminski,[2] T. M. Gill,[2] A. M. Hajduk,[2] A. B. Cohen.[2] *1. Penn State College of Medicine, Hershey, PA; 2. Yale School of Medicine, New Haven, CT.*

Background: Little is known about the functional trajectories of older adults who have survived a hospitalization for COVID-19.

Methods: We enrolled 341 adults ≥60 years during their index COVID hospitalization (7/2020-6/2021) and interviewed them at 1, 3, and 6 months after discharge; 311 participants had at least one follow-up interview. At enrollment, participants underwent an assessment of pre-admission disability in 15 activities and Fried frailty; assessments were linked to EMR data, including age, sex, comorbidities, neighborhood socioeconomic disadvantage (Area Deprivation Index), severity of illness (SOFA), and biomarkers (interleukin-6 and D-dimer). Delirium was abstracted using the CHART-DEL. To identify functional trajectories, we used PROC TRAJ with minimization of the BIC and a priori constraints of minimal 10% membership per trajectory and average probability of membership >70%. We added the above 9 variables to the model and evaluated associations with trajectory group membership. We applied the False Discovery Rate to account for multiple comparisons.

Results: The mean age was 71.3 yrs (SD 8.5); 34% were of Black race or Hispanic ethnicity. Four distinct functional trajectories were identified with excellent average probabilities of membership (range 89-98%). 40% of participants did not experience any disability, and ~25% survivors experienced mildly increased disability. However, over 1 in 4 older adults experienced trajectories of moderate or severe disability. In the multivariable model, age, frailty, comorbidities, and delirium were associated with membership in the worst functional trajectory, with delirium losing significance after adjustment for multiple comparisons; age, frailty, and comorbidities were associated with the moderate disability trajectory, and only frailty was associated with the trajectory of mild disability.

Conclusions: Older survivors of a COVID hospitalization experience distinct functional trajectories over the 6 months after discharge. Age, frailty, and comorbidities were associated with these functional trajectories, but not biomarkers or severity of illness.

P25

Association of an Emergency Department Care Transition Program with Healthcare Outcomes Among Older Veterans

C. McQuown, K. Snell, L. M. Abbate, L. C. Ragsdale, S. Song, T. Sheng. *US Department of Veterans Affairs, Washington, DC.*

Background

The US Department of Veterans Affairs (VA) Emergency Departments (ED) evaluate a high percentage of older adults with complex medical needs. We aim to describe the outcomes of SCOUTS (Supporting Community, Outpatient, Urgent Care & Telehealth Services), a VA clinical pilot program utilizing Intermediate Care Technicians (ICTs) (former military combat medics and corpsmen) in a post-ED care transition program.

Methods

This is an observational analysis of the SCOUTS pilot program at six VA EDs May 2021-May 2022. In SCOUTS, community dwelling adults age 65+ identified as high risk for functional decline in the ED are offered a rapid follow up home visit. The ICTs perform in-home geriatric and home safety screens. The ICTs act as in-home tele-presenters, assisting patients with a live video visit with an ED provider, acute care geriatrician, or physical therapist.

Demographic data were recorded for each pilot site. Propensity score matching was used to compare ED hospitalization and revisit rates and outpatient service referrals of SCOUTS patients (*N=684*) and a matched group (*N=684)*. Propensity parameters were frailty score, age, gender, prior 30 day hospitalization, prior 30 day ED visit, and facility.

Results

SCOUTS ED patients had higher frailty scores and were more likely to have prior 30 day hospitalization and prior ED visit compared to ED patients age 65+. Propensity matched SCOUTS patients were more likely to be discharged home from the ED (3.5% vs 21.2% $p<0.001$). When also matched for admission status, discharged SCOUTS patients had lower rates of 72-hour ED return visits (1.5% vs 5.2%$p<0.001$) and were more likely to receive durable medical equipment (50.7% vs 34.7%, $p<0.001$) and a referral to outpatient social work to access VA and community services (15.6 % vs 10.8 %, $p<0.01$). There was no difference in 30-day ED revisits between SCOUTS and controls ($p<0.05$).

Conclusions

An ED based program that combines follow up home visits with telehealth, geriatric screens, and home safety evaluation by former military medics is associated with reduced ED admissions and increased outpatient referrals and equipment to address unmet needs, without increasing ED revisit rates.

P26

Reducing Behavioral and Psychological Symptoms of Dementia for Acutely-Ill Persons with Dementia via Patient Engagement Specialists

L. Sinvani,[1] S. Ardito,[1] A. Strunk,[1] V. Gromova,[1] Y. Liu,[1] E. Schantz,[1] A. Arroon,[1] A. Ilyas,[1] A. Ilyas,[1] J. Levin,[1] A. Makhnevich,[1] S. D'Angelo,[1] M. Boltz.[2] *1. Northwell Health Feinstein Institutes for Medical Research, Manhasset, NY; 2. Nese College of Nursing, Penn State: The Pennsylvania State University, University Park, PA.*

Background. Three-quarters of hospitalized persons living with dementia (PLWD) display behavioral and psychological symptoms of dementia (BPSD). The objective of the study was to test preliminary efficacy of an innovative model of care, which cohorts PLWD who display BPSD on a specialized dementia unit that utilizes nursing assistants with mental health background (Patient Engagement Specialists, PES).

Methods. We conducted a non-randomized trial, enrolling N=158 patients to the intervention (n=79, a 10-bed unit for PLWD with BPSD, staffed with PES) and enhanced control unit (n=79, 40-bed medicine unit, staffed with nursing assistants, NAs). All NAs and PES received dementia training. The primary outcome was hospital BPSD (Neuropsychiatric Inventory-Questionnaire, NPI-Q). Secondary outcomes included management of BPSD (e.g., use of restraints) and length of stay (LOS).

Results. Patients on the intervention unit were more likely to: be younger (83.5 [standard deviation, SD, 8.44] vs. 86.9 [7.48]), male (39% vs. 33%), and Black (34% vs. 11%); live at home (91% vs. 73%); have moderate dementia (38% vs. 27%); display more baseline BPSD: mean NPI 15.8 (SD 7.49) vs. 10.5 (SD 6.60); and require more care (62.6% vs. 30.9% requiring >41 hours/week).

The most common hospital BPSD included changes in appetite/eating (74%), agitation/aggression (61%), and irritability/lability (61%). After adjustment (demographics, comorbidities, dementia severity, and baseline and emergency department NPI-Q), there was no significant difference in hospital BPSD (average NPI; 5.36 vs. 3.87; 0.82, 95% CI -0.51, 2.16, p=0.23) (maximum NPI; 12.43 vs. 8.67; 1.66, 95% CI -0.86, 4.18, p=0.19) between the units. However, patients on the intervention unit had 88% (-97%, -53%, p=0.002) shorter duration of constant observation; were less likely to be restrained (0.35, 95% CI 0.09-1.37); and had similar LOS (1.11; 95% CI 0.77-1.64, p = 0.57) and overall family caregiver satisfaction (p=0.86).

Conclusions. There is an urgent need to improve the provision of care for hospitalized PLWD. A specialized dementia unit staffed by nursing assistants with mental health backgrounds may improve the management of BPSD.

P27

Pharmacist-led de-prescribing pilot for frail older adults with intensively controlled type 2 diabetes

K. E. Callahan,[1] K. Lenoir,[1] C. O. Usoh,[1] A. Moses,[1] J. D. Williamson,[1] T. Sherod-Harris,[2] M. Hinely,[2] N. Pajewski.[1] *1. Wake Forest University School of Medicine, Winston Salem, NC; 2. Atrium Wake Forest Baptist Health, Winston Salem, NC.*

Background: Despite guidelines, older adults are often over-treated for type 2 diabetes (T2D) with high-risk agents (insulin, sulfonylureas). This pilot assessed the feasibility of a pharmacist-led intervention to reduce over-treatment in frail older adults with T2D.

Methods: We identified a cohort of patients aged 65+ years with electronic frailty index >0.21 and T2D overtreatment (hemoglobin A1c (HbA1c)<7.5% while taking insulin/sulfonylurea). We obtained approval from primary care (PC) to approach patients. Pharmacists working in collaborative practice agreements with PC followed an algorithm to reduce insulin/ sulfonylurea dose. Pharmacists followed patients in person or by telehealth for up to six visits, then transitioned T2D management back to PC. The primary outcome was the percent of participants who were de-prescribed, defined as discontinuation or reduced dose of insulin/sulfonylurea. Secondary outcomes include subsequent HbA1c and unplanned acute healthcare.

Results: Of the 125 EMR-based eligible participants, PC clinicians approved referral for 109 (87.2%). Study staff were able to reach 75 (68.8%) by phone and 30 (40%) of these consented to participate. Of the 38 (60%) who declined to participate, reasons included not interested in the program, current illness, or preferring own clinician to manage medications. At baseline, 7 were no longer eligible by HbA1c. As of 12/1/2022, 30 patients have consented and enrolled, and pharmacists have seen 21 participants for a median number of 3 visits and de-prescribed insulin/sulfonylurea for 17 (56.6% of consented). HbA1c increased by a mean of 0.46% among participants. Thirteen participants withdrew prior to completing all study visits: 6 cited new competing health concerns, 3 transportation barriers, and 4 disagreed with a higher HbA1c target (7.5-8.0%).

Conclusions: A pharmacist-led pilot study was highly acceptable to providers and to almost half of eligible frail older adults. Despite greater than expected withdrawal rates, de-prescribing of high-risk anti-diabetic medications is feasible. These results will inform the design of a pragmatic, trial of de-prescribing to assess safety, feasibility, acceptability and time-in-goal for treatment.

Paper Session
IMPROVING CARE FOR OLDER ADULTS: OPPORTUNITIES FOR TRANSLATION

Saturday, May 6
7:30 am – 8:30 am

P28

An innovative clinical pathway to improve fall-related primary care after an emergency room visit for a fall

C. M. Casey,[1] M. Kuebrich,[1] P. McKelvey,[2] A. Fox,[1] H. Li,[2] K. Engstrom,[3] M. O. Hodges.[1] *1. Senior Health Program, Providence Health & Services, Portland, OR; 2. Providence Heart Institute, Providence Health and Services Oregon and Southwest Washington, Portland, OR; 3. Strategic Management Services, Providence Health and Services Oregon and Southwest Washington, Portland, OR.*

Background: A growing number of older adults are treated in emergency rooms (ER) after a fall each year. Many of them do not receive primary care follow up to identify and decrease fall risk factors, including detection of potential frailty and cognitive impairment. Primary care pathways have not existed to systematically evaluate and stratify these risk factors after a fall.

Methods: Adults aged 75 years and older who had an ER visit for a fall and received care through the SAFER (Seniors At risk for Fall after Emergency Room visit) clinical pathway (n=121) at one of 4 clinics within a large integrated health care system were compared to a propensity matched control group (n=122) who received usual care in the same organization. Fall-related care metrics; frailty and cognitive assessments; utilization metrics, and mortality were collected for 12 months preceding and 7 months after the index fall. Categorical variables were compared with chi-square test. Continuous variables were described using Student's t-test, with difference-in-differences (DiD) analyses performed to determine the impact of interventions over time.

Results: SAFER intervention patients had more fall risk screenings and interventions after a fall-related ER visit (42% for intervention vs 3% for controls), including more pharmacist consultations (55% vs 6%). More intervention patients had a new cognitive evaluation completed (42% vs 17%), with dementia-specific diagnoses doubling in the SAFER group (15% vs 7%). Intervention patients had longer hospice lengths of stay (94 days vs 11 days) and, of those who died, more SAFER patients had hospice (67% vs 27%). No significant changes were observed in ER utilization, readmissions, or subsequent hospitalizations.

Conclusions: Primary care teams effectively used a clinical pathway to stratify an older adult's risk after a fall-related ER visit to tailor care based on fall risk, frailty, and cognition. Improved fall-related care and earlier detection of cognitive impairment, along with select utilization outcomes, demonstrate a post-fall primary care pathway can provide high value, improved care to older patients.

P29

A Sweet Spot for Intervention: Deintensifying Diabetes Medication in Hospitalized Older Adults

R. Lazarus, Y. Zweig, M. Rau, B. Otkur, J. Chodosh. *Division of Geriatric Medicine and Palliative Care, New York University Grossman School of Medicine, New York, NY.*

Background: Guidelines state that Hemoglobin A1C targets for most adults with type 2 diabetes mellitus (T2DM) are 7-8%, while older adults with comorbidities and/or functional disability may benefit from a liberalized goal of < 8.5%. However, older adults are often treated to achieve lower A1Cs, and deintensification of therapy rarely occurs. Identifying older hospitalized adults who meet criteria for T2DM deintensification may reduce avoidable risk.

Methods: We screened hospitalized older adults between August and October 2022 with T2DM and A1C ≤ 7% and offered geriatric consultation for those meeting the following criteria: age over 75, A1C recorded within the last 3 months, on hypoglycemic medications. Patients were excluded if they were admitted to the medical ICU or if they had active COVID infection. We reviewed medical records and used consultation to determine diabetic history and baseline functional status. We recommended insulin and/or oral hypoglycemic deprescribing based on geriatric consultation. We measured the frequency of deintensification recommendations in discharge documents. We also queried patients' interest in deintensification.

Results: 33/110 (30%) of screened patients met inclusion criteria and 8/33 (24%) received geriatrics consultation aimed at deprescribing. Mean age of consulted patients was 84 years [SD: 7.5], mean A1C was 5.7% [SD: 0.66], 5 (62.5%) were on insulin prior to admission, 5 (62.5%) were on oral hypoglycemics excluding metformin, 2 (25%) were on both. 2 (25%) patients lived alone, 5 (62.5%) had a history of a recent fall, and 1 (12.5%) had a diagnosis of cognitive impairment. 2 (25%) self-reported a history of hypoglycemia.

Of the patients who underwent consultation, we recommended deprescribing diabetes medications in all cases (100%). In 5 (62.5%) patients, we recommended deprescribing additional medications as well. Discharge documents for 5/7 (71%) of patients reflected deprescribing recommendations. All (8/8) patients reported an interest in medication deprescribing.

Conclusion: In an urban inpatient hospital setting, we identified older adults at risk for diabetic overtreatment. Geriatrics consultation led to deprescribing recommendation in all cases. Improving workflow to identify those at risk will likely help providers detect more patients eligible for deintensification.

P30

A Multicenter Randomized Trial of a Group-Based Yoga Program for Ambulatory Older Women with Urinary Incontinence

A. Huang,[1] M. Chesney,[1] M. Schembri,[1] E. Vittinghoff,[1] L. Subak.[2] *1. University of California San Francisco, San Francisco, CA; 2. Stanford University, Stanford, CA.*

Background: Due to the limitations of existing clinical therapies for urinary incontinence (UI), many older women are interested in identifying alternate treatment strategies that are not only effective but better tolerated and more accessible. Pelvic yoga has been recommended as a community-based, complementary treatment strategy for UI, but little is known about its efficacy or safety in incontinent women across the aging spectrum.

Methods: The Lessening Incontinence with Low-impact Activity trial is a multicenter randomized trial of a therapeutic yoga program designed to improve pelvic floor strength, autonomic function, and physical function in older women with UI. Ambulatory older women with at least daily UI were recruited from northern California in 2019-2022 and randomly assigned to twice weekly group instruction and once weekly individual practice of study-specific yoga techniques for 3 months (pelvic yoga), versus equivalent-time instruction and practice of general stretching/strengthening exercises (physical conditioning, or PC). All participants also received written education on first-line behavioral self-management of UI. Changes in UI frequency were assessed by validated voiding diaries abstracted by blinded analysts.

Results: Of the 240 randomized (121 to yoga, 119 to PC control), mean age was 62.0 (±8.7) years (max 90 years), and 40% were ethnic minorities (14% Latina, 6% Black, 16% Asian, 4% multiracial). At baseline, participants reported a mean of 3.4 (±2.2) UI episodes/day, including 1.9 ±1.9 urgency- and 1.4 ±1.7 stress-type episodes/day. Over 3 months, total UI frequency decreased by an average of 75% from baseline (i.e., 2.4 [95% CI 2.0–2.7] episodes/day) in the yoga vs. 58% (1.8 [1.5–2.2] episodes/day) in the PC group (P=.04 for between-group difference). Urgency UI frequency decreased by 80% in the yoga and 54% in the PC group (P=.02), and stress UI by 70% in the yoga and 65% in the PC group (P=.60). Over 3 months, 14% of participants reported mild musculoskeletal adverse events.

Conclusions: In a multicenter trial, a group-based pelvic yoga intervention resulted in clinically meaningful reductions in total and urgency-type UI over 3 months, providing support for yoga as a potential community-based management strategy for UI in ambulatory older women.

P31

Accelerated biological age is associated with increased delirium prevalence and plasma neurofilament light in acute geriatric hip fracture pilot

S. C. LaHue,[1,2] J. Youn,[1] M. Fuentealba,[2] V. Douglas,[1] D. Furman,[2] J. Rojas,[1] L. Vandevrede,[1] S. Roa Diaz,[2] W. Boscardin,[1] K. E. Covinsky,[1] A. Boxer,[1] J. Newman.[1,2] *1. University of California San Francisco School of Medicine, San Francisco, CA; 2. Buck Institute for Research on Aging, Novato, CA.*

Background: Epigenetic clocks (eg PhenoAge) estimate biological age by quantifying changes in DNA methylation (DNAm). Biological age is "accelerated" (AgeAccel) when epigenetic > chronological age. AgeAccel predicts age-related diseases but its association with delirium or neuronal injury markers (eg neurofilament light, NfL) is unknown.

Methods: Adults age 65+ hospitalized for acute hip fracture underwent daily delirium screening (Confusion Assessment Method). DNAm status of 850,000 CpG sites was measured in triplicate from pre-op peripheral blood mononuclear cells using Illumina MethylationEPIC arrays. AgeAccel was the residual of the linear regression model of PhenoAge regressed on chronological age.

Plasma NfL was measured in duplicate using Simoa immunoassays. Group differences calculated by T-test.

Results: Of 12 subjects (enrollment ongoing): mean age 79±8, 75% women, 42% with dementia, 33% were delirious on pre-op blood collection day. Mean AgeAccel was 4.4 years (p=0.02) in delirious vs non-delirious subjects (Fig1A). Those with positive (vs negative) AgeAccel had higher mean NfL (Fig1B, p=0.002). Delirious (vs non-delirious) subjects had higher mean NfL (p=0.004). We found no difference by dementia status.

Conclusions: In this geriatric hip fracture pilot, accelerated biological age was associated with higher delirium prevalence and NfL. Delirium was also associated with higher NfL. This pilot demonstrates feasibility and utility of measuring biological age in delirium and warrants study in a larger cohort.

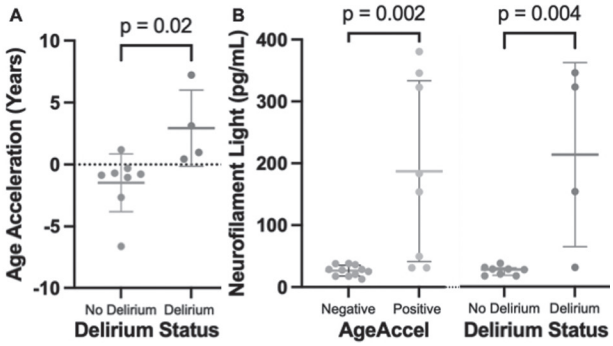


Fig1A: PhenoAge AgeAccel by delirium status. B: NfL concentration by AgeAccel or delirium status.

Paper Session
EPIDEMIOLOGY

Saturday, May 6
10:30 am – 11:30 am

P32 Encore Presentation

Unnecessary and harmful medication use in community dwelling persons with dementia

W. J. Deardorff,[1] B. Jing,[1] M. E. Growdon,[1] K. Yaffe,[1] K. Boockvar,[2] M. Steinman.[1] *1. Division of Geriatrics, University of California San Francisco, San Francisco, CA; 2. Division of Geriatrics, University of Alabama, Birmingham, AL.*

Background: Persons with dementia (PWD) often have multiple comorbidities leading to extensive medication use despite potentially limited benefit and increased risk of adverse events. We sought to determine the frequency and types of medication overuse and misuse among community-dwelling PWD based on a comprehensive set of criteria.

Methods: We included community-dwelling older adults aged ≥66 enrolled in the Health and Retirement Study from 2008-2018 linked to Medicare Parts A/B/D. Individuals were classified as having dementia using a validated algorithm. To place our results in context, we compared medication use among PWD to people without dementia through 1:1 propensity score matching on age, sex, comorbidities, and interview year. Medication usage was ascertained in the 1 year prior to an HRS interview date. Potentially problematic medications were flagged based on several domains. Potential overuse involved over-aggressive treatment of chronic conditions (e.g., insulin/sulfonylurea with HbA1c<7.5%) and medications inappropriate near the end of life. Potential misuse involved medications that negatively affect cognition (e.g., strongly anticholinergics) and from consensus criteria (Beers and STOPP).

Results: In a cohort of 1,441 PWD, median age was 83 (IQR=78-89), 66% female, and 20% Black. The mean number of potentially problematic medications in the 1-year study period was 2.17 in PWD and 1.67 in those without dementia (incidence rate ratio=1.30, p<0.001). Overall, 73% of PWD received ≥1 potentially problematic medication compared to 67% in those without dementia (odds ratio=1.34, p=0.002). PWD received more medications across most domains compared to those without dementia, including 41% vs. 30% receiving at least 1 strongly anticholinergic/sedative-hypnotic, respectively. The most frequent potentially problematic medications included proton pump inhibitors (PPIs), non-steroidal anti-inflammatory drugs (NSAIDs), gabapentin, opioids, and urinary anticholinergics.

Conclusion: Community-dwelling PWD frequently receive potentially problematic medications and at a higher rate compared to those without dementia. Deprescribing efforts in this population should focus not just on harmful CNS-active medications but also on medications across other classes, such as PPIs and NSAIDs.

P33 Student Presentation, Encore Presentation

Development and Validation of an Intracranial Hemorrhage Risk Score in Older Adults with Atrial Fibrillation Treated with Oral Anticoagulant

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BACKGROUND: High risk of intracranial hemorrhage (ICH), often due to falls, is a leading reason for withholding anticoagulation in patients with atrial fibrillation (AF). However, such risk is not recorded in administrative claims data. We aimed to develop a claims-based ICH risk prediction model and compare its performance against the existing Homer fall risk score and HAS-BLED score in older adults with AF initiating an oral anticoagulant (OAC).

METHODS: We used the US Medicare claims data to identify new users of OAC aged ≥65 years with non-valvular AF in 2010-2017. We classified patients in Northeast, South, and West regions into a training set and those in Midwest region into a validation set. We used regularized Cox regression with 10-fold cross-validation to select claims-based predictors of ICH in 1 year. We compared our AF ICH risk score with the Homer and HAS-BLED scores by area under the receiver operating characteristic curve (AUC) and assessed net reclassification improvement (NRI).

RESULTS: Our study cohort comprised of 840,020 patients (mean [SD] age 77.5 [7.4] years and female 52.2%) split into training (3,963 ICH events [0.6%] in 629,804 patients) and validation (1,397 ICH events [0.7%] in 210,216 patients) sets. Our AF ICH risk score, which included 50 predictors, had AUCs of 0.653 and 0.650 in the training and validation set, respectively, compared with those of the Homer score of 0.624 and 0.623 (p<0.001) and of HAS-BLED score of 0.580 and 0.567, respectively (p<0.001). In the validation set, our AF ICH risk score reclassified 33.1, 41.8, and 33.6% of low, intermediate, and high-risk patients, respectively, by the Homer score (NRI: 10.7%, p<0.001) and 35.8, 50.2, and 38.8% by HAS-BLED score (NRI: 19.2%, p<0.001).

CONCLUSIONS: Our claims-based AF ICH risk score may be useful to the comparative safety and effectiveness analysis of OACs in administrative claims data.

P34 Encore Presentation

Cognitive impairment and trajectories in chronic kidney disease: the REGARDS study

K. L. Cheung,[5] M. Arce Renteria,[1] P. Callas,[5] M. Kurella Tamura,[2,3] O. Gutierrez,[4] M. Cushman.[5] *1. Neurology, Columbia University, New York, NY; 2. GRECC, VA Palo Alto Health Care System, Palo Alto, CA; 3. Medicine, Stanford University School of Medicine, Stanford, CA; 4. Medicine, The University of Alabama at Birmingham School of Public Health, Birmingham, AL; 5. Medicine, University of Vermont Larner College of Medicine, Burlington, VT.*

Background: Chronic kidney disease (CKD) is associated with incident cognitive impairment (ICI) but it is unknown if longitudinal cognitive function has a different trajectory in CKD, or if age or race differences exist.

Methods: We studied 22,435 participants from the REGARDS study without baseline cognitive impairment. Participants completed a 6-item global cognition screening test every 6 months and 3 cognitive domain tests every 2 years for 10 years. ICI was defined as a score ≤4 on a 6-item global cognition screening test. Multivariable logistic regression was used to calculate OR of ICI as a function of eGFR adjusting for age, sex, race, region, education, income, hypertension, diabetes, coronary disease, hyperlipidemia, depressive symptoms and smoking. Latent growth curve models were used to determine the relationship of eGFR<60 ml/min/1.73m^2 to intercept and slope of each cognitive domain test (episodic memory, semantic fluency and letter F fluency) over time. Up to five cognitive examinations were analyzed.

Results: 13% (n=2,959) developed ICI over 10 years. As compared to eGFR ≥90 ml/min/1.73m^2 (reference), eGFR 60-<90, 45-<60, and <45 had unadjusted ORs (95%CI) of 1.8 (1.6, 1.9), 2.7 (2.3, 3.1) and 2.7 (2.2, 3.3). Accounting for other risk factors, there was a significant interaction of eGFR and age (p<0.001); compared to eGFR>90, the OR for ICI at eGFR <45 was 1.9 (1.2, 3.0) for age <65, whereas OR for eGFR<45 v eGFR>90 was 0.9 (0.7, 1.1) for age≥65. Compared to those with eGFR≥60, eGFR<60 was associated with lower baseline scores across all 3 cognitive domains, but the slope did not differ. Baseline scores were lower in mid-life compared to late-life, whereas no differences by race were observed.

Conclusions: CKD is associated with increased risk of ICI and lower cognitive domain testing in mid-life compared to late-life. Strategies to reduce cognitive impairment should focus on mid-life.

P35 Encore Presentation

Claims-based Frailty Index (CFI) as a Measure of Dementia Severity in Medicare Beneficiaries with Alzheimer's Disease and Related Dementia (ADRD)

C. Park,[1] S. Sison,[2] E. P. McCarthy,[1] N. Gouskova,[1] D. Kim.[1] *1. Hinda and Arthur Marcus Institute for Aging Research, Boston, MA; 2. University of Massachusetts Chan Medical School, Worcester, MA.*

Background: Little population-level information exists about dementia severity in administrative claims data. Lack of evidence in such data sources provides a challenge to conducting research on the ADRD population. Our study examines whether claims-based frailty index (CFI) can differentiate dementia severity in claims data.

Methods: This cross-sectional study uses CFI (range 0 to 1, higher scores indicating greater frailty) to differentiate dementia severity in 814 National Health and Aging Trends Study (NHATS) participants with ADRD whose Medicare claims data are available. We estimated the Functional Assessment Staging Test (FAST) scale (3: mild cognitive impairment; 4: mild dementia; 5: moderate dementia; 6-7 moderately severe to severe dementia) using NHATS variables and calculated CFI using 12-month Medicare claims prior to the interview date. We performed the C-statistics of the CFI for moderate to severe dementia and identified the optimal CFI cut point that maximizes sensitivity and specificity. Using the equipercentile equating method, we created a crosswalk to determine corresponding FAST scores based on CFI scores. Survival analysis was performed using the Kaplan-Meier curve and multivariate Cox regression.

Results: The prevalence of FAST stage 5 or higher was 244 (weighted percentage, 25.9%). The C-statistic of CFI to identify FAST stage 5 or higher was 0.78 [95% CI:0.72-0.83], with a CFI cut-point of 0.28 achieving the maximum sensitivity 76.9% and specificity of 62.8%. The crosswalk showed that 0.30, 0.35, and 0.41 CFI scores correspond to FAST stages 4, 5, and 6, respectively. The mean survival durations were 32.9 months and 28.8 months in the FAST stage 3 (CFI <0.30) and FAST stage 6 (CFI≥0.41). Higher FAST stage was associated with earlier mortality after adjusting for age and sex. For FAST stage 4 (CFI 0.30-0.40), stage 5 (CFI 0.35-0.41), stage 6-7 (CFI ≥0.41), Hazard ratios were 1.48 (95% confidence interval [CI], 0.96-2.29), 2.90 [1.80-3.75], and 2.98 [1.94-4.58], respectively.

Conclusion: Our study results support the utility of a CFI as a proxy of dementia severity in administrative claims data among Medicare beneficiaries while not using in-person dementia severity measurement.

Paper Session
IMPROVING AMBULATORY CARE FOR OLDER ADULTS

Saturday, May 6
11:45 am – 12:45 pm

P36

Action Plans Increase Advance Care Planning Documentation and Engagement Among English and Spanish-Speaking Older Adults

C. Ferguson, J. Gilissen, C. Scheerens, A. Volow, J. Powell, Y. Shi, D. Barnes, R. Sudore. *Medicine, University of California San Francisco, San Francisco, CA.*

Background: Advance Care Planning (ACP) has been reconceptualized as a health behavior. Action Plans (APs), or patient-directed mini contracts, have been shown to increase behavior change in exercise. However, no prior studies have assessed whether creating an ACP AP can increase ACP engagement.

Methods: English and Spanish speaking older adults with serious or chronic illness were included from public and VA outpatient clinics in San Francisco. Participants were in the intervention arm of the PREPARE for YOUR Care trial, where participants were asked to choose an AP at baseline (choose or ask a surrogate, choose surrogate flexibility, tell others medical wishes, and ask clinicians questions). At 6 months, we assessed whether participants completed their AP and if completion was associated with demographics, ACP EMR documentation, and the validated 5-point ACP Engagement Survey scores. We used t-tests, Chi-squared, and multivariate analysis adjusted for baseline ACP and clustering by physician. We used qualitative thematic analysis to explore reasons for not completing an AP.

Results: The mean age of the 586 participants was 65.6 +/-10 years; 44.0% were women, 45.9% were Spanish-speaking, 31.4% had limited health literacy, and 42.5% of people completed an AP (the top 3 APs were choose a surrogate (57.6%), ask a surrogate (16.4%), and tell others about medical wishes (15.8%)). Of participant characteristics, those with limited vs adequate health literacy were less likely to complete an AP (25.4% vs. 35.9%, p=0.01). Completing an AP was associated with greater ACP EMR documentation 49.8% vs 35.6%, p <0.001, (Adjusted OR: 2.06; 95% CI (1.43-2.97) and engagement (adjusted 5-point scores (3.69; 95% CI 3.57 – 3.81 vs 3.10; CI: 2.98 – 3.21), p <.001). Qualitative themes for non-completion included not being ready and logistic issues (e.g., family out of country, partner dying, surrogate refusing).

Conclusion: Among English and Spanish speaking older adults, creating an Action Plan resulted in greater ACP EMR documentation and self-reported engagement. Action Plans may help facilitate ACP behavior change, and additional support may be needed for patients with limited health literacy and those facing logistic barriers.

P37

Montefiore-Einstein Center for the Aging Brain (CAB): The impact of an electronic medical record template for comprehensive geriatric assessment on primary care provider management of geriatric syndromes

R. Chalmer, R. Malik. *Geriatrics, Montefiore Medical Center, Bronx, NY.*

Background: Geriatric syndromes have significant deleterious effects in older adults with cognitive impairment and dementia. Comprehensive geriatric assessment (CGA) provides recommendations to primary care providers (PCPs) in how to manage these conditions. Our study in 2019 showed low PCP response rates. This study evaluated whether PCP response rates improved after implementation of an electronic medical record (EMR) template for CGAs.

Methods: The CAB provides multidisciplinary (geriatrics, neuropsychology, neurology) evaluation for patients with cognitive concerns. We implemented a novel hybrid clinical/didactic EMR template in January 2022 for use by faculty and trainees completing CGA. Recommendations in the template include strategic text emphasis (bold font, underlining, and bullet points) and citation of relevant medical literature. Patients included in this chart review had initial CAB visit with one geriatrician between January and June and had a PCP within the Montefiore network with a visit within 6 months after CGA. Charts were reviewed for PCP documentation of implementation of CGA recommendations and rates were compared with the 2019 study. Excel was used for analysis.

Results: 82 charts were reviewed; 48 met inclusion criteria. Rates of weight loss, falls, and polypharmacy were 40%, 79%, and 93%, respectively. 269 recommendations for these three conditions were made for a mean of 5.6 per patient. Of the 269, 88 (33%) required PCP action. Of the 88, 38 (43%) were implemented. Compared to the 2019 review, in which 40% were implemented, rates of PCP response were not significantly different (X^2 .1, p=0.76). Across all the consultant's recommendations, text emphasis tools and citations of medical literature were used in a mean of 76% (10% in 2019).

Conclusion: CGA with an EMR template more than doubled the quantity of recommendations by the consultant geriatrician (from a mean of 2.4/patient in 2019) and more uniformly included text emphasis and citation of relevant medical literature. Changes did not reach significance in affecting PCP likelihood of response, though this pilot study is limited to only 1 geriatrician. We will repeat this analysis among multiple CAB providers and elicit local PCP input to improve uptake of consultations.

P38

Implementing an automated gait speed measure in a geriatric clinic and the impact on clinic workflow

T. Johnson,[1] A. Garbin,[1] C. Allison,[1] B. Jones,[2] C. Dahal,[1] J. Hill,[1] J. Stevens-Lapsley,[1] H. Lum.[1] *1. Medicine, University of Colorado School of Medicine, Aurora, CO; 2. Interactive Media Technology Center, Georgia Institute of Technology, Atlanta, GA.*

Background: Identifying declines in gait speed in older adults may have a significant impact on falls, morbidity, and mortality due to providers' improved ability to refer patients to the care they need. Experts suggest that gait speed should be considered a 6th vital sign; however, there is a need to examine implementation strategies for gait speed measurement and its effect on clinical workflow. Here, we detail 1) strategies for gait speed implementation, and 2) time added to Medical Assistant (MA) workflow due to gait speed integration.

Methods: The UCHealth Seniors Clinic provides multidisciplinary geriatric primary care to approximately 2600 older adults with an average age of 84 years old, 64% women, and 10% Black, 6% Hispanic/Latino, and 8% Asian. MAs do clinical assessments on patients before they are seen by a clinician. Implementation strategies for incorporating gait speed measurement into clinic workflow were developed by an interdisciplinary team comprised of researchers, physicians, physical therapists, MAs, and patients. The impact of gait speed measurement on MA rooming procedures was assessed via time spent performing gait speed measurement.

Results: Primary implementation strategies included 1) use of an automated gait speed measurement system incorporated into MA workflow to reduce errors and burden, 2) integration of gait speed into the electronic medical record that populates into provider notes, 3) identification of clinical champions, and 4) environmental supports in clinic to facilitate use and measurement of gait speed and provide referral recommendations (i.e., physical therapy; community exercise programs) for patients with low gait speeds. During a 4 week early implementation phase, MAs measured gait speed on 118 patients, adding a median of 19.5 seconds (14.2-26.4 sec, IQR) to the rooming process.

Conclusions: Utilizing multiple implementation strategies, automated gait speed measurements were readily integrated with minimal impact on total rooming time. Future directions include outcome measurements such as physical therapy referrals, fall rates, and sustainability of gait speed measurement. Feasibility and fidelity of gait speed measurement will need to be assessed as it is expanded to additional clinics that care for older adults.

P39

A tailored outreach program to engage patients and physicians in deprescribing chronic benzodiazepines in primary care

S. Chae,[1] J. Lindenberg,[3] E. Lee,[3] K. Shen,[2] T. S. Anderson.[3] *1. Pharmacy, Beth Israel Deaconess Medical Center, Boston, MA; 2. Northeastern University Bouve College of Health Sciences, Boston, MA; 3. General Medicine, Beth Israel Deaconess Medical Center, Boston, MA.*

Background: Benzodiazepines are commonly and chronically prescribed for anxiety and insomnia despite low evidence of clinical benefit and strong evidence of increased risks. Using a population health framework, we sought to develop and evaluate a benzodiazepine deprescribing quality improvement program in a large US academic primary care clinic.

Methods: A clinic registry of older adults prescribed chronic benzodiazepines was developed and concurrent sedating medications were identified. Primary care physicians (PCPs) received an email providing tapering resources, offering a deprescribing training, and asking them to opt out patients not appropriate for outreach. Patients were mailed one letter discussing patient-specific risk, and advising them to discuss deprescribing with the clinic's research team or their PCP. A pharmacist coordinated tapering for all patients. The primary outcomes were the number of patients who discussed deprescribing and number with a benzodiazepine dose reduction at 90 days.

Results: A total of 559 patients and 50 PCPs were included in the study. One PCP requested a deprescribing training, 4 PCPs (8%) opted all patients out of the program, and 21 PCP (42%) opted out some patients. In total, 133 patients (24%) were opted out. Of the remaining 426 patients, 38 (9%) patients contacted the team and received pharmacist-led education. Subsequently 15 (40%) of patients started a taper. At 90 days, 4 patients discontinued benzodiazepines, 2 patients have had 50% dose reduction, 2 patients have had a 25% dose reduction, 5 patients have had less than 25% dose reduction, and 2 patients returned to prior dose after trying taper. Chart review is ongoing to determine frequency of deprescribing conversations between PCPs.

Conclusion: A one-time low-cost clinic-based education on benzodiazepine risks led to deprescribing conversations for a minority of patients but when deprescribing conversations occurred, nearly half of patients started a benzodiazepine taper. Direct patient outreach resulted in greater engagement than PCP outreach.

POSTER SESSION A

Thursday, May 4
12:30 pm – 1:30 pm

A1

Finger Gangrene in End-Stage Renal Disease Patients

R. Ahmed, N. Shukla. *Geriatrics, Northwell Health, New Hyde Park, NY.*

Background:

Finger gangrene distal to arterio-venous fistula (AVF) is a potential complication in end stage renal disease (ESRD). This clinical finding can be due to the AVF itself as a form of steal syndrome in some instances. It can also be a finding of calciphylaxis with increased 1-year mortality in ESRD patients. This case describes a patient with ESRD with AVF-ipsilateral gangrene.

Case:

66-year-old male with ESRD on dialysis three times/week via left AVF, peripheral artery disease, atrial fibrillation, type 2 diabetes presents for sub-acute rehabilitation for physical deconditioning following hospital discharge. His initial exam revealed several wounds notably on his left middle finger with an ulceration without discharge on his proximal interphalangeal joint (PIP) with surrounding erythema and some minute areas of skin consistent with dark eschar. He had similar findings on his bilateral feet involving the third through fifth digits of his left foot and the second digit extending into the dorsum of the right foot. Left radial pulse was palpable. He felt pain with movement of his finger. AVF on the left forearm was unaffected and had audible thrill. X-ray of the left hand revealed focal ulceration without evidence of osteomyelitis. Extensive calcification noted. Cefalexin was started and vascular surgery recommended routine wound care. Despite treatment, gangrenous skin changes gradually started to extend into the hand and Doxycycline was started. His wounds on his feet began to express purulent drainage and patient was febrile necessitating hospital readmission for osteomyelitis with sepsis. Systemic IV antibiotics were started. Vascular surgery considered amputation of the affected digits, but patient was hypotensive and unable to tolerate dialysis or surgery. He expired on comfort care.

Discussion:

Ipsilateral AVF gangrene of the finger is an uncommon phenomenon but can occur in ESRD patients. Though he presented with finger gangrene distal to the AVF, imaging revealed underlying calciphylaxis which is a likely underlying cause. Annual incidence of calciphylaxis is low, about 0.35% and typically occurring in ESRD patients. This patients' other chronic conditions, diabetes and peripheral artery disease further complicated the clinical picture. One year mortality in patients with calciphylaxis and ESRD is 45 to 80%. Amputation of the affected digits may have helped decrease mortality, but our patient was not a good candidate.

A2

A Case of Cerebellar Cognitive Affective Syndrome

M. Al-Ahmad, K. Scandrett. *UPMC, Pittsburgh, PA.*

Introduction

The cerebellum regulates voluntary movement and coordinates posture, walking, and speech. The cerebellum affects cognitive skills, emotions, and behavior due to its links to the brain and association areas, a research found.

Case presentation

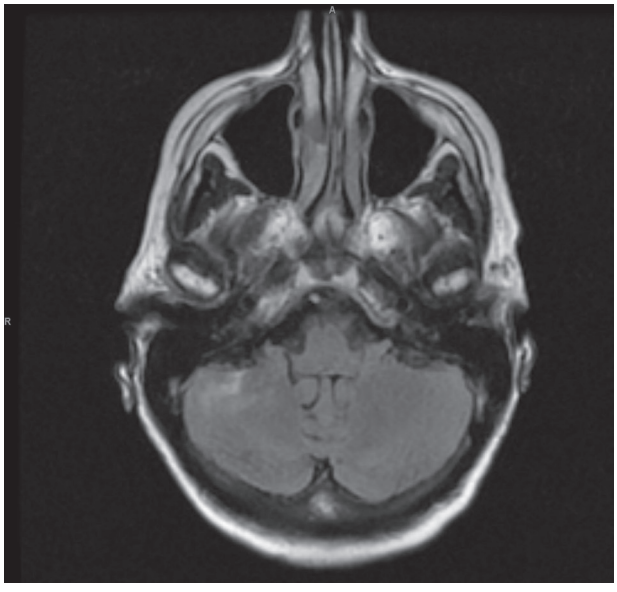
We present a case of an 81-year-old woman with a history of right cerebellar CVA secondary to a vertebral artery dissection came with disorientation and hyperactive delirium. Prior to admission, the patient's functional state had declined gradually over the previous two months along with concerns for paranoi. The patient has been exhibiting signs of at least mild cognitive dysfunction for months to short number of years. She has had a more pronounced subacute decline is apparently been ongoing since a mild illness with COVID-19.

Disinhibited activities and a deterioration in executive functioning led to her hospitalization. Two weeks before, her home was tidy; on admission, her belongings were broken and discarded.

All strudies including LP, inflammatory markers, EEG were unremarkable, MRI without contrast with old infarct and scant microhemorrhages, no other structural lesions, no excessive atrophy

Discussion

Recent reports relate structural and functional cerebellar anomalies to schizophrenia, bipolar illness, depression, anxiety, ADHD, and autism. Cerebellar cognitive affective syndrome is characterized by impairments in executive function, spatial cognition, visual-spatial memory, personality change, and linguistic issues. It occurs from injury to the cognitive cerebellum in the cerebellar posterior lobe and is hypothesized to reflect cognition dysmetria similar to motor control dysmetria from damage to the sensorimotor cerebellum in the anterior lobe.



A3

INCIDENTAL FINDING OF RCC COMPRESSING IVC IN ELDERLY WITH AFIB

N. Alam, S. Rodriguez, S. Pati. *Geriatrics, Texas Tech University Health Sciences Center, Odessa, TX.*

Introduction: AF is the most common arrhythmia and risk factors are age, DM, HTN. Progression of AF is hyperexcited atrium resulting in difference in contraction b/w atria and ventricle leading to increased risk of clot especially in the left atrium which places patient at risk of stroke or thromboembolism. In this case report, a new variable was added that placed patient at higher risk of VTE and is believed to have prompted the patient to enter AF. Here we discus a case of new onset AF with RVR whose inciting factor was an incidental Renal Cell Carcinoma compressing IVC causing increased pressures in the atrium.

Case Presentation: 63 y/o male with H/O DM, HTN admitted for AF with RVR c/o SOB, hematuria. On P/E there was a mass in

LUQ. CT Chest showed B/L pulmonary nodules, enlarged IVC. CT abd showed stage 4 RCC with Lt renal mass, Lt renal vein thrombus. Patient was started on cardizem and heparin drip. Oncology suggested lung biopsy and heparin drip until cardioversion. Biopsy showed metastatic RCC. There was an emphasis for patient being at risk of life threatening bleeding if on anticoagulation. However in anticipation of cardioversion heparin was continued. Urology recommended poor surgical candidate given the advanced metastatic cancer. patient underwent unsuccessful cardioversion and developed hematuria. Cardiology recommended, risk of bleeding is higher than risk of stroke. Heparin and ASA were discontinued. Due to poor prognosis patient was admitted under Hospice.

DISCUSSION: Our case demonstrates an unexpected presentation of new onset AF with RVR in a patient with RCC compressing IVC. Different cancer are associated with increased risk of AF. RCC was number 7 in regards to association b/w cancer and AF. Patients with malignancy are in prothrombotic state and addition of AF poses even greater risk of stroke. Given the delicate balance b/w cancer and risk of life threatening bleed while on anticoagulation place patients with AF in a difficult situation which was a major issue in our patient where the idea of case report arose to help clinicians.

CONCLUSION: Recognition and early detection of cancer in patients with AF is vital, especially given that it can potentially cause life threatening bleeding if usual treatment is initiated so team based decisions involving specialists are encouraged and patient education on risk and benefit of anticoagulation therapy is strongly suggested prior to being initiated in elderly population.

A4

Swinging High and Low: Type 1 Diabetes in Long-Term Care

S. Aljedaani,[1] L. Shaffer,[2] R. M. Wright.[1] *1. Medicine/Geriatrics, Penn State Health Milton S Hershey Medical Center, Hershey, PA; 2. Post Acute Care, Penn State Health Community Medicine, Hershey, PA.*

Introduction

The prevalence of type 1 diabetes mellitus (DMT1) in long-term care (LTC) settings is low compared to type 2 diabetes (18-30% of LTC residents), though people with DMT1 are living longer. Many staff are not aware DMT1 requires a different approach than DMT2. Little guidance exists on how to best to manage DMT1 in LTC, and it leads to wide fluctuations in glucose control.

Case Description

A 78 yo woman with DMT1, CAD, PAD, and mild dementia went to skilled rehabilitation after a hospitalization for diabetic ketoacidosis (DKA) complicated by hypovolemic shock and metabolic encephalopathy. Dementia led to DKA. At admission, she was on insulin detemir 36 units at bedtime, 10 units of insulin lispro at breakfast and lunch, 5 units at dinner, along with a sliding scale 4 times a day. This resulted in low fasting glucose (FG) levels in the 50s and lunchtime glucose in the 500s. Some glucose checks were obtained postprandially, though it was difficult to tell which ones. The facility does not offer a concentrated carbohydrate diet. An evening snack cart brings cookies and chips. Candy wrappers were in our patient's trash bin.

Discussion

Management of DMT1 in LTC is unique and challenging. Multiple guidelines on diabetes management in long term care were reviewed. None contained specific guidance on how to dose insulin or what types of insulin to use in DMT1. Type 1 diabetics cannot live without insulin even if they do not eat much. The LTC system imposes challenges on DMT1 control: compressed meal schedule, carbohydrate content, the acceptable window of time for checking glucose levels. Individual characteristics of type 1 diabetics like nutrution status, dysphagia, dementia, and inconsistent caloric intake thwart dosing of rapid acting insulin. Continuous glucose monitoring (CGM) is not permitted. High staff turnover makes it impossible to train everyone to use CGM. ADA 2022 guidelines recommend all DMT1 receive basal insulin even with low intake. Review of her glucose trends and the unique LTC setting led to these Lessons:1) insulin regimens must be individualized. 2) Split the daily basal insulin dose between 7AM and 9PM. 3) fast-acting insulin must be given right before or after meals and adjustable with sliding scale according to intake. 4) Target FG 100-300 with meals. Lunchtime glucose levels came down to 200-300s while the dinnertime levels were 200s.

A5 Encore Presentation

Cognitive impairment in NPH; Could it be Alzheimer's?

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Background

Normal Pressure Hydrocephalus (NPH) can present as a reversible cause of dementia. It is crucial to differentiate from other causes of dementia. Alzheimer's disease (AD) is recognized as a source of comorbidity in patients with NPH and can exacerbate their cognitive decline. Differentiating the two is complicated due to the lack of validated clinical and neuroradiological techniques. We present a case of NPH which was being managed for possible co-existing AD.

Case

81 years old female with a past medical history of hypertension, diabetes mellitus, hyperlipidemia, NPH, and possible AD presented to the clinic for a geriatric evaluation. Her symptoms included cognitive impairment, urinary incontinence, and ataxia. The patient has been followed up by a Neurologist for 10 years prior. MRI at that time revealed findings that raised the possibility of NPH. She declined evaluation or treatment, by refusing a lumbar puncture and a ventricular shunt. The patient's cognitive function did not improve and was presumptively diagnosed with AD. She was started on donepezil and Memantine 3 years after diagnosis of NPH. After evaluation by our team, her cognitive decline was deemed not compatible with AD. We decided to wean her off donepezil as she was also experiencing adverse events, including weight loss and anorexia; that eventually improved. We hypothesize that the lack of improvement in her cognitive function was due to untreated NPH rather than superimposed AD.

Conclusion

Patients with untreated NPH can mimic those with AD. 20% of patients are misdiagnosed with other diseases such as AD. Patients should have a thorough evaluation by a multidisciplinary approach including a Geriatrician, Neurologist, and primary care provider. No established guidelines are present to aid in the diagnosis of AD in patients with NPH. Studies have hypothesized methods to differentiate AD and NPH such as cortical biopsy. Cerebral spinal flow imaging with the reduced flow into the lateral ventricles suggests NPH. Positron emission tomography (PET) showing cerebral hypometabolism is typical for AD. More studies are needed to investigate methods for differentiating the two diseases. Moreover, this will prevent unnecessary medications that could result in adverse events which affect the patient's quality of life.

A6 Encore Presentation

Best Practices for Addressing Housing Insecurity and Homelessness in Older Adults

O. Bamishigbin, E. Lee, R. Loza, E. Gelb, B. Alog, C. Escobar, J. Howe, J. McGougan, K. Gustafson, P. Emelle, R. Batra. *SCAN Health Plan, Long Beach, CA.*

Background: Housing insecurity and homelessness (H&H) is a significant driver of health inequities and is associated with poorer self-rated physical health and an increased number of chronic conditions. Per the Los Angeles Homeless Service Authority, older adult

homelessness increased 20% between 2017 and 2020. 50% of homelessness in older adults is due to economic hardship, 20% weak social ties, and 10% disabling health conditions. The current system that provides support to prevent H&H is ill-equipped to support older adults. Accordingly, the purpose of this case series is to describe best practices used by SCAN Health Plan to address H&H in older adults in Los Angeles.

Methods: SCAN Health Plan's housing insecurity program served 120 members in 2021. Demographically, 58% of members were between the ages of 65 and 74 and 32% are between the ages of 75 and 84. 57% of members were women and 43% were men. 38% of members were Hispanic, 31% were White, 9% were Black, and 22% were "Other." One case manager and one community health worker led whole-person interventions that included establishing care with a primary care physician, securing mental and behavioral supports, enrolling members into public benefits e.g. Medicaid and food stamps, connecting members to legal aid, and assisting members in receiving housing vouchers.

Results: Of these 120 members, 71 had received a significant duration of intervention (>60 days or goals met). Post-intervention, all 71 members were connected to programs and 83% of members were housed or prevented from being homeless. 22 older adults (31%) received permanent housing, 15 (21%) were connected to a family member or friend, 15 (21%) received temporary or transitional housing, 12 (17%) received housing vouchers, and 7 (10%) were prevented from being evicted.

Conclusions: As a result of SCAN's efforts, we believe that best practices for addressing H&H in older adults include 1) addressing both H&H and medical needs, 2) providing personalized one-on-one assistance to navigate the housing support and healthcare systems, and 3) working collaboratively with county housing officials and landlords to ensure housing remains accessible.

A7

A diagnosis within reach: a case report of allergic contact dermatitis

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Background: Allergic contact dermatitis is a T cell-mediated hypersensitivity reaction that presents with a pruritic and sometimes painful rash and can be diagnosed by history and physical alone without need for histopathologic confirmation. Here, we present a case in an older adult with allergic contact dermatitis secondary to topical hydrogen peroxide. This case can help providers recognize a unique rash distribution, diagnose, and treat in the primary care office.

Case Presentation: A 97-year-old man with macular degeneration, osteoarthritis, and atopic dermatitis with no known allergies was seen in the geriatrics clinic for subacute presentation of worsening pruritis. Physical exam showed well-demarcated, erythematous patches on the chest, arms, and legs, notably sparing the face and back. The rash was associated with excoriations of the distal legs and edema of the forearms and left hand. The patient denied any recent exposures or new medications. However, at the end of the visit his wife urged him to reveal the bottle of liquid he kept in a compartment of his rollator. This turned out to be hydrogen peroxide, which he had been applying topically to body surfaces within his reach as a self-prescribed remedy for his atopic dermatitis. The patient was diagnosed with allergic contact dermatitis on a background of atopic dermatitis. He was advised to discontinue the offending agent and was started on a prednisone taper, fexofenadine, and topical triamcinolone. At 3 week follow up visit, the patient's symptoms had resolved.

Conclusion: This case highlights the importance of a thorough history and physical to guide clinical diagnosis while taking into consideration unique challenges that older adults might face. Vision impairment may prevent patients from self-identifying a rash, and patients may not think about OTC or topical agents as part of their "medication list" when asked about new meds. The distribution of the rash can prompt providers to inquire about topical agents the patient may have self-applied, and eliciting collateral history from patients' family members can help provide diagnostic clarity. Finally, this is a diagnosis PCPs can feel empowered to recognize without the need for over-utilization of resources or invasive diagnostic procedures.

A8

Centennial Patient with Suspected Cryptogenic Organizing Pneumonia

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Cryptogenic Organizing pneumonia (COP) has been reported worldwide with annual incidence of 1.10 to 6.7 cases per 100,000, with a mean age of presentation between 50 to 60 years (range 17 to 95). This is the first case report of COP in a 100-year-old patient in published English literature.

Case report: Hundred years old Spanish speaking male presented to the hospital ER with 5 days complaints of cough and increasing shortness of breath. Earlier he received Augmentin for community acquired pneumonia at an outside facility due to patchy infiltrate on left lower lobe on CXR and lingular infiltrate on CT chest. Past medical history was significant for Anemia, Myelodysplastic syndrome, Hypertension, Coronary artery disease, and BPH. No history of smoking or alcoholism. Significant positive findings on physical examination included new requirement of 2L nasal cannula(NC) oxygen(O2) to keep O2 saturation above 90% and bilateral chest crackles.

Hospital Course: Patient was started broad spectrum intravenous antibiotics for suspected community acquired pneumonia. Workup for fungal, viral, and bacterial infections was negative. Over the next 3 days, his breathing deteriorated and he was switched to 5L nasal cannula oxygen to maintain O2 saturation above 90%. Repeat CXR showed patchy airspace opacities in the right upper and left mid lungs and CT chest revealed bilateral upper lobe ground glass and consolidative opacities, negative for pulmonary embolism. His modified swallow study was negative for aspiration. Due to deterioration in the absence of obvious infectious process COP was considered. Pulmonary decided to empirically start him on therapeutic dose of steroid of 60mg for COP and differed bronchoscopy considering patient advanced age. Next few days his condition stabilized, and O2 requirement came down to 2L NC and there was no further deterioration in his CXR imaging. He participated in physical therapy and was discharged with home physical therapy and a prolonged course of steroids.

Discussion: Increasing population of nonagenarians and centennials may be changing the usual disease epidemiology, that is based on studies of younger population. As suggested by our care report, COP can be successfully treated when timely managed in much older patients. **Conclusion:** Though never reported COP in a 100-year individual but high index of suspicion can result in successful treatment of COP in the centennial population.

A9

A Rare Case of Recurrent Reversible Vasoconstriction Syndrome (RCVS) Causing Severe Anxiety

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Introduction: When patients present with severe thunderclap headache (HA), life threatening etiology such as Cerebral Vascular Accident (CVA) must be ruled out. RCVS, a condition that rarely reoccurs, can be a possibility. This rare recurrent RCVS case led to severe anxiety in our patient.

Case presentation: A female with history of hypertension, dyslipidemia, coronary artery disease visited an emergency room (ER) with thunderclap HA but was discharged home after negative workup.

Three days later she visited another facility for non-resolution of HA. She was sent to our facility, and workup including Cat Scan (CT) of the head was negative. She then, had a generalized seizure, and was given 1 mg of intravenous Lorazepam. She was admitted under neurology after cerebral angiogram showed evidence of RCVS of bilateral middle cerebral arteries (MCAs). She was placed on nimodipine, a calcium channel blocker used to treat RCVS. Repeated brain magnetic resonance angiography showed resolution of stenosis. She was then discharged home.

Nine months later, she was again transferred to us with 7 days of debilitating HA. Her exam and blood work were normal. Cerebral angiogram redemonstrated right MCA stenosis. She was placed on nimodipine 60 mg every 4 hours with resolution of HA. However, she developed

anxiety and panic attacks requiring continued psychologic counseling after realizing that she belongs to the 5% of patients who suffer from recurrent RCVS.

Discussion: RCVS comprise a group of diverse conditions, all characterized by reversible multifocal narrowing of the cerebral arteries, heralded by sudden onset (thunderclap), severe HAs with or without associated neurologic deficits (1). This condition is severe and can be a source of significant distress for patients and providers. Sequelae of RCVS include ischemic or hemorrhagic CVAs. RCVS has been reported in people aged 10 to 76 years, but occurrence peaks at around 42 years and the syndrome is more common in women than men (2). This case highlights that we need to think outside the box when evaluating any medical condition. I should be kept in mind, that the geriatric population is not spared from RCVS.

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A10

Polypharmacy and Multimorbidity Obscuring a Diagnosis of Cerebral Amyloid Angiopathy

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Background: Cerebral amyloid angiopathy (CAA) is characterized by amyloid beta-peptide deposits within cerebral arteries causing both single and recurrent lobar hemorrhages in the elderly. It is also suspected in patients presenting with multiple microhemorrhages over several months or years. A distinct manifestation includes cerebral amyloid angiopathy-related inflammation (CAA-ri) characterized by inflammatory response to amyloid deposition with acute or subacute cognitive decline rather than hemorrhage. CAA-ri often presents in younger patients with a mean age of 63 years.[1]

Methods: A single case at a VA medical center was reviewed.

Case: A 72-year-old functionally independent male with a history of coronary artery disease, remote alcohol use disorder, sleep apnea, depression, anxiety with benzodiazepine use, chronic low back pain, and benign prostatic hypertrophy presented to Geriatric clinic for polypharmacy and medication management. At a neurology appointment 22 months earlier, he reported difficulty with semantic memory and episodic confusion. On initial assessment he was taking 26 prescribed medications and 16 over-the-counter medications and supplements. Modified MoCA of 15/22 suggested mild cognitive impairment. Significant polypharmacy was suspected as the major contributor to his cognitive decline. Neuropsychology testing determined he did not meet criteria for a neurocognitive disorder. Six months later, he was admitted for subacute dizziness, diplopia and poor concentration. MRI showed areas of microhemorrhage concerning for CAA with an unremarkable lumbar puncture, and negative autoimmune encephalitis panel. Aspirin, ibuprofen, and many of his prescription and OTC medications were discontinued. Patient was discharged home with therapy focused on blood pressure control.

Discussion: Cognitive impairment is often multifactorial. Multimorbidity and extensive polypharmacy can contribute to several diagnostic cognitive biases including confirmation and anchoring biases. Although cognitive impairment is typically associated with advanced CAA, this patient may have experienced earlier CAA-related inflammation. Clinicians should consider that CAA can present with subacute cognitive decline rather than acute cognitive changes and hemorrhage.

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A11

Rare Granuloma annulare presentation in elderly

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Introduction

Granuloma annulare (GA) is a benign inflammatory skin disease typically presenting as asymptomatic, erythematous, annular plaques or papules affecting dorsa of hands and feet in younger females and children. We report a case of an elderly woman presenting with disseminated skin lesion concerning for, malignancy, pigmented dermatosis and tinea corporis requiring clinical and histopathological workup.

Case

A 84 YO with PMH of HTN, depression, thyroid cancer, thyroidectomy, hypothyroidism, Chronic Kidney disease stage (CKD) 3A who presented with widespread rash without associated flaking or itching. She denied any recent medication change, human contact with similar skin lesion or pets at home. On physical exam, numerous erythematous annular plaques involving bilateral axillae, extensor arms, L flank, bilateral groin/upper inner thighs, and bilateral knees; without scaling- mimicking tinea cruris.

She finished treatment with topical nystatin and terbinafine 250 mg without improvement and was referred to dermatology given concerns of granulomatous disease and possible underlying malignancy. Her KOH preparation was negative and punch biopsy indicated dermis with focal areas of mucin deposition associated with interstitial infiltrate of histiocytes with basophilic cytoplasm, perivascular infiltrate consistent with granuloma annulare. Her rash faded in response to tacrolimus.

Discussion

GA is a benign inflammatory dermatosis mostly involving the trunk, extremities, and dorsal hands in feet in young adults. The etiology is poorly understood and can be due to systemic diseases like HLP, Diabetes, infections, thyroid disorder, and malignancy: or drug-induced. GA can be frequently mistaken for tinea cruris. GA typically resolves spontaneously within 2 years. Topical steroids are the first line treatment, however for generalized spread calcineurin inhibitors, TNF-alpha inhibitors are prescribed.

Conclusion

This case highlights unusual locations of GA in elderly patients. It serves as a reminder that GA should be considered among the differential diagnoses along with tinea cruris when evaluating annular lesions of the groin/axillary folds and the importance of skin biopsy for such lesions

A12

The COVID-19 booster- a disparity in minorities and elderly

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Background:

The COVID-19 pandemic caused a worldwide impact and revealed disparities in the healthcare system. While COVID-19 vaccinations reduce the risk of hospitalization, vaccination hesitancy among minority populations continue to drive disparities in health outcomes. According to the CDC, Hispanics and Blacks were less likely to receive the COVID-19 vaccines and are now the lowest with receiving the booster. Older adults are disproportionately affected by the infection as well and are considered a priority for vaccination. The following case illustrates an elderly minority who did not receive the booster and developed COVID-19 pneumonia.

Case:

Eighty-eight-year-old Ecuadorian male with past medical history of atrial fibrillation and CAD that presented to the hospital due to dyspnea and found to be COVID positive. He was vaccinated for COVID but did not receive the booster. His family was hesitant about him receiving it and felt he should be "protected" with his vaccination status. During his stay, he developed hypoxia and ultimately required BiPAP. CTA chest showed no PE. He received dexamethasone, tocilizumab, and antibiotics. He was given a dose of remdesivir but developed significant transaminitis.

Results:

His clinical condition worsened, and the patient decided to remain no code. He ultimately was placed in comfort care and passed away. This case demonstrates the morbidity and mortality COVID-19 can cause, even on vaccinated patients; it highlights the importance of receiving the booster as COVID variants exist. In this case, the patient was influenced by his family to not get the booster. Vaccination hesitancy remains a barrier and occurs higher in minorities, with reasons including lower health literacy, lower income, lack of nearby facilities, and discrimination. Data from a Medicare survey on COVID-19 patients found that Hispanics and Blacks had less vaccination rates compared to White[1]. This illustrates the further gaps in care due to age and race.

Conclusion:

To prevent further complications and deaths from COVID-19 pneumonia, the medical community must strategize ways to reduce healthcare disparities and increase COVID booster administration to minorities and the elderly.

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A13

PANCREATIC INTRADUCTAL PAPILLARY MUCINOUS NEOPLASM ASSOCIATED WITH ACROMEGALY

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Background: Acromegaly is rare but an age – related disease associated with increased risk of certain cancer types. However, the medical literature does not reveal much information about pre - cancerous conditions linked with Acromegaly. This case report describes an older adult with Acromegaly who presented with diffuse abdominal pain and eventually found to have a premalignant pancreatic cystic lesion.

Case: A 75-year-old male with a history of acromegaly, diabetes, hypertension, and arthritis presented with 2 weeks of diffuse abdominal pain and distress. Before his diagnosis of acromegaly 4 years earlier, he had complained of headaches, joint pains, and morphological changes. On the physical exam, clinical features of acromegaly were apparent. Laboratory tests revealed high basal serum concentrations of GH and IGF-I. An MRI of the brain showed a large 3.0 x 2.3 x 3.7 cm enhancing mass in the sella with bony infiltratation. The patient underwent transnasal/transsphenoidal pituitary resection which showed a growth hormone-producing pituitary adenoma. 3 years later, the patient demonstrated symptoms of pancreatitis. MRI showed multiple pancreatic cysts with pancreatic duct dilation. Endoscopic ultrasound confirmed pancreatic cysts, and cyst fluid analysis showed high CEA levels and histology were consistent with Intraductal Papillary Mucinous Neoplasm (IPMN).

Discussion: This case report serves an illustration of two concepts: firstly, chronic GH and IGF-1 excess may accelerate the aging process and secondly, these hormonal excesses increase the incidence of both premalignant as well as malignant conditions. Thus, clinicians should be highly vigilant of symptoms in acromegaly patients that may be caused by premalignant and malignant masses.

A14

DERMATOLOGIC TOXICITY OF A NEW TYROSINE KINASE INHIBITOR IN AN OLDER PATIENT WITH CHRONIC LYMPHOCYTIC LEUKEMIA

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Background: Bruton's tyrosine kinase (BTK) inhibitors represent a breakthrough in treating chronic lymphocytic leukemia (CLL) and other B-cell malignancies. Acalabrutinib and Zanubrutinib are second-generation irreversible BTK inhibitors to treat patients with relapsed or refractory mantle cell lymphoma. Here, we present an older adult with CLL and the first reported dermatologic side effect of Acalabrutinib.

Case: An 81-year-old male presented for a healthcare maintenance visit with a 12 year history of treated CLL, Hodgkin lymphoma, and sarcoidosis. A recent surveillance PET scan showed a large right iliac node and a mass compressing the ureters. A biopsy showed recurrent CLL and Acalabrutinib was started. One year later, purpuric eruptions and purple discoloration appeared on the forearms and hands with edema. Scaly erythematous plaques were noted over the ankles, dorsal and plantar foot surfaces. A skin biopsy revealed non-inflammatory occlusive vasculopathy with intravascular thrombi and no inflammatory dermal infiltrates. Ultrasound was negative for deep venous thrombosis bilaterally and the skin condition was attributed to Acalabrutinib. Upon discontinuation of the medication, the purple discoloration faded, and the edema improved.

Discussion: To the best of our knowledge, this case is the first reported instance of Acalabrutinib induced purpura and plaque formation of the extremities.

A15

Geriatric Emergency Surgery: Using the 4 M Model as a guide to see the person beneath the trauma

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Background

To improve care for older adults, The John A. Hartford Foundation started the Age Friendly Health System Initiative to bring care concordant with the 4M Model to hospitals across the United States. The following patient example helps demonstrate the value of employing this framework for delivery of high value geriatric surgical care.

Patient Scenario

A 74-year-old gentleman, living alone, with reported history of dementia, was admitted to the surgical service with altered mental status, pneumoperitoneum, critical limb ischemia, diffuse pressure wounds, and malnutrition. He underwent exploratory laparoscopy with gastric wedge resection and a right above the knee amputation after unsuccessful attempts at stenting, thrombectomy, and bypass.

He was cared for with geriatric consultative assistance for complex medical management and delirium prevention. He discharged to a SNF, readmitted within 30 days for worsening of his wounds with severe infection, and was transitioned to hospice. On retrospective review his care, over time the approach became more concordant with a focus on his prior mentation deficits which led to poor self-care, prior chronic immobility leading to severe wounds, and what mattered most. This culminated in his transition in goals of care to focus on comfort.

Conclusions

This gentleman was admitted for 31 days over the span of 2 months with several life-threatening conditions. Traditionally in emergent geriatric surgical management, teams focus on emergent and urgent issues and stabilize patients before broadening their perspective to the factors that contributed to the admission and the longer-range goals to which we should tailor our treatment approaches. In patients with exceptionally complex care, like this patient, this can result in many interventions before this bigger picture is integrated into treatment plans. We suggest that by employing the stepwise thought process of the 4M Model early, even in, and perhaps especially in, highly complex patients, and repeating this framework frequently throughout the complex care of geriatric surgical patients, geriatricians can help ensure all care is tailored to the older adult's unique functional, cognitive, and medical situation and aligned with what matters most to them.

A16

Testing & Driving with Alzheimer's

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We evaluated a 79 year-old man in Memory Clinic, who presented for a second opinion of Alzheimer's diagnosis (AD) from an outside Memory Clinic. At his prior clinic, he received neuropsychiatric testing, MRI brain, and a new AD biomarker test by PrecivityAD, which measures amyloid-beta (Abeta)42/(Abeta)40 ratios in the blood. The brain MRI had minor hippocampus changes, however no other noted concerns. MOCA on current exam was 23/30 (Recall 0/5, Orientation 4/6) consistent with prior testing. He has a PhD in mathematics and masters in engineering. He was attentive and appropriately interactive. Socially he lives alone after his wife had a large stroke one year ago, requiring SNF placement.

He reported that he was driving and denied any tickets, getting lost, or accidents. He typically drives short distances and does not think he has any issues with driving. His sister/POA was unsure about his driving ability, as she lives out of state. Further into the interview, the patient relayed that his prior Memory Clinic gave him a letter requesting revocation of his license based on the AD diagnosis. He wanted a second opinion to readdress this concern.

The patient had crossed state lines to come to this clinic and the reporting requirements do vary by jurisdiction. His short term memory was poor, however he retained significant cognitive and physical functions otherwise. From records, it appeared that the diagnosis itself had prompted the report and this was heavily based on the high likelihood presented by the PrecivityAD testing.

The PrecivityAD test looks for the ratio between Abeta42: Abeta40 as noted above. Ratio's below 35 are negative, 36-57 are intermediate, and 58-100 are consistent with the presences of amyloid plaques. The patient had a ratio of 84, which is consistent with the presence of amyloid on CSF or amyloid plaques on PET scan. With his impaired recall, this is consistent with an AD diagnosis, however does not confer overall functional status.

It is important to recognize that patient's early in the course of AD continue to have some degrees of independence. Not all initial presentations are identical and testing must be highly scrutinized prior to use in life changing recommendations, which will become more important as biomarkers are being more widely used in earlier stages of AD. Using a novel blood test without taking into account function and driving capacity could led to loss of trust in the medical system, causing the most vulnerable patients to miss out on time appropriate care.

A17

Never Too Late: Withdrawal of Care in Honor of the Advanced Directive

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Withdrawal of artificial nutrition and hydration (ANH) is an ethically, medically, and legally valid choice for patients suffering from terminal illness at the end of life. However, in the absence of life-threatening illness, withdrawal of ANH poses an ethical dilemma when hastening of death results.

A 78-year-old woman with history of Alzheimer's disease was admitted to skilled nursing facility following hospitalization for skull fracture, acute subarachnoid & right temporal lobe hemorrhages sustained after a fall down stairs. She experienced respiratory failure requiring tracheostomy (later reversed) & dysphagia requiring percutaneous endoscopic gastrostomy (PEG) tube placement. On exam, she showed profound cognitive deficits with fluctuating states of awareness, limited eye contact, aphasia, & quadriparesis.

For the next 5 years the patient remained stable with no significant neurologic improvement, dependent on enteral tube feeds for nutritional support. An acute episode of hypoxia, fever, & cough, which ultimately resolved, prompted reconsideration of goals of care. In light of the patient's low quality of life & poor prospect of improvement, family decided they no longer wanted to unnecessarily prolong life, referencing the patient's advance directive (AD) created prior to her head injury & Alzheimer's diagnosis as the basis for their decision. The AD had explicitly expressed wishes to allow natural death and avoid artificial nutrition. Although the AD had not been honored at the time of her head injury, the family now wished to honor her wishes and requested withdrawal of care. Enteral feeds were stopped, however hydration was continued. The patient survived another 28 days, and due to concerns for prolonged suffering, family requested cessation of all hydration and PEG tube removal. The patient was offered oral wet swabs as a comfort measure, ultimately succumbing to death 3 days later.

Artificial nutrition and hydration are medical interventions often confused for provisions of comfort, a humane intervention that should be afforded to all. In this case, the patient remained in a prolonged minimally conscious state with little chance of meaningful recovery. In absence of significant life-threatening comorbidities, the withdrawal of ANH led to expedited death. The witness burden placed on family and staff was great, however ethically acceptable in accordance with the patient's AD.

A18

Idiopathic Retroperitoneal Fibrosis and Its Related Complications in an Older Adult

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BACKGROUND

Idiopathic Retroperitoneal Fibrosis (IRF) is an immune-mediated disease, and the nonspecific nature of symptoms may contribute to considerable diagnostic delay.[1]

CASE

69-year-old African American female with hypertension, hyperlipidemia, chronic obstructive pulmonary disease and smoking history (1 pack per day for 50 years) presented to the emergency room with lower back and abdominal pain with bloating and dyspnea. She was found to have Creatinine of 7.27 mg/dl and blood urea nitrogen of 44 mg/dl. Renal ultrasound showed bilateral hydronephrosis and proximal hydroureter. MRI revealed rind of soft tissue around the infrarenal abdominal aorta and along common iliac arteries. Susequently bilateral ureter stents and nephrostomy tubes were placed, and Creatinine went down to 1.1 mg/dl. She then underwent robot assisted laparoscopic biopsy and ureterolysis. Biopsy reported fibroadipose tissue with inflammation and fibrosis without evidence of malignancy and IGG4 related disease. Workups for other autoimmune diseases, malignancy and IGG4 disease were negative. She was treated with steroid with no significant response but clinically deemed not to be fit for immunosuppressive therapy. Later she developed left ureter leakage, uretero-colic fistula and multiple infections. Over the course of years, she was admitted to skilled nursing facility several times for intravenous antibiotics and rehabilitations. She passed away four years after the diagnosis of IRF from the complecations of sepsis.

DISCUSSION

IRF is more prevalent in individuals aged 40 to 60 years with a male to female preponderance of 2:1 to 3:1 with the incidence of 0.1 to 1.3 cases per 100,000 people per year.[2] IRF can be of immunoglobulin G4 (IgG4) related or non-related. It is a part of the chronic periaortitis syndrome characterized by the presence of fibro-inflammatory tissue that surrounds the infrarenal abdominal aorta and iliac arteries and extends into the retroperitoneum to envelop structures such as ureters.[2] It has association with HLA-DRB1*03, smoking and asbestos exposure.[3] Treatment includes steroid, immunosuppressants, Tamoxifen and surgery.[2] Recent studies show more cases diagnosed in patients aged in their 70s and even 80s.[1] Geriatric patients appear to be at increased risk for morbidity and mortality from this disease process.

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A19

COVID-19 ENCEPHALOPATHY AND LONG TERM CONSEQUENCES

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The long term impact that COVID-19 will have on our healthcare system is still to be determined. Specifically, neurological consequences of "long-COVID" will be a concern for geriatricians as it will affect our practice in the years to come.

A 77-year-old African American male was hospitalized for evaluation of altered mental status. Two weeks prior to admission he tested positive for COVID-19 with symptoms of sore throat and cough. Prior to COVID he was high functioning and independent in IADL. In the ensuing 2 weeks, he became increasingly confused. According to his daughter he had issues with memory, was unable to dress himself, and did not recognize the layout of his own home. Initial workup upon admission was remarkable for acute kidney injury, elevated troponin and anemia. Except for a positive COVID-19 test, all other infectious workup was negative. A head CT showed an old infarct in the right anterior internal capsule but no acute pathology. MRI was ordered but was unable to be completed due to his agitation. Further work up included EEG that showed diffuse slowing of brain function. Lumbar puncture was negative for infection, malignancy, and paraneoplastic disease. The diagnosis of COVID-19 encephalopathy was made. Patient was treated with steroids but this did not improve his symptoms. On discharge patient was only oriented to self and on occasion to place.

A study by Xu et al. examined neurological consequences of COVID-19. There was an increased risk for memory problems and Alzheimer's disease persisting 12 months after COVID. The overall elevated risk for neurological complications persisted in patients who were not hospitalized for acute COVID-19 infection. The mechanism leading to cognitive decline is still not well understood. Reiken et al. showed that neurological pathways that leads to tau hyperphosphorylation, typically seen in patients with Alzheimer's disease, were also present in patient's with COVID-19. As geriatricians we may need to prepare for an increase in the prevalence of neurocognitive disorders as a long-term consequence of the pandemic.

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A20

Persistent nausea post abrupt duloxetine cessation: An unusual presentation of serotonin discontinuation syndrome

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Introduction: Discontinuation syndrome can occur in patients who abruptly stop their antidepressant medication after taking them for at least 6 weeks. Symptoms are generally mild and include sensory disturbances, insomnia, nausea, imbalance, etc. These symptoms usually subside with reinstatement of the medication. Most patients have mild self limiting symptoms, however some may experience severe symptoms that can last several weeks. We present a case of an elderly woman who presented with worsening nausea after stopping Duloxetine.

Case: An 85 year old woman with a past medical history of emphysema and depression went to the emergency department due to nausea associated with abdominal pain and vomiting. The symptoms started 3 weeks prior to the current admission. Patient's daughter reported the patient made the decision to stop her Duloxetine the month prior to this hospitalization. Upon arrival to the hospital she was found to be in hypertensive urgency. Physical exam was notable for confusion. Laboratory work did not reveal any infectious process. CT head showed atrophy with white matter changes suggestive of small vessel ischemic disease. Vitamin B12 and folate were within normal limits. An abdominal x-ray did not reveal obstruction. Due to agitation she required lorazepam and valproic acid for two days. She was also treated with ondansetron, pantoprazole and IV fluid hydration. The geriatrics consult team evaluated the patient and recommended re-starting duloxetine 30 mg daily as this was the dose the patient was taking until she abruptly stopped it the month prior to hospitalization. Her encephalopathy resolved and her mental status returned close to baseline. She was discharged to subacute rehabilitation.

Discussion: Antidepressant discontinuation can cause significant morbidity in patients. It is important for physician's to counsel against abrupt cessation and have treatment plans that involve slow tapers on patients with improved psychiatric symptoms who wish to discontinue their medication. In this case the abrupt cessation of duloxetine was followed by prolonged GI symptoms and encephalopathy upon admission to the hospital.

A21

67-year-old female with Stage 3 Metastatic Melanoma presenting with neurologic and pulmonary sequelae subsequent to Nivolimumab + Iplimumab therapy.

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Background: Antineoplastic immune checkpoint inhibitor therapies, such as Nivolimumab+Iplimumab, play an ever-increasing role in treating advanced, metastatic oncologic disease. These have provided novel targeting opportunities to provide additional targeting modalilities in achieving remission in cancer. These therapies can have unfortunate result in adverse reactions that can mimic other diseases and have a pleiotrophic affect across multiple organ systems that can profoundly impact aging patients receiving these agents and cause debilitating or life-altering consequences if untreated. Due to their novel use, reporting instances of adverse affects remains important to expand the body of literature as to how these immunotherapies impact patients particularly aged over 65 years old, who may have been underrepresented in initial studies.

We report a 67-year-old female being treated for Stage 3 metastatic melanoma with Nivolimumab+Iplimumab progressing bilateral weakness and paresthesia initially treated as radiculopathy thought to be the consequence of musculoskeletal pathology who also was noted to have family history of ALS (Amyotrophic Lateral Sclerosis). The patient also on presentation was noted to have acute hypoxic respiratory failure with concerning evidence of pneumonitis requiring respiratory support with no prior history of pulmonary disease. Imaging, Lumbar puncture, and other laboratory tests were obtained while starting high dose corticosteroids with subsequent improvement of symptoms and resolution of her hypoxia.

This case report describes an instance of pulmonary, integument, but most concerning neurologic sequelae. Given several competing items in the history of presenting illness along with patient history, timely initiation of important diagnostic tests to rule out other competing diagnoses that may be a new disease entity can allow for rapid diagnosis and initiation of treatment of the adverse event with resolution to avert possible long term consequences and subsequent morbidity with quality of life.

A22

An Unusual Presentation of Hemophagocytic Lymphohistocytosis

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Introduction

Functional decline is a common complaint in older adults and its cause can be multifactorial. Hemophagocytic lymphohistocytosis (HLH) is a rare life-threatening syndrome driven by uncontrolled immune activation with multi-organ involvement. We present a case of acute functional decline, of which the cause was malignancy-associated HLH.

Case

A 79-year-old Chinese male was admitted from the geriatric clinic for functional decline of 1 month duration after a fall. There were no injuries from the fall. He had left sided weakness, poor balance, lethargy, and episodes of incontinence. His past medical history include hypertension, hyperlipidemia, diabetes and ischemic heart disease. On examination, he was febrile with increased tone, hyperreflexia and weakness over his left upper and lower limbs. CT brain did not show any acute infarct or bleed. Chest X-ray showed opacities in bilateral lung fields. The diagnosis of pneumonia was made and he was commenced on IV amoxicillin and clavulanic acid.

Over the next 2 weeks, he continued to deteriorate clinically and biochemically with persistent fever up to 39.4 degrees Celsius. Laboratory results showed worsening leucopenia, anaemia, thrombocytopenia and derangements in liver function tests. Multiple sets of blood cultures were negative for bacterial growth. His antimicrobial therapy was escalated to IV piperacillin and tazobactam, and then to IV meropenem.

Tests for HIV, hepatitis B and C, COVID-19, tuberculosis and histoplasmosis were negative. CT of the thorax, abdomen and pelvis revealed multiple pulmonary nodules suspicious of metastasis with mediastinal and intra-abdominal lymphadenopathy, and indeterminate hepatic hypodensities. His ferritin level was high at 16889ug/L and fasting serum triglycerides was raised at 3.4mmol/L. His Hscore of 196 indicated a 80 - 88% probability of HLH. The patient had developed jaundice with fluctuating levels of alertness and spiking temperatures. After discussion with his family, the decision was made for supportive care and not for bone marrow biopsy. He was terminally discharged and passed away within 72 hours.

Discussion

This case highlights the challenges in diagnosing HLH because of its rarity and varied presentation in older adults. Mortality rate without treatment is high. HLH associated with malignancy confers a worse prognosis. HLH should be considered in older adults with persistent fever and laboratory markers suggesting uncontrolled inflammation.

A23

Bleeding or Thrombosis: The Lesser of Two Evils?

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Background

Physicians are required to make difficult decisions in practice. One such involves anticoagulation, a double-edged sword with unfavorable consequences at both ends, as illustrated in this case.

Case

91 year old male with prostate cancer, treated with radiation therapy, developed radiation cystitis and hematuria. Work-up revealed bladder rupture requiring partial cystectomy and bladder repair. Urologist placed an indwelling catheter. At this time, he was hospitalized for atrial fibrillation (AF) and pulmonary embolism (PE). He was started on apixaban and discharged. He was readmitted 2 weeks later with hematuria, melena and hypotension. Apixaban was held and then restarted at a lower dose because the urologist believed risk of death with thrombo-embolism was higher than risk of death from bleeding. Thereafter, the patient remained on apixaban despite ongoing periodic blood losses resulting in hypotension and anemia. He required frequent hospitalizations and transfusions periodically.

Discussion

Since the advent of newer and safer Direct Oral Anticoagulants (DOACs), many providers have become more comfortable prescribing anticoagulants, as opposed to previously when the oral option was only warfarin. Warfarin was notorious for a narrow therapeutic index, drug-drug interactions, besides requiring close monitoring of INR and dose adjustment. Although DOACs brought a revolutionary change in managing thromboembolism, they are not without side effects, like bleeding. Plus DOACs need dose adjustment for renal function.

Our patient had several risk factors for thrombosis, given previous PE, AF and cancer; he also developed ongoing bleeding and became transfusion dependent. Stopping DOAC could result in a stroke or PE and possible death. Continuation of DOAC led to anemia, hypotension and hypovolemic shock, with likelihood of death. Therefore his anticoagulation was continued and losses replaced, in hopes of striking a balance. A balance that came at the cost of his quality of life. Hence, prescribing anticoagulation in geriatric population may become a clinical dilemma for physicians. Bleeding vs. Thrombosis? Both can be fatal in older adults. Unfortunately, outcomes can only be judged in retrospect.

Key Points

DOACs are relatively safe, but still carry a risk of bleeding; that may lead to serious consequences in geriatric population.

Hence, in older adults it may be wise to prioritize patient's wishes (autonomy) and quality over quantity of life.

A24

Deprescribing Can Enhance the Quality of Life

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Background

Deprescribing (DeP) is the planned and supervised process of reduction in dosage or discontinuation of medications that may cause harm or is no longer beneficial. DeP is aimed at reducing polypharmacy and improving outcomes.

Case

71-year-old male with a history of coronary artery disease, hypertension, trigeminal neuralgia, on multiple medications for neuropathic pain presented with repeated falls over the past 3 months. He was on carbamazepine 400 mg qid, baclofen 10 mg bid, phenytoin 300 mg bid for past 5 months along with aspirin, atorvastatin, lisinopril and metoprolol. He had new onset dizziness, cognitive impairment and difficulties in driving and working (freelance photographer). Examination revealed no orthostasis, visual or hearing impairment. ECG and ECHO were unremarkable; cardiology opinion was sought; Imaging was negative for new stroke. We communicated with his neurologist regarding the adverse drug effects and sought dosage modification, without success; the patient sought a second opinion with another neurologist. He was now tapered off baclofen and phenytoin. Carbamazepine was continued at a lower dose. Gradually his dizziness and cognition improved; he was able to drive and resume his work. His pain remained controlled without recurrence; he was happy.

Discussion

DeP is part of good prescribing practice that reduces potential harms, mitigates polypharmacy and ensures efficacy. Falls and cognitive disturbances are often overlooked as part of the aging process. However, they also result from adverse drug effects, or polypharmacy from treating additional comorbidities. Comprehensive medication review with interdisciplinary approach help optimize management and reduce inappropriate medication use. It is important to consider the potential harm of medications versus potential benefits when prescribing for the geriatric patient. A planned approach with effective communication between providers and the patient yields a favorable outcome. During the process of DeP, one must follow the patient for recurrence of symptoms and adverse drug withdrawal events which may pose challenges. Importantly, DeP also has the potential to improve quality of life.

Lessons learnt

DeP can improve quality of life, as shown above, by reducing adverse drug events.

Medication reconciliation with DeP is vital in geriatric care to unfold the root cause of many complaints.

Effective communication (with team-based approach) helps achieve successful DeP.

A25

Beyond the Villages

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Background: Self-neglect is one of the most common forms of elder mistreatment; accounting for increased morbidity and over 50% of elder abuse cases reported to Adult Protective Services (APS).[3] The COVID-19 pandemic and quarantine guidelines brought this issue to the forefront with a significant increase in cases of elder abuse nationwide.[2] Proper utilization of services for vulnerable older adults with an understanding of the capacity of such services is paramount to get needed resources to them.

Case summary: An 83-year-old female, living alone independently, presented to new PCP after being lost to follow up for several years. She had multiple medical comorbities. Family lived in Canada. Patient was brought by a volunteer from her village due to functional decline. Patient demonstrated poor insight into her debility. She refused resources, such as PT or home health aide, deeming them unnecessary. She shared during the interview that she no longer showered because her bathroom flooded and she did not want strangers coming in to fix it. On evaluation, patient had Mild Dementia but had intact decision making capacity. She was not deemed a candidate for anything APS could offer. She was referred to a local non-emergency police service who were able to perform a wellness check at her condo. Once safety at home was assured, the PCP and her village social worker were able to reach out to her family for further care coordination and advance care planning.

Discussion: The patient showed signs of cognitive/functional decline but early on the case for self-neglect was harder to prove. The use of non-emergency police services was vital confirming patient's safety at home while home health services were coordinated and out of country family was onboarded. Further government financial backing is needed so that broader scope of services can be offered.[1,2]

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A26

When Disclosure Turns Deadly: "You have Alzheimer's Disease"

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Background: While suicidality is an important and not uncommon concern among persons diagnosed with incurable life-limiting diseases, little is known about the risk factors, common timing of, and effective suicide risk assessment/mitigation strategies specifically for people diagnosed with Alzheimer's disease and other dementias.

Case: A 92-year-old Korean War Veteran and long-term survivor of laryngeal cancer was referred for cognitive evaluation. Divorced and estranged from his family, he lived for years in a structured senior community. He dined regularly with other residents and was known as congenial but private. A staff supervisor requested a medical evaluation after noting his increasing irritability and several heated arguments with residents and staff. A comprehensive interdisciplinary geriatric evaluation revealed early dementia and his provider shared the diagnosis along with supportive care resources. The following morning, the patient called the community receptionist and reported he cut both wrists with intent for suicide. Upon hospital arrival he could not recall details of his suicide attempt.

Discussion: People living with Alzheimer's Disease and other dementias may be at increased risk for suicide with similar common factors as other older adults and those with life-limiting diseases (age, sex, depression, uncontrolled pain). Recent research suggests additional factors which predict high risk suicidality groups among people with dementia (first 3 months from diagnosis, psychiatric co-morbidity, age less than 65 years, and behavioral variant frontotemporal dementia). Along with further discussion of the risk factors and outcomes of this case we will present an evidence-based, interdisciplinary approach which aims to reduce suicidality risk following disclosure of a dementia diagnosis including: assessing patients' understanding and desire to know, monitoring patients' reactions to the news, involving family and

supportive persons, and suicide risk assessment for high risk-groups. We will share resources for psychotherapeutic and psychosocial interventions which target mechanisms and predictors of suicidal behavior among people living with dementia.

Conclusion: When sharing a new diagnosis of dementia, healthcare providers may promote patient safety by employing strategies to assess suicidal risk factors and connecting to psychosocial and psychotherpeutic resources.

A27

Multi-complexity matters most: management of multifactorial dysphagia

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Background:

Dysphagia near the end of life is a poor prognostic feature and serves as a decisive factor to consider palliative care. The objective of our study is to explore ways to support feeding in older adults with multifaceted dysphagia.

Case:

An 85 years old ALF resident with complex medical history of atypical Parkinson's disease, gastroesophageal reflux, hypothyroidism, bronchiectasis, and cervical stenosis with radiculopathy/myelopathy, underwent C3-C7 anterior cervical discectomy and fusion (ACDF) for symptom relief. He had mild swallowing difficulty at baseline but developed severe dysphagia post-op. On SLP evaluation, he failed MBS and VFSS tests. He was made NPO and nasogastric tube was inserted for high-aspiration risk. After few weeks, a gastrostomy tube was placed and he developed aspiration pneumonia by taking too many ice chips leading to aggressive pulmonary toilet.

Discussion:

The incidence of dysphagia is 2.3% after ACDF and often lasts transiently. Multi-complexity such as aging (≥70 years), male sex, frailty, duration of spinal surgery, and >2 surgical level fusions, are all significant independent risk factors that attributed to prolonged dysphagia in our patient. Moreover, prior health status like atypical PD, GERD, reduced functional status, poor oral hygiene, and feeding tube placement further contributed to the severity of dysphagia, difficult swallowing recovery and aspiration. Facilitative swallowing strategies that carry physiologic information from formal assessments and making use of postural modifications to redirect bolus direction, alter sensory awareness, and change bolus properties may reduce aspiration. Paying attention to extrinsic factors such as quiet and peaceful environment to avoid distractions at mealtimes allow patients to concentrate on swallowing techniques, as well as efforts to concur mealtimes with times of their high functioning level encourage efficient swallowing. Specialized training to caregivers or nurses to give feeds slowly and safely improve outcomes. Finally, increased time out of bed and physical activity may prevent aspiration of refluxed stomach contents and promote pulmonary clearance.

Conclusion:

Dysphagia is a multifactorial geriatric syndrome that requires comprehensive interdisciplinary evaluation and individualized treatment of all potential contributing factors.

A28

Atypical COVID in a patient with Primary Progressive Aphasia

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Background: Primary progressive aphasia (PPA) is characterized by language impairment, specifically word usage and comprehension. As a result, history-taking and review of systems can be challenging and may lead to delays in diagnosis and treatment, particularly in atypical presentations of COVID.

Case: An 86-year-old female with PPA was admitted for altered mental status. Daughter described patient as "more confused than usual," requiring more assistance with activities of daily living. On presentation, she was febrile, tachycardic, and tachypneic. Mild leukocytosis was noted however other workup was unrevealing, including a rapid molecular COVID test. She was started on antibiotics and intravenous fluids (IVF) due to concern for sepsis. She remained stable however mental status continued to be altered.

Geriatrics was consulted on hospital day 4. Family continued to describe changes as "blank looks" and "not as responsive." Chart review was notable for persistent borderline temperatures, mild tachycardia, and mild leukocytosis, all despite antibiotics and IVF. She appeared fatigued, otherwise no abnormal exam findings. Given overall presentation, several recommendations were made, including a repeat COVID test due to concern for viral infection. PCR test was positive.

Discussion: COVID commonly presents with respiratory symptoms, however it can cause atypical symptoms in older adults, including falls, weakness, and delirium. This case involving an older adult with PPA highlights the importance of using objective data in the setting of limited collateral information to broaden the differential. Furthermore, given the complexities of COVID as a novel virus and testing nuances, providers should maintain a high level of suspicion despite an initial negative test. This is imperative during times of high prevalence, as the negative predictive value of a test decreases. A definitive diagnosis may be helpful, as early studies have indicated an increased risk of longitudinal cognitive decline in older survivors of COVID.

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A29

An Unusual Presentation of Polymyalgia Rheumatica

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Polymyalgia rheumatica is one of the most common rheumatologic conditions affecting the older adult population. PMR classically presents with aching and stiffness of the upper arms, neck, back and thighs. PMR can be associated with nonspecific symptoms of fatigue, malaise, anorexia and weight loss. Occasionally, fever may be present.

A 76 year old male with history of hypothyroidism and mild cognitive impairment (MCI) was seen in an academic geriatric primary care clinic with complaints of low back pain thought to be due to lumbar spinal stenosis and weight loss. MCI was diagnosed in 2020. Weight loss (60 pounds) and low back pain started in 2021. Patient participated in PT and EGD/Colonoscopy were negative. TSH, ESR and CRP levels were normal. In 2022, in addition to low back pain, patient developed right shoulder pain. Pain was thought to be due to arthritic changes and slowly progressed to include left shoulder, wrists, and hands. Patient sought care with orthopedic surgery who provided a left shoulder corticosteroid injection. Patient reported that 24 hours after injection myalgias, stiffness and appetite improved. The diagnosis of PMR was considered. Patient was treated with slow steroid taper and was noted to have resolution of symptoms- including memory complaints.

In this patient, the diagnosis of PMR was considered after a remarkable improvement in symptoms post corticosteroid injection for presumed left shoulder arthritis. Patient initially presented with unilateral joint pain which is not classic for PMR. Additionally, weight loss (although a common manifestation of PMR) was thought

to be due to social factors related to the Covid-19 pandemic (lack of food resources). This case highlights the difficulty in diagnosing PMR in patients with systemic symptoms and normal ESR/CRP values. Physicians should maintain a high degree of suspicion for PMR in patients with nonspecific systemic symptoms such as weight loss and fatigue. Additionally, it is unclear why patients' cognitive symptoms improved with treatment of PMR and additional research may be considered in this area.

A30

Swimming to Happiness: The Importance of Swimming in Older Adults.

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Aerobic exercise health benefits are well documented for people of all ages. Among them, swimming has demonstrated the greatest benefits for older adults. A 96-year-old woman presented to our geriatric clinic in significant emotional distress with anxiety, depressed mood and crying spells. In despair, she stated that "I can't swim". She started to swim ten years ago, following the death of her husband and swam at a local indoor pool for an hour each day. She found that swimming to be relaxing and reduced her anxiety, to the point that she could live alone. However, due to the lockdown during the COVID-19 pandemic, public activities including gyms and pools were closed. Since then, she was no longer able to swim. Her self-esteem decreased, and anxiety and depression kept worsening. Despite psychotherapy and anti-depressant medicine, her suffering persisted. She knew that the only way to improve her symptoms was if she could swim again. Finally, her family moved with her to the lakes and assisted her in swimming in the lake. After that, her local gym re-opened and she restarted her one-hour daily swimming in the pool. Finally – she felt better, and found emotional solace. Her medications include low dose of nortriptyline and alprazolam prescribed by her primary doctor about 30 years ago. She was not able to wean them off despite attempts. Swimming is the fourth most popular sports activity in the United States. It promotes cardiovascular health, bone strength, joint flexibility, muscle tone and endurance as well as mental health and well-being. Indoor swimming is great way to socialize, decrease risk of falls and overall improves quality of life in older adults, including those suffering from frailty. While swimming has numerous positive effects on mental health and wellbeing, its mechanism of action is not clearly understood. One study in rats with anxiety-like behavior suggested that swimming improves well-being by increasing endorphins and decreasing cortisol level. More studies are needed in humans. Our patient's story not only emphasizes the importance of aerobic exercise in older adults, but also underlies special values of life stability, performance and resilience in older adults. For those that can tolerate it, we suggest that swimming should be strongly encouraged as a way to promote cognitive and physical health and emotional wellbeing.

A31

Benign struma ovarii mimicking ovarian malignancy: A case report

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Background: A woman in her 60's with an abdominal mass, periumbilical and omental nodularity on Computerized Tomography (CT)scan and elevated Cancer Antigen (CA)-125 tumor marker would usually be treated as malignancy unless proven otherwise. This is a case of a patient with benign struma ovarii, a rare goiter-like ovarian mass initially concerning for cancer.

Case Presentation: A 69-year-old independent woman with hypertension presented to the clinic with 2 months of worsening abdominal distension, nausea and difficulty loosing weight. On exam, she had clear lungs, an enlarged abdomen appearing as 40 weeks gravidarum with no ascites or peripheral edema. CT scan showed a 21x31x32cm cystic mass in the abdomen/pelvis with subcutaneous nodularity in the umbilicus and omentum concerning for metastatic disease. CA-125 was elevated at 86 unit/ml. Thyroid stimulating hormone and Free T4 were normal. She underwent hysterectomy, bilateral salpingo-oophorectomy and omentectomy. Pathologic diagnosis was benign cystic struma ovarii. No further management was needed. The patient has been doing well for 3 months post-operatively.

Discussion: The rarity of struma ovarii, making up only 0.5%-1% of all ovarian tumors, has made literature limited to mostly case reports/series. It has been difficult to diagnose preoperatively because of its unusual and varied presentation, and it is most often mistaken for malignancy. It presents as an abdominal/pelvic mass in the 5th-6th decade of life. A third of cases have ascites and 5% of cases have Pseudo-Meigs syndrome (pleural effusion, ascites and ovarian tumor). Imaging commonly shows a complex ovarian cyst, with an average size of 10cm. CA-125 is commonly elevated. Peritoneal strumosis described as peritoneal implants can be present as was seen with our case. Pathologic diagnosis will show more than 50% of mature thyroid tissue and 5% of cases are associated with hyperthyroidism. These features of a large cystic mass, elevated CA-125 and peritoneal implants are concerning for maligancy. However, this tumor is benign and with adequate surgical resection is curable.

Conclusion: Struma ovarii is a rare but benign cause of pelvic mass in postmenopausal women. It has a good prognosis with surgical resection, diagnosed postoperatively with pathology, and rare recurrence rates.

A32

Teaching Patient Safety: An Important Role for the Geriatrician

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Background: Working in teams to enhance patient safety is a core competency of Internal Medicine residency that must be mastered to graduate. However, patient safety is a vast topic that can be under-prioritized in medical training and the clinical setting. Prioritizing safety can be a life-saving intervention for patients. We advocate that providers should strive to be proactive in this role and involve the skills of an interdisciplinary team early when caring for older adults, especially those with cognitive impairment.

Methods: We describe a 78-year-old female with a history of mild cognitive impairment (MCI) that has progressed to mild dementia between visits with care providers. She and her husband are struggling with her diagnosis and how best to balance safety while maintaining independence.

Results: The patient had struggled with memory loss for two years. She had undergone neurocognitive testing and was diagnosed with MCI due to Alzheimer's dementia. She presented for a geriatric consultation with progressive loss of IADLs including reliance on transportation, help with finances, and shopping. She struggled with anger over her diagnosis, particularly with having her driver's license revoked. Her husband was concerned about her desire to go out alone and felt it was his job to keep her safe. They lived in an independent living facility and had not previously discussed safety with providers. During the clinic visit, we prioritized patient safety given the progression in her disease and her husband's concerns. We asked her about thoughts of suicidal ideation and addressed the potential for weapons in the home. We involved our geriatric social worker who helped register the patient and her husband with the Alzheimer's Association Dementia Care Coordination program and recommended that her family register her name with her local police department's Alzheimer's registry. Finally, we provided caregiver resources on home safety tips and recommended popular literature about living with a family member with dementia. Both she and her husband expressed relief and gratitude after this discussion.

Conclusions: Discussing patient safety can have a significant and positive impact on patient care, especially for older adults and those with cognitive impairment. Providers should strive to initiate this conversation early and involve the help of their interdisciplinary care team to provide quality patient care.

A33

Rare Case of Oropharyngeal Dysphagia

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67- year- old- female presented to the geriatrics clinic with inability to move her tongue, dysphagia and facial paralysis. Patient at the age of 64 had developed a large bump over her lip for which she had seen dermatology. The swelling slowly progressed and caused facial paralysis, inability to move tongue, difficulty with speech, difficulty chewing and hearing as well as visual loss. Past medical history included an episode of Bell's palsy in her twenties, hypertension and psoriasis of scalp and inner ear. Patient had a positive family history of normal pressure hydrocephalus in both parents. Patient denied using tobacco, alcohol and illicit drugs. On exam patient had swelling around lips, tongue and eyelids. Patient was unable to move her tongue or have facial expression. Laboratory work-up including blood count, comprehensive metabolic panel, Tyroid Stimulating Hormone, calcium, Angiotensin- Converting enzyme levels, Antineutrophil Cytoplasmic Antibodies, IgE, C3/C4 complement levels, C1 esterase inhibitor, and tuberculosis skin test were negative. Magnetic Resonance Imaging of head and neck revealed masseter and pterygoid muscle diffusely atrophic, with fatty infiltration of left aspect of tongue. Biopsy of the lip and tongue showed non-caseating granulomas. After exclusion of other differentials, patient was diagnosed with Orofacial granulomatosis (Melkersson-Rosenthal Syndrome). Since the diagnosis, patient has been treated with steroids, methotrexate and stem cell therapy which helped with progression of the disease. Eventually, she lost her ability to swallow and had to get Pertutaneous Endoscopic Gastrostomy tube and since have experienced multiple complications from the tube. Orofacial granulomatosis is a rare but an important cause of dysphagia which causes poor quality of life if not diagnosed and treated in timely manner.

A34

Title: Can You Hear Me? Delirium or Misdiagnosis

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Background: Hearing loss (HL) is a significant issue in Geriatric Medicine as it is known to be associated with communication breakdowns during the exchange of health information, accelerated cognitive decline, depression, falls, and early mortality.

Case Presentation: 70 yo frail man with severe HL with a nonfunctional cochlear implant, depression, end stage renal disease on hemodialysis, multiple spinal fractures with chronic opioid use, heart disease and a recent left hip surgery, who was seen in the inpatient medical floor for a fall due to left hip pain from a prosthetic hip joint infection.

The orthopedic team was consulted to discuss surgical treatment. Because of his agitation and noncompliance with their treatment plan, other consulting physicians and nurses were concerned that he was delirious. He was prescribed antipsychotics for treatment and prevention of delirium. This prolonged his hospitalization and delayed his medical and surgical treatments.

When Geriatrics was consulted, we determined he was not delirious. We communicated with him with a hearing amplifier. During the encounter he shared that given his severe HL, he was frustrated as he couldn't communicate well with his healthcare team and his pain was uncontrolled.

We recommended the use of a hearing amplifier and a white board to communicate with him at all times, and pain management. Since then, his compliance with medical care, physical therapy and pain improved, and he was ultimately discharged home after a prolonged hospital stay.

Discussion: This case highlights how HL has an impact on overall care. In this case, it increased the risk of medical misdiagnosis with delirium and partly resulted in a longer and more expensive length of stay. When the patient's needs were addressed using his hearing amplifier, his pain improved and he became more willing to participate in his care.

Conclusion: HL is an important geriatric syndrome that is often overlooked. HL is associated with cognitive decline, depression, falls/balance issues, increased hospitalizations and early mortality, as well as its social implications as reduced verbal communication, social isolation and loss of autonomy. Addressing HL may contribute not only to improve health, but also to the everyday functioning, quality of life and avoid misdiagnosis.

A35

Pemphigus foliaceous, a rare cause of skin lesions in the older adult

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Introduction: Pemphigus foliaceous is a rare, autoimmune disease that affects skin causing intraepithelial blisters. In this disease, IgG autoantibodies form against desmoglein 1 causing loss of keratinocyte-to-keratinocyte adhesion, or acantholysis. This is a potentially life-threatening disease that typically presents in older adults and requires systemic immunosuppression for management.

Case Description: A 67-year-old female living independently in the community with comorbidities of cirrhosis, rheumatoid arthritis and alcohol use disorder presented with an unusual facial rash. She recently had multiple admissions related to hyponatremia and was started on salt tablets. She developed skin rash she attributed to the salt tablets, so she self-discontinued them. Despite this, she had progression of skin lesions with painful blister formation. She was re-admitted with hyponatremia with note of rash, which was thought to be a drug reaction from hydroxychloroquine. The hydroxychloroquine was discontinued, but on hospital follow up, the skin changes had continued to progress. She was referred to dermatology and biopsy was performed. Biopsy was characteristic for pemphigus foliaceous. She was started on oral prednisone 40 mg daily. Symptoms began to improve, but medical course was complicated by multiple admissions for bowel obstruction related to clostridium difficile. Prednisone was discontinued with plans to trial rituximab pending clinical course.

Discussion: Pemphigus is a group of potentially life-threatening, autoimmune diseases characterized by flaccid bullae or skin erosions. Pemphigus foliaceous is a subset of this disease group that is causes cutaneous lesions without mucosal involvement. Identification is multifactorial with clinical, histologic, immunopathologic and serologic findings. Treatment is largely directly by immunosuppression with first line therapies being oral prednisone and rituximab. Without treatment, there is a 70% mortality rate within 5 years of diagnosis. Unfortunately, there is a risk of complications from treatment including infection and delirium which can impact quality of life. In older patients with recurrent blistering rash, the differential diagnosis is broad, and a skin biopsy may be required to rule out, potentially life-threatening rare conditions.

A36

Medical Cannabis for Sundowning in Dementia: Case Report & Literature Review

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Background: Alzheimer's and related dementias (ADRD) are progressive diseases frequently accompanied by behavioral & psychological symptoms (BPSD, e.g., agitation, delusions, aggression) that can be harmful and stressful. Antipsychotic drugs are used off-label for management, but overall effectiveness is low and they carry significant risk of morbidity and mortality. Medical cannabis is a potentially safer therapy for management of BPSD, but comprehensive literature review over the last 10 years reveals minimal published data regarding its use.

Methods & Case Description:

96-year-old female with dementia, FAST stage 6D, presents for management of agitation and insomnia. Symptoms start daily around 4pm, with yelling, cursing, violent outbursts, and physical aggression. Symptoms persist about 4 hours until she goes to sleep. She often wakes around midnight and remains awake throughout the night. Past trials of different antipsychotics resulted in greater agitation. Trazodone trial for sleep caused excessive lethargy.

Results: After discussion with the family, the patient was started on a regimen of cannabinoid/tetrahydrocannabinol (CBD/THC) tincture with major improvement of her symptoms. The physical aggressiveness resolved, and the patient's verbal outbursts decreased significantly. Sleep improved with both the patient and caregivers able to obtain a full night sleep. The patient was calm but alert, and family reported greater and more meaningful interaction with family and friends.

Conclusions: CBD/THC may be a potential alternative therapy for aggression and insomnia in dementia patients. This treatment option has been minimally explored and may provide a safer option for management of BPSD than antipsychotics. The significant response in this and a few case reports in the literature supports the need for more rigorous clinical trials in this population.

A37

Addressing the Unmet Needs of Transgender Older Adults Through a Lens of Minority Stress Theory and Intersectionality

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A 73 year-old Black transgender female patient presented for establishment of care to our geriatric medicine clinic with a focus to treat her opioid use disorder. She has historically avoided medical care and treatment and has been lost to follow-up for several years. Minority stress theory postulates that transgender women of color experience greater social stressors because of their stigmatized, minority social status, which can then directly compromise mental and physical health while also increasing health risk behaviors, such as substance abuse. The theory of intersectionality also contends that transgender women of color experience discrimination based on race, being female and being transgender, which is additive, putting them at increased risk of substance abuse. Currently, there is a lack of evidence-based addiction care/treatment interventions for transgender women of color, specifically, if they are efficacious. Therefore, there is a need to address the unique experiences of transgender women of color dealing with addiction via culturally-responsive, tailored strategies, and intervention tools that address intersectionality. It has been shown that transgender populations face substantially greater healthcare barriers and poorer health outcomes than their cisgender sexual minority counterparts. In previous studies, transgender individuals have experienced increased rates of suicide, poverty, HIV infection, unemployment, discrimination, and low levels of social support, which may all contribute to the development of addictive behaviors and reduce treatment engagement. In taking into account the historic barriers faced by transgender women of color, we established frequent visits with our patient, including the inclusion of a transgender women of color with lived experience of previous substance use disorder in order to establish trust and to understand barriers and facilitators to addiction services, identify unmet treatment needs, and inform intervention tools, in order to engage her into addiction care services. Within three months, our patient established ongoing geriatric care, as well as enrollment in a substance use disorder treatment program. Therefore, understanding our transgender older adults through a lens of minority stress theory and intersectionality with inclusion of a transgender peer can potentially lead to better engagement in medical services to meet their unmet needs.

A38

Cognitive Impairment and Cancer Survivorship

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Background: For some, cancer is a disease of multiple recurrences and complications over years. During this time, cognitive impairment may emerge but go undetected as cancer treatment takes center stage. Here, we present a case of the progression of cognitive impairment over the course of cancer treatment and its impact on patient care.

Case: Mr. H was a 76-year-old man with renal cell carcinoma who had undergone a remote nephrectomy and then developed recurrent metastatic disease to his left humerus. He was seen in the Geriatrics clinic with his daughter after resection of his humerus and prosthetic reconstruction for memory loss leading to him taking multiple days' worth of medications, including lorazepam for anxiety. While his remaining IADLs were preserved, his MOCA was 18/30. He was scheduled for follow up in the Geriatrics clinic but cancelled the appointment. In the meantime, his prosthetic shoulder was found to be infected, leading to multiple elective surgeries over the subsequent 2 years. Two years after the initial Geriatrics evaluation, Geriatric medicine was consulted for inpatient delirium after a repeat joint washout. His wife described recurrent episodes of delirium and behavioral symptoms of dementia, including physical combativeness. The diagnosis of Alzheimer's Disease was made, and his family was provided with community support resources in addition to Mr. H starting on memantine. He returned home where, amidst waiting for endoprosthesis exchange, he developed pneumonia requiring hospitalization. He was eventually discharged home with hospice.

Discussion: Among adults 65 and older in the United States with an incident cancer diagnosis, over 1 in 10 have probable dementia. The American College of Surgeons recommends that all older adults undergoing surgery be screened for impaired cognition, delirium risk, and the need for palliative care assessment. For our case, re-evaluation of cognition prior to elective surgery could have led to better shared decision-making around the risks and benefits of surgery, leading to improved functional and cognitive outcomes and quality of life for the patient and family.

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A39

A Case of Corticobasal Syndrome due to Alzheimer's Disease

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Background:

Corticobasal syndrome (CBS) is a complex neurodegenerative disorder without well-established diagnostic criteria. Symptoms may overlap with features of typical Alzheimer's dementia, logopenic variant primary progressive aphasia (lvPPA), and even behavioral variant frontotemporal dementia, making definitive diagnosis difficult. CBS can be associated with different underlying pathologies that are difficult to predict based on clinical presentation.

Case Presentation:

65-year-old right-handed male presented to clinic for evaluation of cognitive impairment for 2 years. Episodic memory loss and word-finding difficulty were the initial symptoms and progressively worsening. Overtime, executive dysfunction and other language deficits in spelling, reading and comprehension also emerged. General bradykinesia, resting tremor and involuntary jerking movement of right upper extremity also gradually developed. Neurological exam was significant for effortful speech with multiple halting due to significant word finding difficulty. Bradykinesia, resting tremor of right hand, and increased tone and twitching/jerking of right upper extremity was also noted. Brain MRI showed asymmetric volume loss, left more than right, most prominently at the left parietal region. Neuropsychological testing indicated impairment in memory and visuospatial function as well as weakened executive function and language. The testing result was consistent with the structural changes seen in the brain. CSF biomarker revealed significantly high amyloid burden (671.7 pg/mL) that confirmed the presence of Alzheimer's disease pathology.

Discussion:

CBS is characterized by asymmetric involuntary movements and is also associated with multiple nonmotor deficits, including cognition and language (1). While asymmetric Parkinsonism and involuntary movement favor a diagnosis of CBS in this patient, CSF findings support a diagnosis of Alzheimer's disease. Not many cases of mixed Alzheimer's disease with CBS phenotype have been described in current literature. Our case demonstrates the vast spectrum and overlap of neurodegenerative diseases and possibility of mixed phenotypes.

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A40

A Complex Chronic Disease and Polypharmacy

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Cardiac amyloidosis is caused by deposition of amyloid fibrils in the extracellular space of the heart. Patients may present with cardiac complaints or the disease may be clinically asymptomatic. Aside from the cardiac manifestations in ATTR amyloidosis, patients can present with autonomic or peripheral nerve disease, spinal stenosis, and biceps tendon rupture. The disease can be devastating for older adults and has a high propensity to lead to polypharmacy, mood disorders, and cognitive decline.

A 78 year old male with past medical history of ATTR amyloidosis (transthyretin amyloidosis), spinal stenosis, and obstructive sleep apnea presented to the clinic with complaints of cognitive decline over the past year. The patient was noticing word finding difficulty and losing his train of thought. He was diagnosed with ATTR amyloidosis two years ago and had been admitted to the hospital several times due to decompensated heart failure. He reported that the disease process has been hard on him and reported low mood. As a result of his amyloidosis, the patient had severe peripheral neuropathy and had been prescribed Gabapentin 600 mg TID, Lyrica 150 mg daily, Tramadol 50 mg daily and Methocarbamol 500 mg at bedtime. The patient was diagnosed with sleep apnea many years ago and was using his CPAP nightly. He was also taking Trazodone 50 mg nightly and Diphenhydramine 50 mg nightly to help with insomnia symptoms. However, he was also taking Armodafinil 250mg due to excessive daytime sleepiness. He carried a diagnosis of Narcolepsy.

Adverse drug events are common in older patients with chronic conditions and are particularly common in patients taking 5 or more medications. Polypharmacy was identified as a major cause of his cognitive decline. Gabapentin at high doses, Diphenhydramine for sleep, and Armodafinil as a stimulant were all contributing to the patient's memory loss. In addition, the patient was found to have depression which was not being treated. Patient was advised to discontinue diphenhydramine and armodafinil. Additionally, the dose of gabapentin was reduced. The patient reported improvement in sleep, mood, energy levels, and most importantly in his quality of life after medication changes were initiated. This case highlights the need for close monitoring of adverse drug events and drug cascades in older adult patients with complex chronic conditions.

A41

Social determinants of health as a contributing factor for uncontrolled hypertension

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Background: Hypertension is a common medical diagnosis that can have significant impact on a patient's overall health. Untreated or sub-optimally treated hypertension increases the risk of heart failure, heart attack, stroke, and kidney failure. Along with lifestyle changes, pharmacotherapy is recommended when appropriate. However, several other factors also play an important role in determining whether a patient is successful in managing their medical condition including social determinants of health such as educational status, lower income and language barriers.

Methods: 74 y/o African American male living independently with mild neurocognitive disorder, hypertension, hyperlipidemia, visual impairment, osteoporosis, and Paget's disease who presents with persistent hypertension despite treatment with multiple antihypertensive medications.

Results: During a routine primary care visit, the patient had an elevated blood pressure of 180/88. Upon review of his antihypertensive medications, he provided 3 different medication lists from his wallet and was unable to identify which list he was using. Conversation with the patient's pharmacist and daughter confirmed the suspicion that he was unable to accurately manage his medications. There were several contributing factors: mild dementia, impaired vision, limitations in health literacy, reading abilities, and financial resources. In addition, the patient had limited family assistance. His daughter was unable to attend most clinic visits as she works as a daycare teacher and would have to take unpaid time off to attend the visits.

Conclusions: We describe a case of how adverse social determinants of health play a significant role in a patient's ability to manage their medical condition and medications. Partnering with his daughter closely via regular phone calls and with the pharmacy resulted in a simplified medication list and blister packs with once a day dosing. With this new system, the patient was able to take his medications more consistently and his blood pressure normalized as well. Multiple factors can contribute to uncontrolled hypertension and it is essential to take a deeper dive into non-medical risk factors and assist them in identifying solutions.

A42

Cardiac amyloidosis in an elderly patient – A challenging disease to differentiate and diagnose.

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Introduction

Cardiac light chain deposition disease can originate from a plasma cell dyscrasia in the bone marrow(AL) or hepatic transthyretin production(ATTR). Treatments for both conditions are available and different. Diagnosis is commonly delayed due a mis or delayed diagnosis and clinically deterioration. We describe a case of cardiac amyloidosis in an elderly patient who presented initially to the ER.

Case

A 70-year-old male with a PMH of HTN, CAD, DM presented to the ER with symptoms of SOB, enlarged liver and leg edema. He was found to have bilateral pleural effusions. A preliminary TTE showed an EF of 30-35% with atrial enlargement and LV diastolic dysfunction. He had no other end organ damage. Aggressive diuretic therapy improved symptoms. The patient was discharged;further workup scheduled as an outpatient. Following his discharge his final TTE was interpreted as suspicious for cardiac amyloid. He was suspected to have ATTR amyloidosis. His further workup was delayed by hospitalization for symptomatic pleural effusions. An SPEP revealed a monoclonal gammopathy with increased lambda light chains. A skeletal survey showed no lesions; a fat pat biopsy was Congo red negative. A myocardial biopsy was felt too risky. A bone marrow biopsy showed 30% CD138+ cells with a K/L free light chain ratio of 0.07 and negative Congo red stain. After 5 months from presentation, he was started on daratumumab, bortezomib, cyclophosphamide with a final diagnosis of AL. While his laboratory disease burden continues to improve, he still is intermittently admitted for symptomatic pleural effusions.

Conclusion

Cardiac amyloidosis is an important differential diagnosis in elderly patients presenting with HF. Over 95% of all cardiac amyloid is caused by ATTR or AL amyloidosis. ATTR is treated with transthyretin stabilizers and possible liver transplantation versus AL with plasma cell directed therapy and possible SCT. The median age of diagnosis is in the late 6^{th} to 7^{th} life decade with an increased incidence over the past decades. Organ toxicity of pathologic light chains is cumulative and might be present for years before clinical symptoms evolve. Once patient present with symptoms a timely accurate diagnosis and treatment is important to improve cardiac function and prevent further clinical decline.

A43

Flipping the script: A paradoxical reaction to antipsychotic initiation in a skilled nursing facility

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Intro: Paradoxical reactions that aggravate or worsen the condition they are supposed to treat can occur with a variety of medications. Older adults are at increased risk for this type of reaction. Amongst the known paradoxical reactions that have occurred with psychotropic medications, much of the research has focused on benzodiazepines. Many of the behaviors are associated with disease progression or medication inefficacy. As a result, there is an underreporting of adverse reactions.

Case: A 91-year-old male with major neurocognitive disorder with behavioral disturbances was admitted to a VA skilled nursing facility for long term care placement. On admission he was calm and cooperative, though he reported visual hallucinations of bugs and paranoid delusions of his family watching him. In addition to behavioral redirection, the patient was continued on sertraline and trazadone as needed for anxiety. Initially, he remained behaviorally stable. However, over a two-month period he developed worsening episodes of confusion, auditory hallucinations, and agitation without evidence of other underlying medical conditions. The decision was made to trial low dose risperidone in addition to his other psychotropic medications. The risperidone was titrated over the first week, and then transitioned to olanzapine the following week due to ineffectiveness. Unfortunately, the patient then experienced worsening agitation, aggression, and confusion as well as progressive psychotic symptoms without evidence of alternate medical cause. In addition to lack of characteristic features, a dopamine transporter scan was not suggestive of Parkinson's disease. Recognizing that the veteran's behaviors worsened with initiation of an antipsychotic, the decision was made to trial discontinuation out of concern for a paradoxical reaction. Within one week of discontinuation, the patient's behaviors significantly improved.

Discussion: This case illustrates the complexity of treating geriatric patients exhibiting behavioral disturbances with dementia. Differentiating between inadequate response to antipsychotic initiation and paradoxical reactions is particularly challenging. This highlights the need for increased awareness and further investigation into paradoxical reactions with antipsychotic use.

A44

An Unsuspected Cause of Recurrent Falls

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Background:

Falls are associated with increased mortality and morbidity in the elderly. For older patients effective fall prevention is crucial to prevent functional decline. Fall evaluations usually evaluate for multifactorial causes of falls. Often pulmonary artery hypertension (PAH) is overlooked as a new-onset cause even though in global estimates, pulmonary hypertension has been reported to range from 20 million to as high as 70 million cases.

Methods:

Patient interviews, physical exams, and medical records review.

Case Description and Results:

We present the case of a 71-year-old African-American female with a past medical history of Alzheimer's dementia, scleroderma with PAH, hypertension, chronic kidney disease, and hypothyroidism who was admitted to the hospital for multiple falls over a 2 week period. All vitals, including orthostatics remained normal, CT head and neck found to have no acute changes, and baseline mild anemia was found to be relatively unchanged. Patient was neurocognitively at baseline with no other changes noted on physical exam. On her third visit to the ED, she was found to have elevated high sensitivity troponins (42.9 ng/L). EKG completed revealed normal sinus rhythm with new right axis deviation. Echo revealed normal ejection fraction, systolic pressure is estimated to be > 50 mm Hg.

Conclusions:

Patient was seen and evaluated by pulmonology who suspected patient of having WHO Group I PAH associated with a connective tissue disease. The severity of the PAH was thought to be drastically underestimated due to the severity of tricuspid regurgitation. The patient's insidiously worsening scleroderma associated PAH was the cause syncopal episodes leading to falls. Her right heart catheterization from 2 months prior to admission revealed high pulmonary vascular resistance and low cardiac output/index; a very poor sign of worsening PAH but she was otherwise asymptomatic. This case demonstrates the importance of considering a less common cause of syncope with a higher mortality that can lead to recurrent falls. In this patient presentation, the cause may be more obscure given that the presentation was

compounded by cognitive impairment that hindered further history to be obtained. Patient was noted to have a high one-year mortality and after discussion with the family DNR/hospice was found to be appropriate.

A45

High tension in the vessels: A sequelae of excess hormones

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Case:

A 70-years old female with history of CVA, HTN presented in clinic with uncontrolled hypertension despite being on 4 different blood pressure medications. She had been tried on multiple different antihypertensives without any improvement. She denied any symptoms of fatigue, visual changes, mood changes, memory changes, muscle cramps or palpitations. Review of system was positive only for occasional dizziness with elevated blood pressure.

On exam, she appeared well. Cranial nerves were all grossly intact, normal vision, no JVD, regular rate and rhythm, no murmurs. She had a normal abdominal exam, no palpable mass, no abdominal bruit. She had a normal neurologic exam. Extremities were warm and without edema or lesions.

Her lab work (CMP) in multiple clinic visits was remarkable for Na in higher limit of normal and borderline low K. Our initial workup (including CBC, CMP, TSH/T4, Urine toxicology and Metanephrines) yielded no suggestive findings. Imaging studies including renal ultrasound, CT A/P and transthoracic echocardiogram were all unremarkable.

Case Conclusion:

Despite maximizing 4 antihypertensives and continued adherence to dietary modifications, her blood pressure remained uncontrolled. Finally, we checked one more set of labs (plasma renin activity and plasma aldosterone concentration). To our pleasant surprise, these labs were abnormal, consistent with primary hyperaldosteronism. She was notified of the results and immediately started on spironolactone. On follow up visit her blood pressure had improved significantly to near normal limit.

Discussion:

Primary Hyperaldosteronism is an endocrine pathology characterized by an excess in the production of the hormone aldosterone by the adrenal glands or various kinds of aldosterone producing tumors. Patients usually present with asymptomatic uncontrolled hypertension despite being on multiple maximal doses of antihypertensives. If symptomatic, commonly reported symptoms are fatigue, visual changes, headaches, dizziness, nausea, and sometimes excessive thirst and muscle cramps. Initial evaluation for secondary hypertension should always begin with a thorough physical exam, medication review, and include workup for common secondary causes such as renovascular disease (worked up with renal ultrasound). Primary hyperaldosteronism should be suspected in a patient with BMP that shows elevated or high normal Na, and a normal to low level K.

A46

A rare variant of bullous pemphigoid in an older adult with major neurocognitive disorder

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Background

Bullous pemphigoid is an autoimmune subepidermal blistering disease that generally presents in older adults greater than 60 years old.

Case

A 91-year-old veteran residing in long-term care with history of dementia with behavioral disturbances and bilateral lower extremity chronic venous stasis ulcers was seen for difficulty walking and worsening of chronic ulcers. Exam revealed scattered open areas on the bilateral lower extremities. He progressively became more resistant to wound care and the wounds worsened, along with agitation. He developed a pruritic urticarial rash on the palmar aspect of his hands, torso, and arms and fluid-filled blisters on the lower extremities, the right proximal upper extremity, the palmar aspect of the hands, and the plantar aspect of the right foot. The toe lesions turned hemorrhagic. Doxycycline, triamcinolone ointment, and niacinamide were started. Initial response to treatment was poor. Punch biopsy of the lesions was obtained and was consistent with bullous pemphigoid. Dyshidrosiform variant of bullous pemphigoid was diagnosed given the presentation on the palms and sole. Prednisolone was started. Immunofluorescence testing confirmed bullous pemphigoid. He gradually responded to therapy. Mycophenolate mofetil was added, allowing prednisolone to be tapered down. Lesions continued to improve.

Discussion

Bullous pemphigoid is an autoimmune blistering disease. The incidence is 4.3 per 100,000 person-years and increases with age. Dyshidrosiform bullous pemphigoid is a very rare variant of bullous pemphigoid that presents with palmar and/or plantar skin involvement, often hemorrhagic. In this case, the lesions appeared on the extremities initially, although dyshidrotic eczema like rash appeared on the hands and torso concomitantly. Studies have shown that an underlying neurological disorder like dementia is a risk factor and has a possible causal association with bullous pemphigus. Behavioral symptoms of dementia contributed to delayed wound healing in our patient.

References

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A47

Recurrent Stroke and Novel Therapies to Prevent Recurrence

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Background

Risk factor modification and antithrombotic drugs are crucial for reducing ischemic stroke (IS) recurrence. Anti-inflammatory therapy with low-dose colchicine plus usual care is novel therapy to reduce recurrent vascular events.

Case

62 yr old female with hypertension and diabetes admitted to subacute rehabilitation after recurrent cerebrovascular stroke. The first stroke left no residual deficits. She then had recurrent strokes over next 4 years. Extensive evaluation for etiology of recurrence (hypercoagulable disease, malignancy, atrial fibrillation, heart and carotid disease and amyloidosis were negative except for atheromatous cerebral arteries. Initially, she was on dual antiplatelet therapy and high dose statin, and later, a shift to aspirin and ticagrelor. Colchicine was next added based on its anti-inflammatory benefit for atherosclerosis. Statin was on hold due to transaminitis and resumed in low dose with ezetimibe after liver function normalized.

Discussion

Despite current optimal medical therapy with antihypertensives, antithrombotic agents and lipid-lowering therapy, annualized risk of recurrent stroke/transient ischemic attack after an index event is up to 3.6%. A need for novel therapies to lower stroke risk is clear. Inflammation is key in the pathophysiology of atherosclerotic plaque de-stabilization and thromboembolism, and atherosclerosis development. Anti-inflammatory therapies targeting atherosclerotic plaque inflammation help plaque stabilization and prevent atherosclerosis.

The mechanism of colchicine's vascular protectiveness is via multiple anti-inflammatory properties: inhibition of microtubule polymerization with reduced secretion in monocyte-macrophages. Plaque inflammation is profound after acute ischemic stroke (IS) and leads to stroke recurrence. Colchicine inhibits levels of interleukin-6 (IL-6) and C-reactive protein, and helps reduce inflammation.

Use of colchicine in acute non-cardiogenic IS patients was associated with marginally fewer incidence of recurrent IS in an Asian population. The protective effect was observed at 6 months and 2 years after IS. Concomitant statin use with colchicine potentiated protection.

Key Point

Concomitant statin and colchicine use may enhance protective effects in those with recurrent stroke.

Reference

Liu CH et al. Colchicine Use and Risks of Stroke Recurrence in Acute Non-Cardiogenic Ischemic Stroke Patients: Population-Based Cohort Study. J Pers Med. 2021;11:935.

A48

A Rare Case of Drug-Induced Necrotizing Pancreatitis

A. Walker, P. Solomon. *Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Hempstead, NY.*

Background: Drug-induced pancreatitis is uncommon, accounting for 0.1%-2% of acute cases. Most cases due to medications are mild, which makes this case even more unusual.

Case: A 74-year-old male with hypertension on olmesartan, hyperlipidemia on rosuvastatin, GERD on omeprazole, history of herpes simplex affecting R eye on acyclovir who presented to the Emergency Department with acute abdominal pain. Right upper quadrant ultrasound revealed normal gallbladder without gallstones or pericholecystic fluid, no dilatation of bile ducts. CT revealed moderate inflammatory changes surrounding pancreas and free fluid with no drainable fluid collection, compatible with acute pancreatitis. No evidence of obstruction/gallstones/pancreatic mass on MRCP. He had no history of alcohol use or evidence of elevated triglycerides.

Results: As ACE-inhibitor and PPI are class Ib for pancreatitis, olmesartan and omeprazole were discontinued. Patient was started on amlodipine for blood pressure control. His pain improved, he was tolerating meals, and he was discharged after 6 days.

Patient noted fever and dull back pain during transition of care visit with his geriatrician 2 days after discharge. He was sent to the ED and found to have WBC 24,000 with left shift. CT showed acute necrotizing pancreatitis associated with 10 cm fluid and gas-containing pancreatic abscess, which was confirmed by MRCP. Endoscopic ultrasonography (EUS) found a large proximal pancreatic necrotic collection with mass effect on the stomach and duodenum. Drainage was performed with endoscopic cystogastrostomy via lumen-apposing metal stent (LAMS) placement. Post-procedure, he felt much better and was discharged home 3 days later.

An outpatient CT scan the following week revealed necrotizing pancreatitis with walled off necrosis measuring 6 cm x 4.5 cm. Repeat EUS with necrosectomy was performed, but he was readmitted later that day with sepsis due to bacteremia and discharged home after treatment.

Conclusions: Drug-induced pancreatitis is an uncommon diagnosis of exclusion but should be considered after etiologies of alcohol, gallstones, and hypertriglyceridemia have been ruled out. Symptoms typically resolve with discontinuation of the offending medication. However, patients are at risk for rare complications like necrotizing pancreatitis and abscess, which carry high rates of morbidity and mortality.

A49

Formula Shortages: Not Only a Pediatric Problem

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Background: An increasing number of older adults living in the community require nutritional support via gastrostomy tube. Most providers have little or no education regarding enteral formulas and the nuances of choosing or changing preparations. This case illustrates some challenges associated with managing these needs in the ambulatory setting.

Case: 85-year-old man with Type II Diabetes, fully independent in ADLs and IADLs until he had a mechanical fall while mowing his lawn. Fall resulted in a subdural hematoma and traumatic brain injury with aphasia, dysphagia, and significant motor impairments. Tracheostomy and PEG tube placement were performed. With rehabilitation, he regained the ability to ambulate over the next several months, and his tracheostomy was reversed. Dysphagia and aphasia improved slightly, but he still required enteral nutrition. He presented to establish care at an ambulatory Geriatric Medicine practice about 9 months after his injury.

He was started on Suplena while hospitalized. His renal function had recovered, so changing the enteral nutrition product was considered. His physicians had difficulty finding a nutritionist or registered dietitian to assist in changing his supplementation. As he was tolerating Suplena well, a shared decision was made with the patient and his wife to continue.

Results: Patient subsequently returned to his pre-trauma weight, and metformin was also discontinued after normalization of A1c. Eighteen months after his trauma, supply chain issues resulted in a shortage of Suplena, now necessitating enteral formula substitution. His geriatricians sought assistance from multiple departments with experience with patients with gastrostomy tubes and/or enteral nutrition, including gastroenterology, ENT, and registered dietitians working in both inpatient and skilled nursing settings, but were unable to obtain guidance to determine the best substitute. The care team finally contacted Suplena manufacturer Abbott and were able to consult with the industry dietitian. Patient was switched to Glucerna.

Conclusions: Nutritional support for older adults with complex medical needs in the outpatient setting can be difficult for providers due to lack of education and experience even within large health systems. Shortages and supply chain issues create even more challenges. Current expert opinion and guidelines are limited and do not address enteral supplements for geriatric patients in the ambulatory setting.

A50

Frequent Transient Ischemic Attacks in a Nonagenarian

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A 94-year-old female LTC resident was hospitalized after she was unable to follow commands, and was disoriented with SBP > 190 mmHg. She was last known well the day prior to admission.

In the ED, vitals were T 98.3 F, HR 99 bpm, RR 18 bpm, BP 161/96 mmHg, and saturating 94% on RA. Physical examination was notable for orientation only to self. Neurological testing was not done as she could not follow commands. Laboratory studies and head CT were unremarkable. CXR showed a retrocardiac opacity in the left lower lobe concerning for aspiration.

Her symptoms resolved overnight without intervention. MRI brain and MRA head and neck were negative for acute pathology or evidence of flow-limiting stenosis, occlusion, or dissection but did show chronic small vessel ischemic disease. She was diagnosed with a transient ischemic attack with an $ABCD^2$ score of 6. Due to an allergy to aspirin, she was discharged on a 21-day course of clopidogrel only.

Five days after completing the course of clopidogrel, the patient had another episode of acute confusion with an unwitnessed fall.

Laboratory testing and cultures were negative for electrolyte abnormalities or infection. In the following days, the patient's cognitive status continued to deteriorate, making her more functionally dependent, worsening her dysarthria, diminishing her participation in recreational activities, and increasing her social isolation. Her rapid decline raised concerns for vascular dementia. Clopidogrel was reintroduced, and the patient returned to her baseline three days later and has remained so for the past four months without evidence of bleeding.

In the CHANCE trial, after the first phase of dual antiplatelet therapy (DAPT) (22 - 90 day period), clopidogrel alone was more effective than aspirin for secondary stroke prevention without an increase in bleeding risk. The patients who reaped the most benefit from DAPT were those with a more high-risk profile at baseline, increased stroke severity, or concurrent carotid artery disease, and patients who received early initiation of DAPT. However, after the 21-day recommended period for DAPT, patients with an $ABCD^2$ score > 4, such as this patient, are indicated for monotherapy with aspirin or clopidogrel. This case proves that clopidogrel should be considered more frequently for geriatric patients with a history of stroke or TIA who exhibit acute worsening in functional status or concerns for altered mental status or cognitive decline.

A51

Digoxin Toxicity in a Patient with Hypertrophic Cardiomyopathy

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An 83-year-old woman with hypertrophic cardiomyopathy (HCM) and paroxysmal atrial fibrillation (AF) presented to the clinic after hospitalization for palpitations and malaise. In the ED, the patient was afebrile, hypotensive at 95/67 mmHg, tachycardic, and hypoxic, requiring 3 LNC. Her labs were notable for hemoglobin 7.2 gm/dL, BUN 52 mg/dL, creatinine 2.6 mg/dL, proBNP 11457 pg/mL and INR 3.5. High-sensitivity troponin tests were negative. EKG revealed AF with a rapid ventricular rate (RVR) at 136 bpm. CXR was unremarkable. An echocardiogram showed preserved ejection fraction, mild concentric left ventricular hypertrophy, severely dilated left atrium, dilated inferior vena cava, and small to moderate pericardial effusion for which the cardiothoracic surgery team did not recommend intervention.

Her regimen was changed to amiodarone 200 mg BID, digoxin 0.125 mcg QD, metoprolol succinate 12.5 mg QD, and torsemide 20 mg QD during her hospitalization. Her anemia caused the AF RVR, for which she got 1 unit of packed red blood cells, iron supplementation, and two B12 injections. Her rivaroxaban was held temporarily due to the possibility of an occult bleed and resumed upon discharge.

The patient reported abdominal pain, weakness, and new-onset shortness of breath in the clinic. She initially attributed her symptoms to iron supplementation; however, they persisted after it was discontinued. She was also bradycardic at 52 bpm. It was determined that the patient's abdominal pain was likely caused by digoxin toxicity. The digoxin level was 2.7 ng/mL and her symptoms resolved once this medication was discontinued. Her metoprolol succinate was also held due to symptomatic bradycardia.

HCM causes stiffening of the left ventricle and disruption of the cardiac conduction system, placing those affected at risk of developing AF. Digoxin is a cardiac glycoside that ultimately increases intracellular calcium causing positive inotropic and negative chronotropic effects. Due to its positive inotropic effects, digoxin is contraindicated in patients with HCM as they require a decreased inotropic and chronotropic state to mitigate outflow tract obstruction, diastolic dysfunction, and myocardial ischemia. Care should also be taken in geriatric populations due to poor renal clearance as digoxin is renally excreted. This patient was not only inappropriately given digoxin which resulted in her dyspnea but also developed digoxin toxicity due to renal impairment.

A52

Sudden cessation of benzodiazepine associated with late rather than early CNS withdrawal symptoms

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Background:

Acute benzodiazepine (BZDs) withdrawal symptoms usually depending on the BZD's half-life, withdrawal can start at distinct intervals. In BZDs with long half-lives, symptoms can take up to three weeks to exhibit, however they may occur 24 to 48 hours after stopping use in BZDs with short half-lives.[1]

Case description:

88-year-old female with past medical history of hypertension, Depression, and anxiety, complicated by distal femur fracture s/p open reduction and internal fixation admitted with left complex left femur fracture underwent left femur intramedullary rodding complicated by hemorrhagic shock requiring pressor support. Her hospital course on day 3 was complicated by dysphagia requiring stopping longstanding oral clonazepam abruptly without parental benzodiazepine replacement, in addition to escitalopram and a significant dose of amitriptyline (tolerated for years).

Subsequently, 10 days after discontinuing clonazepam, she started to develop acute mental status change, twitching, tremor, tachypnea, and tachycardia. A CT head was without acute findings and EEG negative.

Her withdrawal symptoms improved gradually in 3 to 4 days after starting a moderate dose of diazepam.; the tremor, in particular, abated within a day.

Discussion:

In this case, the delayed delirium was felt to be multifactorial; however; the motoric components led Geriatrics to review the the hospital course and timeline of abrupt stopping of CNS medications.

The resulting prompt treatment for benzodiazepine withdrawal with valium leads to the rapid resolution of her symptoms.

Reference:

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A53

Survey of US clinician use of telemedicine by role

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Background Clinicians identify challenges in using telehealth with older adults, yet continue to use it at high rates. We conducted a nation-wide survey of US clinicians to assess utilization of telehealth for older adults (≥ 65 years old), including clinical role, medical specialty, and type of care provided. We report the most common uses of telehealth in the care of older adults amongst respondents who function as licensed independent practitioners (physician, nurse practitioner, or physician assistant) or nursing professionals.

Methods We distributed an online survey (Wallin Opinion Research) to assess use of telehealth and clinicians' views on advantages/challenges of telehealth in care of older adults in March 2022. Respondents were eligible if they were active US clinician with self-attestation of patient population ≥ 10% older adults. Survey was distributed through established professional networks. Eligible respondents received a gift card for participation, fulfilled by a third-party vendor. Survey participation was voluntary. Completion of the survey was considered consent to participate. The study was reviewed and determined exempt by the WCG's IRB Affairs Department.

Results Approximately 13,300 surveys distributed and 7,246(55%) respondents. Over half (56%) respondents were licensed independent practitioners (4,026): 1,991 (28%) physicians, 1,057 (15%) nurse practitioners, and 978 (14%) physician assistants. 19% (1,384) of the respondents were nursing professionals. Most common use of LIP telehealth was for primary care (PC 51%), mental/behavioral health (TBH 48%), and healthcare coordination (HCC 47%). Top use for nursing professionals was also PC (29%); however, other top uses were Emergency (26%) and home-based care (25%).

Conclusion Clinicians use telehealth in care of older adults for many types of care. Our previous survey of all clinicians showed the top utilization of telehealth to be TBH, primary care and healthcare coordination. This further assessment of survey results suggest that clinicians utilize telehealth differently based on their role. This highlights an opportunity for specific guidance and resources to support clinicians to optimize telehealth for their older adult patients by clinical role.

A54

How interdisciplinary geriatric team members approach What Matters Most

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Background: What Matters Most (WMM) conversations are central to Age Friendly care. Yet little is known about how interprofessional teams conduct WMM conversations. We explored various approaches teams take during these appointments via direct observation.

Methods: Between July and September 2022, we directly observed and, following consent, audio-recorded 5 WMM appointments, each with an outpatient geriatrics team (geriatrician, social worker, clinical pharmacist, nurse); 4 of which involved at least one family caregiver. Authors MA, KK, & EQ reviewed transcripts, developed a code book, and identified themes related to approaches taken by team members.

Results: The themes were: (1) validation of patient/caregiver concerns, (2) group problem-solving in real-time with the patient/family caregiver (e.g., in-home storage of exercise equipment, incorporation of past hobbies into current routines) and (3) development of care coordination plans to align with WMM (e.g., expediting a dental appointment and a cardiologist referral). Referrals in response to patient/caregiver concerns varied; while some referrals were often discussed (physical/occupational therapy, adult day, nutrition) others were not (missed opportunities to refer to neuropsychology, mental health counseling, VA Caregiver Support Program).

Conclusions: Our exploratory study suggests that interprofessional clinicians engage in real-time care alignment with WMM to patients and caregivers. Future research should evaluate how clinician approaches in WMM conversations contribute to patient experiences and outcomes and thus inform clinical best practices.

A55

Biological Aging Index Score (BAIS): Development of a predictive model to quantify biological age

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Background

Chronological age is record of time elapsed since birth. Biological age is the condition of an individual at certain time of his calendar age, marked by normal aging and pathological conditions. In recent years, biological age has shown to indicate general health status, predict frailty, functionality and mortality independent of chronological age. As there is no phenotypic model with objective scoring reference to quantify biological age till date, we have tried to develop an integrated biological aging index score (BAIS), which could predict overall physical, mental, sensory, cognitive, and cardio-respiratory function of an older adult.

Methods

We conducted a cross-sectional observational study between January 2019 and October 2020. Ambulatory patients without Major Neurocognitive Disorder visiting geriatrics out patient department were included in the study. Participants were questioned for geriatric syndromes and tested for grip strength, 2-minute step test, visual acuity, dexterity and cognition. Biological aging index score was calculated by integrating these variables using Analytical Hierarchical Process and a model was generated using regression analysis. Ethical clearance was received from Institutional Ethics Committee.

Results

A total of 184 participants were included in the study with a mean age of 67.7±6.4 years. Predictive model for biological age generated as: Biological ageing index score = 0.3 + (0.001*2MST) + (0.001*VEF) + (0.004*PGT) + (0.005*GST) + (0.002*MS), where, 2MST= 2-minute step test, VEF= Visual efficiency score, PGT= Peg board test, GST= Grip strength test, MS= 5 memory domains (recent memory, mental balance, immediate recall, delayed recall and visual retention.) Biological Ageing Index Score correlated significantly with fall, joint pain, anorexia, sleep disturbance, weight loss, urinary incontinence, depression and subjective ageing.

Conclusion

We propose a model to quantify biological age. We conclude that biological aging index score (BAIS) could potentially be biomarker of aging. It can be a basic tool for assessment of biological age at bed-side, which is different from the actual chronological age of older adults. There is need of longitudinal studies to validate our model as a long-term predictor of cognitive decline, functionality, quality of life, morbidity and mortality.

A56

Dissemination and Impact of Individualized Support on Caregiver Well-Being and Burden

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BACKGROUND

The emotional state of family caregivers is primary to maintaining health of older patients with chronic illness and functional impairment. We report preliminary results of a social work-delivered, individualized intervention developed at Rush University based on the 4 Ms- Mentation, Medication, Mobility, what Matters Most- on caregiver measures of distress and burden.

METHODS

A convenience sample of caregivers for older adults with multiple chronic conditions was recruited from 4 sites: inpatient (at time of discharge), dialysis center, hospital caregiver center and 1 ambulatory geriatrics practice. Demographic elements were gathered along with physical and emotional well-being using General Anxiety Disorder (GAD 7), PHQ9, Burden Scale for Family Caregivers (BSFC), and General Self Efficacy (GSE). Baseline measures gathered within a week after informed consent, and 1-month and 3-months later. Plans of care developed between caregiver and social worker and documented in REDCap. Descriptive statistics and repeated measures ANOVA run on SPSS.

RESULTS

31 caregivers gave informed consent, age range 44-80 years, mean ± SD 66.5 ± 10.2, 87% female, 77% white. 52% were spouses and 39% child of patient. Caregivers were similar (age, gender, race, relationship) across locations (all p >.05). Mean baseline measures: GAD7 9.2 ± 6.6, PHQ9 7.9 ± 6.9, BSFC 16.5 ± 7.2, GSE 4.1 ± 0.5. All measures showed trends towards improvement for the 7 caregivers with 3 repeated measures, e.g., GAD7 6.0 ± 5.3 decreased to 4.7 ± 3.9, PHQ9 5.6 ± 5.1 decreased to 4.3 ± 2.7, BSFC 14.4 ± 5.8 decreased to 11.1 ± 6.7. Therapeutic plans were similar across locations: 10 referred to support groups, 7 to counselling, 3 other referrals. 4 dropped out after baseline (two patients died).

CONCLUSIONS

In this group of older family caregivers baseline anxiety was moderate, depression mild, burden moderate-severe and burden increased over the first month following individualized intervention. All measures trended towards improvement for the 7 caregivers with 3-month follow-up data; further data collection is ongoing. Future directions include additional follow-up to assess benefit, and assessment of patient outcomes.

A57

Introducing eFrailty: Simplifying Selection of Frailty Assessment Tools

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Background

Health care providers recognize the importance of frailty assessment for older adults, but they may be unfamiliar with which frailty assessment tool to use. We sought to create an accessible website to assist clinicians in choosing an effective, evidence-based frailty screening tool.

Methods

We selected commonly used frailty tools based on the literature and worked with a web designer to develop the eFrailty website prototype. A short description of each tool's key features and estimated time for assessment is included for each frailty tool. An algorithm based on differences in patient characteristics, clinical scenarios, available information, and time for assessment was created to guide users.

Results

Modeled after the highly popular ePrognosis website, eFrailty is designed to guide clinicians to select the ideal frailty tool for their clinical context. The site prompts clinicians to choose between patients considering stressful treatment (e.g., major surgery), or patients with or without serious illness. Depending on available information, clinicians choose between 'Self reports/records only,' or 'Performance tests available,' including cognitive screens or physical performance testing. Alternatively, Clinicians may use the eFrailty comparison table which builds on the work of several systematic reviews of frailty identification tools to easily select the best instrument for their patient.

Conclusion

The eFrailty website offers an accessible guide to selecting the most appropriate frailty assessment tool. Future directions for eFrailty include beta testing to gather clinician input from point of care use.

A58

Novel Medication Management Program Decreases Hospitalization Rate in Geriatric Home Healthcare Patients

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Background: Medication non-adherence is common in the geriatric population and is associated with an elevated risk of hospitalization. ContinueCareRx™ (CCRx) is a novel home-based medication management program that includes adherence packaging alongside medication reconciliation, review and education by clinicians. We hypothesized that home health patients receiving the CCRx service may have a lower hospitalization than control home health patients.

Methods: Between May 1, 2021 and September 30, 2022, 54 home health patients whose insurance covered the program were enrolled in CCRx. Home health patients not eligible for the program due to a non-covered pharmacy insurance benefit made up the control group. Hospitalization rate was calculated in both groups and compared using Generalized Estimating Equations (GEE) analysis.

Results: The control group consisted of 24,804 patients receiving home health during the study period. Controls experienced 8,316 hospitalizations over 2,493,634 managed days (1,217 hospitalizations per 1,000 per year), while the CCRx group had 13 hospitalizations over 10,004 managed days (474 hospitalizations per 1,000 per year). The groups were similar in age ($M_{Control}$=75.63, SD=11.89 vs. M_{CCRx}=73.07, SD = 18.58, t=1.57, p=0.12) and gender composition ($M_{Control}$=60.1% female vs. M_{CCRx}=63% female, c^2=0.18, p = 0.67). The GEE analysis showed that after controlling for age and sex, the fixed effect of group was predictive of individual annual hospitalization rate (Wald c^2=9.154, p<0.01). Specifically, being in the control group was associated with a 3.41-fold increase in the risk of hospitalization compared to the CCRx group (Table 1).

Conclusions: Geriatric home health patients enrolled in CCRx experienced a 70% lower hospitalization rate than controls. Making the program more widely available to seniors receiving home health may be an opportunity to reduce hospitalizations, and requires further study.

Table. Parameter estimates for fixed effects and a co-variate in Generalized Estimating Equations (GEE) predicting individual hospitalization rate.

Parameter	β	SE	95% Wald CI	Odds Ratio	Wald X^2	p
Female	-0.099	0.07	-0.238 - 0.039	0.91	1.97	0.16
Control Group	1.227	0.17	0.432 - 2.022	3.41	9.15	<0.01
Age	-0.002	0.005	-0.008 - 0.004	0.99	0.37	0.54

A59

Older Adult Participation in Multidisciplinary High-Risk Surgery Discussions: A Pilot Study

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Background:Current surgical consent practices are inadequate for older adults undergoing high-risk surgical procedures. Our hospital implemented a multidisciplinary team in 2016 to address

surgical decision-making for older adults. To make this a patient-centric process, we began a pilot program to include the patient and their family in these conversations. Our hypothesis was that multidisciplinary team discussions including older adults can improve patient understanding and comfort with high-risk surgical decision making.

Methods: From January to June 2022, the pilot study offered patients and their family participation in the multidisciplinary high-risk surgery discussion at a level 1a VA hospital. A semi-structed interview was conducted 2-7 days after the meeting with the patient and caregiver(s). These sessions were transcribed and analyzed with qualitative mixed methods approach.

Results: 6 patients and their caregivers participated in the study. Overall, they reported a positive experience and found the discussions helpful for improving their understanding of the surgical decision. (Figure 1) 50% (3 of 6) changed their decision regarding the planned operation based on the discussion with the multidisciplinary team.

Conclusion: Including patients and their caregiver(s) in multidisciplinary surgical decision-making discussions resulted in half of patients changing their surgical plans. This pilot study revealed both acceptance and feasibility for all participants. These data demonstrate the potential for meaningful impact from these multidisciplinary discussions in improving decision making discussion for older adults.

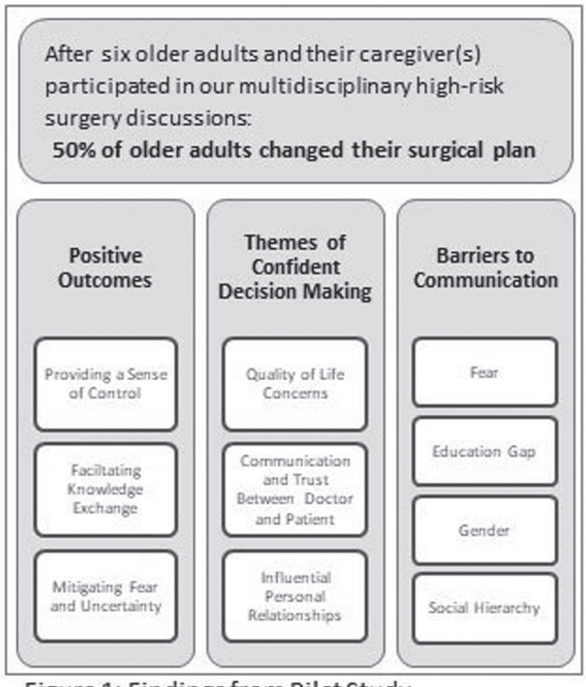

Figure 1: Findings from Pilot Study

A60

Experience Implementing Prehabilitation for Frail Patients in a Thoracic Surgery Clinic

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Background: Prehabilitation (prehab) interventions may mitigate postoperative complications among frail adults but implementation into routine surgical practice is challenging. We developed a prehab smartphone application that provides, encourages, and tracks self-guided at-home exercise for prefrail and frail surgical candidates. The program was piloted in the thoracic surgery clinic of a single, academic institution using the four phases of the Quality Implementation Framework (QIF): (1) Capacity building, (2) Implementation structure building, (3) Ongoing implementation support, and (4) Evaluation. We assessed the frequency that surgeons offered prehab to eligible patients across each phase.

Method: Frailty screening (frailty phenotype, range 0-5) was conducted in all surgical patients presenting to clinic between July and November 2022. During Phase 1, a research coordinator (RC) recorded the surgeons' interaction with patients about prehab. During Phase 2, the RC actively informed surgeons when a patient was a candidate for prehab, addressed computer interface issues with the program, and created a motivational prehab prescription handout. During Phase 3, the RC continued the in-clinic support. During Phase 4, the RC discontinued clinic support and evaluated feasibility of the intervention.

Results: Of 102 patients screened for frailty, 38 (37%) were prefrail/frail and eligible for prehab. In phase 1, surgeons were not offering prehab routinely and the enrollment rate for eligible patients was 11% (1/9). RC support led to increased enrollment in phases 2 (91.6% (11/12)) and 3 (75% (3/4)). Without ongoing RC support, enrollment in phase 4 decreased to 7.6% (1/13).

Conclusion: Our experience implementing prehab for prefrail/frail thoracic surgery patients revealed that a prehab intervention is feasible with dedicated support. However, sustainability of the prehab intervention was poor. Future work will gather surgeon and patient perspectives on facilitators and barriers of implementing prehab to maximize and sustain clinician and patient engagement.

A61

Evaluation of a Dementia-Specific Advance Care Planning Training for Japanese Primary Care Clinicians

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Background: Japan has the largest per capita population of people living with dementia (PLwD) globally. Advance care planning (ACP) is relatively new to Japan especially in primary care for PLwD. Our aim was to evaluate the appropriateness of a dementia-specific training on ACP communication skills for Japanese primary care clinicians.

Methods: We delivered 13 training sessions in primary care clinics across central Japan and conducted a post-training survey to assess the appropriateness of the training with the following 4 statements: 1) The language in the sessions was clear, 2) The sessions took an appropriate amount of time to complete, 3) The design of the sessions was an effective educational method, and 4) The sessions were culturally appropriate for communication with Japanese patients with dementia and their family members. We asked participants to respond using a 5-point Likert scale from strongly agree to strongly disagree.

Results: All participants were Japanese and included 80 physicians (mean age 39.8 years), 33 nurses (mean age 45.7 years), and 58 other participants (mean age 42.9 years), who were 30.0%, 87.9%, and 55.2% female respectively. Most participants practiced in rural settings. Of 128 respondents, 89.8% agreed or strongly agreed that the language was clear; of 127 respondents, 94.5% agreed or strongly agreed that the session took an appropriate amount of time; of 127 respondents, 96.9% agreed or strongly agreed that the educational design was effective; and of 129 respondents, 73.6% felt the training was culturally appropriate.

Conclusions: Japanese primary care generally felt the dementia-specific ACP training was appropriate. The language, time, and design were well received, though further work is needed to improve the cultural appropriateness of the training. We plan to analyze additional qualitative data to explore ways to improve its cultural appropriateness.

A62

Nurses' Opinions on a Geriatric Care Bundle Intervention: An Experience from a Singapore Community Hospital

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BACKGROUND

In Singapore where the proportion aged 65 or older is projected to almost double from 16% to 28% by the end of the Decade of Healthy Ageing (2020-2030), diagnosing and managing geriatric syndromes well are crucial. Several tools have been developed to enhance the management of geriatric syndromes e.g., Fulmer SPICES [1]. A Geriatric Care Bundle (GCB) was first implemented in July 2022 in Ng Teng Fong General Hospital, an acute hospital and subsequently in our community hospital dementia ward in August 2022. We then conducted a survey on nurses' opinions of the GCB in October 2022.

METHODS

The GCB was implemented in patients aged 75 and above. Components include function (basic activities of daily living/ aids required), skin (Braden scale score), cognition/ behavior (sleep, Confusion Assessment Method for delirium, Patient Health Questionnaire-2 for depression), pain, nutrition/ oral assessment (3-min NS), continence, falls (Morse fall scale) and hearing/ vision impairment. Each component has a corresponding set of management guidelines that nurses could self-implement and/ or refer to doctors/ allied health team for further input.

RESULTS

Since its inception, the GCB has been implemented on 51 patients. Table 1 shows our survey results. Majority felt the GCB increased their awareness of geriatric syndromes, empowered them to manage patients more holistically and increased patients' quality of life. Varying opinions on the degree of adherence to interventions suggests further training is needed to standardize care protocols.

CONCLUSIONS

Our GCB is a comprehensive and structured way to identify and manage geriatric syndromes. We are hoping to include frailty/ sarcopenia soon. As hospitals face problems of manpower shortages and geriatric patients become increasingly complex with multi-morbidity and frailty, such clinical tools are only going to become more relevant.

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Table 1. Survey results on nurses' opinions of the GCB

Question	Options	% (n)
The GCB has increased my knowledge and awareness of geriatric syndromes e.g. dementia, delirium etc	Strongly disagree Disagree Neutral Agree Strongly agree	0 (0) 0 (0) 23.5 (4) 76.5 (13) 0 (0)
I find the GCB helpful in my daily work of caring for my patients	Strongly disagree Disagree Neutral Agree Strongly agree	0 (0) 5.9 (1) 23.5 (4) 70.6 (12) 0 (0)
The GCB empowers me to manage my elderly patients more holistically	Strongly disagree Disagree Neutral Agree Strongly agree	0 (0) 0 (0) 11.7 (2) 82.4 (14) 5.9 (1)
I feel that the GCB helps improve the quality of care of my patients	Strongly disagree Disagree Neutral Agree Strongly agree	0 (0) 0 (0) 17.6 (3) 82.4 (14) 0 (0)
On average, I take __ minutes per shift to fill in the GCB	<5 5-15 16-20 21-25 >25	11.7 (2) 58.9 (10) 23.5 (4) 0 (0) 5.9 (1)
I find the GCB too cumbersome to fill in	Strongly disagree Disagree Neutral Agree Strongly agree	0 (0) 23.5 (4) 53.0 (9) 23.5 (4) 0 (0)
On average, interventions are adhered to __% of the time	<20 20-40 41-60 61-80 81-100	11.7 (2) 17.6 (3) 35.3 (6) 17.6 (3) 17.6 (3)

A63

Improving and Addressing Fall Risk: Implementation of a Shared-Medical Appointment Model in an Internal Medicine Practice

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Background:

The median age of Americans is rising, and fall risk increases with age. While the causes of falls are multifactorial, falls are preventable. Despite numerous fall prevention interventions existing, only a small percentage of older-adults report being asked about fall risk or falls. The CDC endorses a Stopping Elderly Accidents, Deaths and Injuries (STEADI) toolkit, but penetration into practice has been slow. To address this gap we implemented a Falls Prevention Shared Medical Appointment (SMA) at an Internal medicine clinic at UC San Diego Health.

Methods:

Patients were referred to the SMA by their primary care provider or bone health specialist. Patients were scheduled per their preference by virtual or in-person visits, as the clinic was hosted synchronously in a hybrid format. Prior to the SMA, patients attend a nurse visit for appropriate fall-related screening: the CDC's Staying Independent Brochure, a 30 second chair rise, timed up and go (TUG), orthostatic vital signs, and a Snellen eye screen. Two physicians lead the SMA to review the patients' medical history, fall screening results and fall risk with the entire group. Recommendations are made based on patient preference/skill/risk to decrease fall-risk. Patients receive a semi-tailored guide showcasing selected community-based resources, and home fall prevention strategies after the visit. Relevant clinical and demographic measures were collected from the history and review of the medical record.

Results: Between November 2021 and May 2022 with SMAs ranging from 3-5, 33 patients were assessed with an average age of 77, 91% female, and 75% with osteoporosis. Of those seen, 78% reported no previous home safety evaluation, the average TUG was 11.6s, and the average chair stand score was 12.6 stands. Questionnaire self-

reported risk factors, self-reported strength, and polypharmacy were all as associated with objective markers of an increased fall risk, namely abnormal TUG/30 second chair rise scores.

Discussion:

Falls prevention SMAs have promise to be delivered digitally or in-person and are useful from a patient's perspective as shown by our survey results. Additional work is needed to further delineate the selection criteria, and possibly cohort participants by risk-level, as this program is expanded within our integrated health system.

A64

Increasing Advance Care Planning with the Black Community

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Background: People identifying as Black/African American are less likely to engage in advance care planning (ACP) compared to their White peers, despite the association of ACP with improved patient and caregiver outcomes. We used community-based participatory research to assess ACP facilitators/barriers in the San Francisco (SF) Black community and co-design/implement/test community-based ACP pilot events.

Methods: In partnership with the SF Palliative Care Workgroup (which includes health system, city, and community-based organizations), we formed an African American Advisory Committee (n=13). We conducted 6 focus groups with Black older adults (age ≥55), caregivers, and community leaders (n=29). Based on learnings from focus groups, we designed and implemented community-based pilot events through 5 community-based organizations identified through a widespread request for proposal. We analyzed focus group data using thematic analysis; assessed pre- vs post-event readiness to engage in ACP (validated survey; 1-4 scale, 4=most ready) using Wilcoxon signed rank tests; and assessed event acceptability with open-ended questions.

Results: Themes indentified included the importance of ACP to the Black community (e.g., strengthens families; preserves dignity, particularly for sexual/gender minorities; is tied to financial planning) and facilitators for increasing ACP engagement (e.g., events in trusted community spaces including Black-owned businesses). One hundred fourteen participants attended 5 events; 74% identified as Black, 16% as sexual/gender minorities. Readiness to identify a surrogate decision-maker increased (2.9 (SD 1.1) to 3.2 (1.0); P=0.3), although non-significantly, and 98% would recommend the events to others.

Conclusions: Community-based ACP events designed and led by and for the Black community are highly acceptable. Insights underscored the importance of financial planning as part of ACP and the role of Black-owned businesses as trusted spaces for health-related discussions.

A65

Improving Social Interaction, Resilience, and Loneliness In Cognitively Impaired Older Adults

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Background: Social connections are important in older adults for promoting health and well- being. Lack of social connections has been associated with decreased quality of life, and adverse health outcomes both physical and mental. COVID-19 pandemic isolation implementations have negatively impacted older adults. The objective was to improve social connections and loneliness in cognitively impaired older adults.

Methods: Older adults aged ≥ 60 years were enrolled in an 8-week program. The connections plan intervention was provided over two or more sessions, that lasted for 30-60 minutes and were provided by phone or video visit. The intervention consisted of improving mind, body, and connection practices. The mind goals were achieved by providing resources on how to keep our mind sharp, like playing word games, doing puzzles, reading, and practicing mindful awareness. Body goals were achieved by providing resources on improving physical activity. Connections goals were achieved by re-connecting older adults with their family and friends, with nature, art or music. All participants were assessed for loneliness, perceived stress, cognition, brief resilient coping scale and managing social interaction at baseline and follow-up visits.

Results: Mean age of the participants (N=62) was 74.6(±7.0); 85% were male; 81% were Caucasian; 18% were African Americans; and 65% were rural. Mean T-MoCA score at baseline was 16.1(±3.8). There was significant improvement in the brief resilient coping scale (p=0.002) at follow-up. Half of the participants reported no loneliness at baseline. For those that reported loneliness (N=31) at baseline, there was significant improvement in loneliness (p=0.013) at follow-up. Majority of the participants (79%) reported high level of confidence in managing social interactions. Among those reporting low confidence (N=13) at baseline, there was significant improvement in confidence in managing social interactions (p=0.039) at follow-up. There was no significant improvement in perceived stress score (p=0.715) at follow-up.

Conclusion: Social interaction, resilience, and loneliness can be improved with connections plans in cognitively impaired older adults.

A66

Evaluation of Antipsychotics vs Valproic Acid in Hyperactive Delirium

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Delirium is a common geriatric syndromes in hospitalized patients. Valproic acid (VA) has been used off-label to assist in the management of delirium in the intensive care (ICU) setting, but studies are limited in its efficacy. Antipsychotics are the standardized medication in the electronic health record (EHR). The primary objective of this study evaluated the resolution of hyperactive delirium with antipsychotics vs VA in a non-ICU setting.

A retrospective chart review on hospitalized patients >70 years old and admitted between 1/2021 and 12/2021 with hyperactive delirium, defined as positive Confusion Assessment Method (CAM) scores, in a non-ICU setting. Patients were excluded if they required antipsychotics or VA for other medical conditions such as epilepsy, schizophrenia, and bipolar disorder. The antipsychotic arm included patients who received medications such as haloperidol, risperidone, quetiapine, and olanzapine, and the VA group included patients who received VA, and as-needed antipsychotics. This study was deemed to be IRB exempt. The primary outcome of the resolution of hyperactive delirium was defined as CAM negative prior to discharge. Secondary outcomes included time from first CAM positive to first CAM negative, and patients with multiple delirium episodes, defined as greater than or equal to 2 CAM positive events.

281 patients were evaluated; 34 patients in the VA group and 28 patients in the antipsychotic group. No statistical difference was seen in the primary outcome; the % of patients with delirium resolution was 79% in the VA group and 92% in the antipsychotic group (p=0.166). The time to resolution of the first delirium episode was non-statistically significant (1.9 hours vs 2.1 hours, VA vs. antipsychotic).

Fewer patients in the VA group had multiple episodes of delirium compared to the antipsychotics group (17.6% vs. 42.9%, VA vs. antipsychotic, P=0.027).

There was no difference in the resolution of hyperactive delirium or time to resolution of delirium between the two groups. However, the use of VA was associated with statistically significant decreased incidence of multiple episodes of delirium compared to antipsychotic use. There may be benefit for using VPA in patients with repeat episodes of delirium. Larger studies are needed to further investigate the impact of VPA for the management of hyperactive delirium in a non-ICU patient population

A67

Enhancing Care Transitions with Geriatrician-led Outpatient Follow-up via Consultative Visit and Home House Call Following Emergency Observation Admission

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Background: Transitions of care pose a risk to patient safety and often lead to adverse outcomes, particularly in older adult patients. Adverse events occur for multiple reasons, including: inadequate medication reconciliation, unmet need for home services or Durable Medical Equipment (DME), or lack of understaninding of the medication changes. We pose a novel approach to enhancing care transitions through a Geriatrician-led home visit following Emergency Observation admission to reconcile the above.

Methods: We included individuals age 65 and older who presented to an academic Emergency Observation unit who 1) had a Geriatric consultation requested, 2) were discharging directly to home, and 3) had a diagnosis that made them a high risk for readmission (heart failure, neurocognitive disorder, frequent falls, polypharmacy [> 4 medications], frailty). We began identifying patients starting October 1st, 2022. Recruitment is ongoing.

Results: Eight (8) patients were identifiied for outpatient follow-up (5 male, 3 female, average age 83.3). Eight patients had polypharmacy, four had underlying major neurocognitive disorder, and two were admitted for falls. Home visits resulted in an average of 1.25 medications discontinued per visit. No patients were readmitted within 30-days of discharge.

Conclusions: Geriatrician-lead home visits and outpatient follow-up may help reduce pill burden and chances of readmission in older adults following Emergency Observation discharge. Data collection will be ongoing.

A68 Encore Presentation

Development of a Mobile Intervention to Support Healthy Eating in Persons with Co-occurring Frailty and Dementia

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Background

New behavioral solutions are needed to improve health in persons with co-occurring frailty and dementia. Using dementia-specific principles of human-centered design, we developed a mobile intervention that includes a patient-facing app and clinician interface to promote a Mediterranean-style eating plan in this population.

Methods

Our design processes were as follows. We first solicited iterative input from experts in dementia, accessible design, and technology concerning language, cognitive load, and overall accessibility needs in persons with early dementia. Next, we recruited seven people with mild dementia and their partners for interviews, experience sampling, and usability studies. In parallel, a web-based clinician interface was developed through individual interviews, a survey of potential end-users, and two rounds of usability studies.

Results

Our primary findings were: 1) participants have basic knowledge of healthy eating tenets and want to learn more; 2) participants are unaware of anything specific to improve in their diet; 3) participants value simple meals with few ingredients; 4) participants strongly rely on physical cookbooks. Based on the results, we developed a high-fidelity prototype of the patient-facing mobile app, divided into tasks: 1) First time onboarding; 2) Setting the first dietary goal; 3) Finding a recipe; 4) Filter/sorting for recipes; 5) Food tracking tool; 6) Mastering a dietary goal and starting a new one; 7) Reviewing progress. The resultant product was iterated in usability studies and informed final prototypes for further testing. The online clinician product features these interactive modules: dashboard, tracking manager, patient portal, and individual patient page.

Conclusion

If found acceptable, feasible, and efficacious in the forthcoming clinical trial, the proposed intervention might present an attractive solution for delivering a scalable lifestyle intervention for secondary dementia risk reduction to currently underserved populations.

A69

Self-Administrated Digital Elder Abuse Intervention for Older Adults in the Primary Care Setting

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Background: Identifying elder abuse in clinical settings remains a growing problem, and traditional tools used with the intent to screen and identify elder abuse generally require the presence of a clinician to conduct the screening. However, older adults may not feel comfortable disclosing abuse experiences in the presence of others due to perceived stigma, misunderstanding of the reporting system and other complicated factors.

Methods: VOICES is a unique, tablet-based elder abuse screening intervention that aims to encourage older adults to self-report elder abuse. The intervention is self-administrated by the older adult rather than the provider, with a digital coach that guides the older adult through the process. In addition to screening, the VOICES Elder Abuse Intervention (EAI) provides brief psychoeducational intervention to enhance and improve identification and reporting of elder abuse when there are no recognized signs or symptoms of abuse (i.e., asymptomatic).

The VOICES EAI was successfully evaluated in a busy emergency department setting with (N=1,000) participants with strong positive results for feasibility and acceptability. In this study, we explored using VOICES with 80 participants aged 60 and above in primary care setting. Participants were recruited from the Yale Internal Medicine Associates primary care clinic in New Haven, CT. Our primary outcomes included measures of feasibility and acceptability.

Results: Participant representation was 83% White, 16% Black or African American, and 61% female. Overall feedback was highly satisfactory, with 95% agreeing that using the tool on the iPad was very easy to use, and 93% agreeing that VOICES was appropriate for learning about mistreatment. 81% of participants felt VOICES was appropriate for use in the clinic.

Conclusion: Our findings suggest that older adults in the primary care setting find VOICES to be feasible and acceptable. Our results also suggest that the differences of integrating VOICES into either the emergency department or primary care setting are minimal, and both settings are a good opportunity for increasing identification of elder abuse. A follow-up study is needed to examine the efficacy of using VOICES in the primary care setting with a larger population.

A70 Encore Presentation

A Randomized Double-Blind Study to Assess the Skin Irritation and Sensitization Potential of Once-Weekly Donepezil Transdermal Delivery System

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BACKGROUND: Once-weekly donepezil transdermal delivery system (TDS; Adlarity®) was approved in 2022 by the US FDA for the treatment of mild, moderate, and severe dementia of the Alzheimer type. The objective was to assess the skin irritation and sensitization potential of once-weekly 5-mg/d donepezil TDS.

METHODS: In this placebo (vehicle), TDS-controlled, randomized, double-blind phase 1 trial (NCT03397862), healthy volunteers aged ≥40 years were evaluated for skin irritation and sensitization potential. Participants were randomized to receive weekly applications of 5-mg/d donepezil TDS on one side of the back and placebo TDS on the opposite side, or vice-versa, with 3 consecutive weekly TDS applications to the same skin site. During a challenge phase, donepezil TDS and placebo TDS were applied to naïve skin sites on opposite sides of the back in a randomized manner for 48 hours. Skin irritation scoring was performed weekly after TDS removal.

RESULTS: Among the 256 participants who received ≥1 dose of any treatment, the mean (SD) age was 54.3 years (9.4 years). After 3 weekly assessments of TDS, the average of the mean combined irritation score was 0.55 of a possible maximum 7 for donepezil TDS, indicating none-to-minimal skin irritation, and 0.19 for placebo TDS, indicating no skin irritation (treatment difference, −34 [95% CI, −0.43, −0.25]). There was a slight numerical trend of better skin tolerability in participants aged ≥65 versus <65 years. Of 198 participants, 4 (2.0%) were considered potentially sensitized to donepezil TDS, and 0 were potentially sensitized to placebo TDS.

CONCLUSION: Once-weekly 5-mg/d donepezil TDS demonstrated minimal skin irritation under use conditions of 3 consecutive weekly patch applications to the same skin site and minimal sensitization potential.

A71

Defining the Unique Microbiome Signature of older adults with cognitive decline: Preliminary findings from the Florida's Microbiome in aging Gut-Brain (MiaGB) Consortium

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Background: Age-related cognitive function or dementia is a debilitating health problem in older adults. To date no effective prevention and therapeutic strategies are available. We have demonstrated that the gut microbiome signature in older adults with mild cognitive impairment (MCI), an early stage of Alzheimer's dementia (AD), and Alzheimer's disease and related dementias (ADRD) differs significantly from healthy.

Methods: With funding awarded by the Florida Department of Health, we have established a multi-site collaborative study across Florida as part of our Microbiome in Aging Gut and Brain study statewide consortium. Our aim was to test a hypotheses that *(1) unique microbiome signatures can differentiate older adults suffering cognitive decline and ADRD from their healthy counterparts; predict disease progression; and (2) inflammation mediates microbiota effects on cognitive decline and ADRD*. We collected stool, blood, and saliva samples from adults 60 years or older with or without signs of cognitive decline who completed an array of cognitive tests.

Results: To date, our whole genome microbiome sequencing revealed that the viral and archaeal population was significantly reduced in the gut of older adults with dementia compared to those with MCI and normal cognition. Whereas the fungi were exclusively detected in the controls only. Alpha diversity of the participants with MCI and dementia was lower than the cognitively healthy controls. The abundance of Actinobacteria and Verrucomicrobia phyla was higher, and Firmicutes phylum was lower in the patients with AD. Bacteriophages *Lactobacillus prophage* Lj771 and *Microbacterium phage* Min1 were exclusively detected in the gut of the participants with dementia.

Conclusions: To date, our results have shown that older adults suffering from mild cognitive impairment and dementia have a unique gut microbiome signature compared to their healthy counterparts. This may have disease monitoring and/or therapeutic implications.

A72

Indwelling urinary catheter insertion during hospitalization for UTI and risk for discharge to rehabilitation and 30 day rehospitalization

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Background: Lower urinary tract infections (UTIs) are common in the elderly and can lead to hospitalization. Often, these patients experience urinary retention and require insertion of an indwelling catheter (IC). Discharge to rehabilitation facility and 30 day rehospitalization carry significant financial burden on healthcare systems. In this study, our aim is to determine if UTIs complicated with need for IC are associated with increased risk of discharge to rehabilitation or 30 day rehospitalization.

Methods: We conducted a retrospective cohort study of patients aged 65 and older hospitalized at our institution with UTI between July 1, 2021 to June 30, 2022. The exposed group included patients with UTI that required IC placement during hospitalization. The non-exposed group included patients that did not require IC. Both cohorts were stratified into two age groups (Ages 65-80 and >80).

Results: A total of 1,537 patients met inclusion criteria. Of these, 58% (n=888) required IC and 42% (n=649) did not require IC. In the non-exposed cohort, 51% (n=333) were aged 65-80 and 49% (n=361) were over 80 years. In individuals aged 65-80, 79% (n= 265) were discharged home, 20% (n=66) to rehab, and 14% (n=48) were re hospitalized within 30-days. In those >80 years in age, 59% (n= 185) were discharged home and 39% (n=123) to rehab. In this subgroup, 11% (n=34) of patients had a 30-day rehospitalization. In the exposed cohort, 64% (n= 568) were aged 65-80. Of these, 35% (n=196) were discharged home and 36% (n=206) to rehab with Odds Ratio of 2.39. In this subgroup, 26.93% (n=153) had a 30-day rehospitalization (OR 2.26). For patients aged above 80 years, 13% (n=42) were discharged home, 29% (n=94) were discharged to rehab (OR 0.65). Of all patients 80 years and older, 32% (n=102) had a 30-day rehospitalization (OR 3.88).

Conclusions: There was a higher likelihood of 30 day rehospitalization and discharge to rehab in patients with a urinary catheter aged 65-80. In patients above 80 years we found higher OR for 30 day rehospitalization, but not for discharge to rehab. The study is limited in identifying factors that could have contributed to the need for urinary catheter insertion but the results support the need for hospitals to develop methods that can minimize the risk of urinary retention.

A73

A Randomised Controlled Trial and Economic Evaluation of a Primary Care Intervention Designed to Improve Health Outcomes and Reduce Health Service Use in a Cohort of Older Australians at Risk of Poor Health Outcomes: Two Year Follow-up

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Background – Observational evidence suggests that continuity of care with a preferred primary care physician, longer appointment times and rapid follow-up after hospital care episodes can produce better health outcomes and improve health service use. We aimed to test whether a multicomponent intervention comprising these components cost-effectively improved health and reduced health service use.

Methods – We conducted a clustered randomised controlled trial of a multicomponent intervention. The trial included a cohort of older adults (>64 years of age) identified by their regular primary care doctor as being at high risk for poor health outcomes. The primary outcome was self-rated health. Secondary outcomes were the number of hospital care episodes, specialist claims and medications dispensed. Cost-effectiveness was based on the number of quality-adjusted life-years gained derived from EQ-5D-5L utility scores. Secondary outcomes were assessed at both 12 and 24 month follow-up.

Results – Twenty general practices, 92 general practitioners and 671 patients (Control: 319; Intervention: 352) in the older cohort took part in the trial. No practices withdrew from the trial and 629 (93.7%) patients completed the trial. 51.7% of patients were female, 64.4% were greater than 74 years of age. Patients reported a mean of 3.6 (SD, 1.5) chronic diseases. No intervention effects were found for mean ratings of self-rated health, the number of specialist claims or the number of medications dispensed. At 24 months there were intervention effect decreases (non-statistically significant) in the incidence emergency department presentations 21% (IRR, 0.79; 95% CI, 0.58–1.06); hospital admissions 22% (IRR, 0.78; 95% CI, 0.55–1.09) and the number of nights in hospital 31% (IRR, 0.69; 95% CI, 0.34–1.31). The intervention was both cheaper than usual care by A$540 (primarily due to lower hospital costs) and more effective (0.074 more QALYs gained). A cost-effectiveness acceptability curve showed that the probability of the intervention being cost-effective at a willingness-to-pay threshold of A$50,000 per QALY gained was around 94%.

Conclusions – This study demonstrates that a complex primary care intervention for older adults was cost-effective but further studies with greater power are required to confirm the findings.

A74

Long-term Impact of a 10-year Intensive Lifestyle Intervention on a Deficit Accumulation Frailty Index: Action for Health in Diabetes (Look AHEAD) Trial

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Background: Multidomain lifestyle interventions may slow aging as captured by deficit accumulation frailty indices, however it is unknown whether benefits extend beyond intervention delivery.

Methods: We developed a deficit accumulation frailty index (FI-E) to span the ten years that the Action for Health in Diabetes (Look AHEAD) randomized controlled clinical trial delivered interventions (a multidomain intensive lifestyle intervention (ILI) compared to control diabetes support and education (DSE)) and to extend across an additional eight years post-delivery. The study cohort included 5,145 individuals, aged 45-76 years at enrollment, who had type 2 diabetes and either obesity or overweight.

Results: Overall, FI-E scores were relatively lower among lifestyle participants throughout follow-up, averaging 0.0130 [95% CI: 0.0104, 0.0156] (p<0.001) less across the 18 years (Figure). During years 1-8, the mean relative difference between control and lifestyle participants' FI-E scores was 0.0139 [0.0115, 0.0163], approximately 10% of the baseline level. During years 9-18, this average difference was 0.0107 [0.0066, 0.0148]. Benefits were comparable for individuals grouped by baseline age and body mass index and sex, but were not evident for those entering the trial with a history of cardiovascular disease.

Conclusions: Multidomain lifestyle intervention may slow biological aging long-term, as captured by a deficit accumulation frailty index.

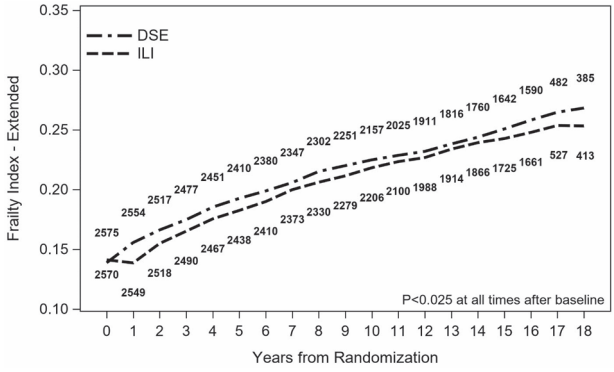

Figure: Trajectories of FI-E across 18 years by intervention group.

A75

Effects of functional food and music aerobic exercise on blood cells, albumin and cholesterol among the older adults

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Introduction. As the prevalence of chewing difficulty increases in the frailty older adults. Our preliminary study with 387 older adults found that the prevalence of pre-frailty in older adults between 65 and 74 was 25.0%, and that in older adults over 75 was 31.25%. It is urgent to prevent poor nutrition and frailty. The aims of this study were to investigate effects of functional food (FF) and music aerobic exercise (MAE) on blood cells, albumin and cholesterol among older adults.

Research method. This quasi-experimental research was conducted in coast communities. Eighty-five older adults were recruited and randomly assigned into FF group (n = 39) and MAE group (50 minutes twice a week for 5 weeks) (n = 46). FF including chicken moose (with turtle, deer antlers, ginseng and wolfberry), milkfish (with gastrodia), golden and green fruit juice were prepared by two central kitchens. FF group comsuming original meals plus chicken and fish 10 bags and two bottles fresh juice per week for 5 weeks.

Research results. Participants in FF group significantly increased the HDL-C and albumin, and significantly decreased LDL-C. Participants in MAE group significantly increased RBC, hemoglubin and platelets. While comparing the results of MAE group and FF group by GEE analysis, sex, age and weight were adjusted

as covariates. The participants in FF group significantly increased HDL-C (Wald X^2 = 4.32, p = 0.038) and albumin, as broadline decreased LDL-C (Wald X^2 = 2.33, p = 0.127) compared to MAE group. Participants in MAE group compared to FF group significantly increased RBC (Wald X^2 = 3.86, p = 0.049), platelet (Wald X^2 = 6.69, p = 0.01), but decreased MCV.

Application. These research results might be applied to prevent frailty, and improve health of older adults for active aging program.

A76

Effects of food derived senolytic purees on the prevention of frailty and depression among older adults

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Background. As Taiwan's aging population increases, so does the heavy burden on long-term care. There is an urgent need to develop active aging strategies that promote healthy aging and prevent frailty. Aging (senescence) is a process in which senescent cells release senescence-associated secretary phenotype (SASP) into the circulation. The consumption of anti-aging meals may decrease SASP mediators and senescent cells, resulting in healthy aging.

Study design and aims. Employing a randomized controlled clinical trial, this study investigated how anti-aging meals decrease SASP secretion and prevent frailty and depression. We developed five senolytic purees made of anti-aging foods (onions, blueberries, turmeric, etc.) and recruited adults age 60 and over (n = 44) from four communities and elder activity centers. Participants were randomly assigned to an experimental group and comparison group. forty-three participants completed the pre-test and post-test. There were 21 participants in the experimental group who consumed their regular meals and senolytic purees for 6 weeks. 22 participants in the comparison group who consumed their regular meals without senolytic purees.

Results. Results showed that the participants in the experimental group showed significantly improved depression scores (Z = -2.68, p = 0.007), borderline significantly increased left hand grip strength (muscle power) (Z = -1.89, p = 0.059), and enhanced overall sleep quality in the Pittsburgh scores (Z = -1.83, p = 0.068). SASP (Fractalkine, IL-6, IL-8) appeared to decrease and adaptive immune mediators (IL-4, IFN-gamma, G-CSF) appeared to increase after senolytic purees for 6 weeks. Future studies should increase the sample size and long-term follow-up of the consumption of senolytic purees to 3-12 months. Moreover, in the future, samples collected before and after the senolytic purees are consumed can be used to explore the biological indicators of physical and mental health and frailty improvements in the elderly.

A77

Frailty and Sarcopenia in Hypertension: You can't manage what you don't measure

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Background

Frailty and sarcopenia are associated with hypertension (HTN) and other cardiovascular diseases (CVDs) and lead to adverse health outcomes, including falls, fractures, hospitalization, and mortality. We sought to find the prevalence of frailty and sarcopenia in hypertensive patients and their associated factors.

Methods

We conducted a cross-sectional study of patients seen at the Frailty Clinic at DotHouse Health from 12/2021-04/2022. Trained MAs measured muscle strength by grip strength & chair rise, physical performance by gait speed & TUG, and muscle mass by the BIA scale. The geriatrician inquired about physical activity, assessed frailty using the Frailty Phenotype and Clinical Frailty Scale, and identified sarcopenia according to the European Working Group on Sarcopenia in Older People. Patients with a known disability and active cancer were excluded.

Results

The cohort had 136 patients with a mean age of 69.8±8.2, with 55% males, 63% Asians, 26% African Americans, and 10 % Caucasians. All patients were community-dwelling and had 4.67±1.84 chronic conditions (COPD 7, CKD 20, DM 83, CVDs 72) and a mean SBP (mmHg) of 139.53±17.33. 40 out of 136 were frail. Prevalence of frailty was higher in patients with additional CVD (POR [95% CI]:3.25[1.46-7.25], p=0.004) and physical activity < 500 METs/week (POR [95% CI]:3.46[1.59-7.55], p=0.002). 90 out of 136 had sarcopenia with a prevalence difference per 100 patients of 30.2 in frail vs. non-frail and 10.2 in age 50-64 vs. 65+. Sarcopenia was also more common in patients with physical activity < 500 METs/week (POR [95% CI]: 2.05[0.98-4.27], p=0.056). Twenty-five patients had a history of COVID-19 infection, but 94 patients reported being less active since the pandemic and had a higher prevalence of frailty (POR [95% CI]: 4.34[1.58-12.21], p=0.005) and sarcopenia (POR [95% CI]: 2.76[1.29-5.89], p=0.009). Having diabetes did not significantly affect either prevalence.

Conclusion

COVID-19 may have added to the burden of frailty and sarcopenia in patients with HTN. Easily administered tests by MAs once a year can provide objective measures for risk stratification, patient motivation, and for designing individualized exercise and strength training programs.

A78

Coronavirus Disease 2019 Pandemic-Related Changes in Distressed Behavior in Dementia in Veterans Affairs Community Living Centers

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Background: Due to the Coronavirus Disease 2019 (COVID-19) pandemic, the Veterans Affairs Community Living Centers (CLC) began isolation of residents in March 2020. The effect of these changes on distressed behaviors in CLC residents with Alzheimer's Disease and Related Dementias (ADRD) is not known.

Methods: We performed a retrospective observational study using Veterans Affairs health system data and the Minimum Dataset 3.0. We measured outcomes using the Distressed Behaviors in Dementia Indicator (DBDI), which incorporates several Minimum Dataset 3.0 variables into a composite score of distressed behaviors. We defined two groups of CLC residents with ADRD based on time: one who resided in the CLC in March 2020 (isolation group) and another who resided in the CLC in September 2019 (control group). We used a Cox regression model to compare the hazard of new DBDI during 90 days of follow-up, between the isolation group and the control group. We fit the model in the overall sample and after stratification into 2 equally-sized age groups.

Results: The sample included 5452 veterans, of whom 146 (2.7%) were female and 1229 (22.5%) were Black. The mean (SD)

age was 79 (10). The hazard ratio (95% CI) of new DBDI was 1.09 (.89-.1.32) for the isolation group compared to the control group. For residents over age 79, the hazard ratio (95% CI) was 1.08 (.80-1.46); and for residents 79 years old and under age, the hazard ratio (95% CI) was 1.10 (.85-1.46).

Discussion: Our analysis did not identify a difference in hazard of DBDI due to isolation. CLCs implemented infection control measures in a context of Veteran-centered care, which may have mitigated detrimental effects on DBDI. The CLC implementation of isolation during the pandemic may not have influenced DBDI. Alternatively, DBDI resulting from pandemic-related isolation may not have emerged until after 90 days of follow-up. Finally, the Minimum Dataset 3.0 may lack sensitivity to detect clinically important differences in distress among Veterans with ADRD.

A79

Examining the Impact of Ethnic Minority Groups on COVID-19 Hospitalization Rate in Older Adults with Pre-existing Cardiovascular Disease

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Background: Risk factors for severe COVID-19 disease requiring hospitalization have been found to be older age, ethnic minority status, and pre-existing cardiovascular disease (CVD). However, few studies have examined all of these risk factors combined. We aim to determine how ethnic minority status impacts COVID-19 hospitalization rates for older adults with pre-existing CVD.

Methodology:

A single-center, observational cohort study was conducted using data collected from South Texas Veterans Health Care System between January 1, 2020 and December 31, 2021. Inclusion criteria included: diagnosis of COVID-19 based on the ICD10 code; VHA record in the outpatient setting between 30 days prior and 5 years prior to the index date; age ≥65 years old; preexisting CVD defined as a diagnosis of hypertension, myocardial infarction, congestive heart failure, peripheral vascular disease, or cerebral vascular disease. Exclusion criteria included any veteran with incomplete records for either pre-existing CVD, age, or unknown ethnicity. Summary statistics were used to examine hospitalization by ethnic minority groups. Individuals who were Black, Hispanic, or Other (Asian, Native American, Hawaiian or Pacific Islander, Mixed) were considered ethnic minorities. Proportion hospitalized by ethnic minority status compared to non-ethnic minority was analyzed.

Results:

1,232 subjects ≥65 years old had pre-existing CVD with an initial outpatient COVID-19 diagnosis. Ethnicity distribution was as follows: 657(49.7%) non-ethnic minority, 99(17.2%) Black, 445(77.4%) Hispanic, and 31(5.4%) Other. The unadjusted odds ratio (OR) for hospitalization by ethnic minority status was 1.18 (95% confidence interval: 0.87-1.58, P=0.289). After adjustment for the covariates, the OR was 1.15, 95% CI: 0.85-1.56, P=0.37). The OR for Charlson comorbidity score was 1.15, 95% CI: 1.10-1.21, P<0.001).

Conclusion:

There was no significant deference in the odds of hospitalization by ethnic group in this population of older veterans with pre-existing CVD and COVID-19. However, Charlson comorbidity score was significantly associated with increased odds of hospitalization. This suggests that comorbidity burden has greater impact on hospitalization than ethnic minority status in this population.

A80

Prevalence of Social Isolation among older adults living in subsidized housing before and during the COVID-19 Pandemic

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Background

Social isolation is a risk factor for morbidity and mortality comparable to smoking, hypertension, and a sedentary lifestyle, thus recognized as a major public health issue. The COVID-19 pandemic transformed how many individuals connect with one another. Low income older adults are at increased risk for poor health outcomes. Nearly three million older adults in the US live in subsidized housing and are more likely to live alone, have more chronic conditions, and have higher levels of functional impairment and mental health issues than their peers. We sought to examine differences in the prevalence of social isolation among low income older adults living in subsidized housing prior to and during the COVID-19 pandemic.

Methods

Data were drawn from a large subsidized housing organization that manages and operates more than 90 subsidized housing sites across 22 states. Data was collected via a voluntary annual health and wellness assessment administered by housing staff. The primary outcome of interest was social isolation from 2019 to 2021. Social isolation was measured utilizing a validated measure, the Lubben Social Network Scale (6 item).

Results

Individuals (N= 2,256) with complete responses of the Lubben Social Network Score were mean age 75.8 years old, Female (68%), White (42.5%), Asian (35.2%), Black (13.7%) and reported that their self-reported health was fair (19.2%) or poor (8.8%). Social isolation was assessed in 2019- 38.8%, 2020- 40.1%, 2021- 39.5%.

Discussion

This sample of low-income older adults living in subsidized housing had high levels of social isolation. These findings fill an important gap in the literature on social isolation among older adults who live in subsidized housing. To our knowledge this is the largest dataset with repeated assessment of social isolation for older adults living in subsidized housing in the US during the COVID-19 era. Subsidized housing offers a unique opportunity to assess and efficiently coordinate and evaluate interventions to address social isolation, and its effect on other health problems that impact low income older adults.

A81 Encore Presentation

MF59-adjuvanted trivalent seasonal influenza vaccine compared to high-dose trivalent seasonal influenza vaccine among older adults, a systematic literature review

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BACKGROUND:

Immunosenescence in older adults results in a lower immune response to vaccination and reduced effectiveness of standard influenza vaccines. The enhanced vaccines MF59-adjuvanted trivalent influenza vaccine (aTIV) and high-dose influenza vaccine (HD-TIV) were both developed to improve immune response to influenza vaccination for older adults. This systematic review and meta-analysis evaluated their relative vaccine effectiveness (rVE).

METHODS:

Peer-reviewed and grey literature published between January 1, 1997 and September 17, 2021 were included. Observational studies evaluating the rVE of aTIV vs HD-TIV among adults ≥65 years of age were eligible. Paule-Mandel random-effects meta-analysis was used for all analyses in anticipation of variable rVE due to viral, vaccine, and host factors.

RESULTS:

After removal of duplicates, 4,627 publications were screened for eligibility and a total of 11 publications reporting the rVE of aTIV vs HD-TIV were identified, 9 of which were included in at least one meta-analysis. Of the two publications that were not included in any meta-analysis, one reported rVE among high-risk patients while the other evaluated rVE against any respiratory outcome. The remaining 9 studies reported rVE estimates for prevention of influenza-related medical visits in different clinical settings over a 4-season period in the US. The pooled rVE of aTIV vs HD-TIV for prevention of influenza-related medical visits was 8.5% (95%CI: -3.0 to 18.8) for outpatient visits and 1.2% (95% CI: -1.3 to 3.8) for hospital/emergency department (ED) visits (**Figure 1**), with high heterogeneity for both analyses.

CONCLUSION:

Pooled estimates from multiple real-world evidence studies conducted over a multi-season period suggest that aTIV and HD-TIV have comparable performance for prevention of influenza-related outpatient and hospital/ED visits.

A82

Health Disparities in Geriatric Oncology: A Scoping Review

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Introduction: Disparities in health and health care are driven by social, economic and/or environmental factors. However, the effects of disparities on health outcomes of older adult cancer survivors have not been systematically evaluated. Here we describe the available literature addressing health disparities among older adult cancer survivors.

Methods: A literature search of Ovid Medline, Embase, PubMed, Scopus, Web of Science, and CINAHL was conducted for original research articles published between January 2016 and August 23, 2021, using search terms reflecting health disparities among older cancer survivors. Using the NIA health disparities framework, we included studies that evaluated adults aged ≥ 65 with cancer, addressing disparities (race/ethnicity, socioeconomically disadvantaged, rural, sexual and gender and/or non-aging related disability) in health outcomes, including treatment, survivorship, and mortality. We excluded articles where disparities (e.g., racial/ethnic) were examined as a sub-group (covariate) in statistical models. Two reviewers independently extracted data following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis reporting guidelines.

Results: Of the 1829 records screened, 47 studies (2.6%) met eligibility criteria, including some articles which addressed multiple disparities. Most studies (41/47, 87%) reported data for racial/ethnic differences, while some focused on socioeconomically disadvantaged (n=21) or urban/rural (n=12) differences. No studies assessed disparities among sexual and gender minorities or older adults with non-aging related disabilities. The main reason studies were excluded was due to race/ethnicity being used as a covatiate in statistical models.

Conclusion: Few studies address disparities despite a rapidly growing and increasingly more diverse older adult cancer population. This lack of evidence and interpretation of race/ethnicity as a covariate further perpetuates cancer-related health inequities and prevents rigorous disparities research. Our review highlights the need for more research focused on health disparities older adults with cancer. Data extraction is still ongoing.

A83

Care of the older trauma patient: the low fall confers high risk and could be used as a trigger for a frailty pathway.

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Background

Low-energy trauma, typically a fall from standing, is the predominant mechanism of major trauma in high-income countries. If an older adult requires admission following a low-fall, this could be a surrogate for frailty.

Methods

This prospective cohort includes all patients aged 65 and older admitted with trauma to a single hospital between February and November 2022. Baseline characteristics were sex, age, baseline function, comorbidities, clinical frailty scale (CFS) and low fall vs other mechanism of injury. The outcomes were mortality, new need for permanent residential care and delirium Descriptive statistics were used for baseline characteristics and logistic regression was used to measure association with outcomes.

Results

1230 people 65 and older were admitted with trauma during this period and 782 (63.6%) had low fall as the mechanism of injury. Overall, 90/1117 people died, low fall conferred a higher risk of mortality (OR 2.0, 95%CI 1.2, 3.3), although this was not significant in a model with age. Mean length of stay for people with low fall was 9.8 days versus 8.1 days (p=0.01). People admitted with low fall were at higher risk of delirium (OR 2.6 95%CI 1.94, 3.6) and needing permanent residential aged care (2.7% vs 4.7%). For the 511 people who had the CFS measured, when this was dichotomised to frail/not frail, the area under the curve with low fall was 0.69.

Conclusions

For people aged 65 and older admitted with trauma, low fall was associated with frailty and could be used as a screen to indicate who requires geriatrician input.

A84

Cognitive Trajectories after COVID-19 Hospitalization in Older Adults: the VALIANT Study

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Background: Cognitive dysfunction is common among older adults with COVID-19. This study sought to characterize cognitive trajectories, and predictors thereof, during the six months after hospitalization with COVID-19.

Methods: 341 community-living older adults (age ≥60 years) hospitalized with COVID-19 were recruited to a prospective study from June 2020-June 2021. Cognition was assessed with the Montreal Cognitive Assessment 5-minute protocol during hospitalization and at 1, 3, and 6 months post-discharge. Data on physical function, sensory impairment, frailty, symptoms, and sociodemographics were collected during hospitalization. Clinical data were abstracted from the electronic health record. A discrete mixture model and multinomial regression were used to identify cognitive trajectories and predictors thereof, respectively.

Results: Median age was 70 (IQR:64-77) years, 52% were women, 36% were minority race/ethnicity. Three cognitive trajectories were identified: impaired (23%), borderline (44%), and non-impaired (33%; Figure). Each trajectory started at a different intercept and followed similar curves of improvement from hospitalization through months 1 and 3 and stability from months 3 to 6. Independent predictors of membership in the impaired or borderline trajectories, relative to the non-impaired trajectory, included older age, socioeconomic disadvantage, hearing impairment, and delirium.

Conclusions: This analysis demonstrated that cognition in older adults hospitalized with COVID-19 improved in the 3 months after hospitalization and remained stable at 6 months.

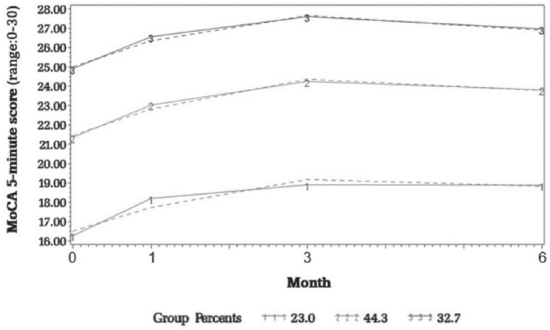

Figure. Six-month Cognitive Trajectories after COVID-19 Hospitalization

A85

Association between Dehydration and Stroke, a Retrospective Cohort Study of a Large Database

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Background: Stroke is devastating, and age increases the risk. Aging changes increase the risk of dehydration. We searched a large database to see if there is an association between stroke and dehydration.

Methods: A retrospective cohort design of TriNetX, a database with >85 million patients. To allow propensity score matching (PSM), we limited analysis to adults aged ≥80, seen from January 1, 2018 to December 31, 2019, before the pandemic. The dehydration cohort was identified using ICD-10 diagnosis codes and laboratory test results. Outcome measures included one of three stroke types: hemorrhagic stroke, ischemic stroke, and transient ischemia attack (TIA), based on ICD-10 codes.

Results: Of 3,125,610 adults ≥80, 563,476 were dehydrated. Individuals with diabetes were 443,450 and 101,661, respectively. The dehydration cohorts in both populations had more females, non-Hispanic, white individuals, and were older 82.7 vs. 82.4. After PSM 563,161 individuals in the larger group and 101,048 individuals with diabetes, these differences became not significant. Controlling for common confounders in PSM, individuals with dehydration were 1.98-3.99 times more likely to develop stroke: hemorrhagic stroke (OR=3.99, 95% CI=3.41-4.67), ischemic stroke (OR=1.98, 95% CI=1.9-2.07), and TIA (OR=2.88, 95% CI=2.74-3.28). A subanalysis of diabetes patients showed: hemorrhagic stroke (OR=6.76, 95% CI=4-11.42), ischemic stroke (OR=1.97, 95% CI=1.81-2.16), and TIA (OR=2.81, 95% CI=2.33-3.39).

Conclusion: We found a strong association between dehydration and stroke in the larger and subgroup with diabetes. Both physiologic changes of normal aging and medications used to treat cardiovascular stroke risk factors increase older adults' risk for dehydration. The strength of this study is the propensity risk management of over 3 million older adults ≥80 years. Limitations of this paper include the retrospective nature of database evaluation. Future studies should evaluate whether increased hydration status leads to decreased stroke.

A86

Population based study on food insecurity among older adults living alone

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Background: Globally, it is reported that the elderly living alone are more likely to experience difficulties due to physiological, psychological and economic factors associated with aging, and have a high rate of food insecurity. Therefore, this study aimed to compare the poverty, dietary intake, chronic health status and urine test results according to the presence or absence of food security in older adults living alone. **Methods:** The secondary analysis using 2020 Korea National Health and Nutrition Examination Surveys was conducted. After extracting the data of the older adults living alone (N=1,721,990) aged 65 or older from the national representative stratified sampling data, they were classified into two groups: food insecurity and security. Impact factors such as sex, income quintile, body mass index (BMI), chronic health condition (physical limitation, chronic disease, depression, suicidal plan, stress), health behaviors (smoking, alcohol drinking, sleep), food intake, and urinalysis were compared between the groups. Chi-square test and t-test using complex sample analysis was performed. **Results:** The majority was female (70.1%), and mean age was 74.7 years. Of total, 11.8% older aged living alone people belonged to the food insecurity group. Among the factors, the distributions of low income quintile (p=.012), limited physical activity (p=.050), having arthritis (p=.015), having renal disease (p=.582), high BMI (p=.021), and having suicidal plan (p=.050), low water (p=.044) and low sugar intake (p=.035), positive urine nitrate (p=.004) and positive urine occult blood (p=.011) were more found in food insecurity group than counter group. However, the distributions of sex, energy intake, chronic disease such as diabetes, health behaviors, stress, and other urinalysis did not statistically different between the groups. **Conclusion:** The proportion of food insecurity was not reduced in older adults living alone in Korea when comparing the previous study. Older adults living alone may be vulnerable to food insecurity due to the high possibility of social isolation in situations such as a pandemic disease. Water intake during food intake was found to be statistically low, requiring further research on the related cause. The conclusion is that more financial support, meal support, and medical services are needed for the older adults living alone.

A87

Social network analysis by self-management behavior among older adults with diabetes

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Background: Social network analysis to understand and evaluate the self-management of chronically ill patients is a way to explain the unique patterns, structures, and composition of the network and its impact on individual behavior. The purpose of this study is to identify the characteristics of structured and interactive social networks that can explain the health status of diabetics, to identify the types of social networks, and to identify social networks by observing self-management behaviors of diabetics.

Methods: A cross-sectional design research method was used and people living in three (A,B,C) villages were recruited. The data collected from this study were analyzed for general characteristics, diabetes-related characteristics, and diabetes self-management and social network by self-management behavior using Net Miner 4.0 that can represent the influence of network members by visualizing the relationship between each node and link.

Results: Mean age of participants was 72.2 years and 33 of total 46 were female. The social network analysis results that affect diabetic dietary cooperation indicating 27.3% and 44.4% of the connection

between B villages compared to the other two villages, and exercise showed 26.8% and 43.8% respectively. In particular, the betweenness centralization index of village B was 9.7%, which was higher than the other two villages. The daily information showed that the degree centralization index, closeness centralization index of the C village was 27.9% and 50.4%, respectively, which were higher than the other two villages. The blood glucose level test showed the degree centralization index, closeness centralization index of the village C was 37.3% and 66.2%, respectively.

Conclusion: This study applied social network analysis to find cooperation and differences in community villages, and examines the overall level of participation and specific patterns of participation within the network. Therefore, the results and approach of this study may influence the evaluation of other collaborative networks aimed at promoting population health at the local and national levels. It is possible to measure the key characteristics between groups of various sizes, showing that it can be used for further research on the formation and outcome of the network of community diabetes self-management.

A88

The epidemiology of social activity upon entry into long-term care facilities

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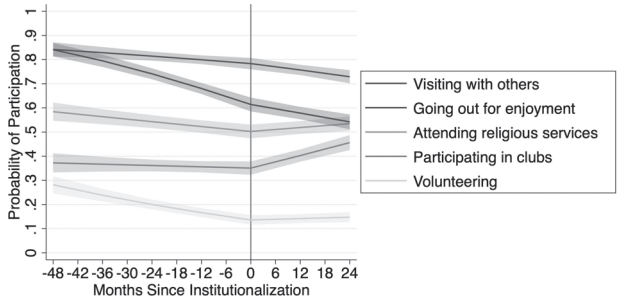
Background: The desire to "age in place" is partly driven by concerns that moving to a long-term care facility (LTCF) reduces one's social activity. Yet LTCFs often facilitate activities to help maintain quality of life. To better understand the transition into an LTCF, we described changes in social activity upon LTCF entry.

Methods: Using the National Health and Aging Trends Study, we conducted an observational cohort study of persons entering a nursing home (NH) or assisted living facility (AL) throughout the continental US between 2011 and 2019. Outcomes were participation in 5 activities in the last month (as yes/no): visiting with friends or family, going out for enjoyment, attending religious services, participating in clubs or other organized activities, and doing volunteer work. We modeled predicted probability of participation in each activity over time using linear splines before and after LTCF entry.

Results: Weighted mean age in our cohort (n=947) was 83.6 years (SD 7.3), 614 (64%) were female, and 743 (87%) were White non-Hispanic. 352 (34%) entered a NH, and 595 (66%) entered an AL. Before LTCF entry, the probability of social participation decreased in all activities (-0.5 to 6.3% per year). After LTCF entry, visiting with others (-2.5% per year, p <0.001) and going out for enjoyment (-3.3% per year, p <0.001) continued to decrease, whereas attending religious services (+1.6% per year, p=0.011) and participating in clubs and other organized activity (+5.2% per year, p<0.001) started to increase.

Conclusions: LTCF entry is generally accompanied by ongoing reductions in visits with friends or family and going out for enjoyment and increases in formal activities such as attending religious services and participating in clubs.



Probability of social activity before and after long-term care entry

A89

Insulin Use, Not Cognitive Function, Drives Frequency of Hypoglycemia Among Newly-Admitted Nursing Home Residents with Diabetes

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Background: Optimal glycemic treatment may be especially challenging immediately after nursing home (NH) admission, since changes in medications and health status are common during this transition. In community-dwelling older adults, poor cognitive function is associated with increased risk of hypoglycemia, but it is unclear if this is also true in newly admitted NH residents. Thus, we sought to describe the frequency of hypoglycemia among newly admitted NH residents across levels of cognitive impairment and medication use.

Methods This secondary data analysis included Veterans with a NH stay ≥7 days between Jan 1 2016 and Sept 30 2019 and aged ≥65 years with diagnosed diabetes. Cognitive status was determined by the Cognitive Function Scale from the Minimum Dataset. Diabetes medication use was classified by hypoglycemia risk: any insulin (high risk), sulfonylureas but no insulin (moderate risk), or no medications or other glucose-lowering medications such as metformin (low risk). We calculated the percent of Veterans with any hypoglycemia <70mg/dL during the first seven days following NH admission.

Results: In the first week following NH admission, insulin was used by almost 70% of the 17581 residents with diabetes. During the first week, almost 20% of residents using insulin had one or more hypoglycemic episode <70mg/dL, compared to 15% of residents using sulfonylureas and 4% of residents on low-hypoglycemia risk medications (or no medications). Frequency of hypoglycemia varied by medication type but not by level of cognitive function (**Table**). Insulin use was more common among patients with intact cognitive function (70.8%) compared to patients with moderate (62%) or severe (60%) impairment.

Conclusions: To reduce hypoglycemia following NH admission, efforts should focus on reducing insulin use.

Percent of Veterans with ≥1 Episode of Hypoglycemia (Glucose <70mg/dL) in the Week Following Nursing Home Admission, by Medication Use and Cognitive Function (2016-2019, n=17581)

	Overall	Glucose-Lowering Medications Other than Sulfonylureas or Insulin, or No Medication (n=4709)	Sulfonylureas (no insulin) (n=841)	Any Insulin (n=12301)
Overall	15.1%	3.9%	14.9%	19.5%
Cognitive Function				
Cognitively Intact (n=9964)	15.3%	2.8%	15.3%	19.7%
Mild Cognitive Impairment (n=5424)	15.2%	5.1%	12.8%	19.5%
Moderate Cognitive Impairment (n=1050)	14.8%	5.2%	23.5%	19.2%
Severe Cognitive Impairment (n=1143)	13.6%	5.8%	14.6%	18.0%

A90

Major adverse cardiovascular event in urban and rural elderly: result from the KURE cohort study

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Background: Health outcomes of the elderly vary between rural and urban areas. In this study, we examined the incidence and risk of major adverse cardiovascular event (MACE), such as stroke, congestive heart failure, and ischemic heart disease, and mortality, in urban and rural elderly in community-based cohort data.

A total of 2,109 subjects aged ≥ 65 years (mean 75.1 ± 4.3) without previous MACE history were recruited from three urban districts (n=2,262) and one rural district (n=425) in Korea. Subjects were followed up for up to 7.4 years (mean 5.4 ± 1.8 years). For MACE endpoint, we extracted subjects' diagnosis data by ICD-10-CM code and death data during the follow up period from National Health

Insurance Service. MACE endpoint included all-cause mortality, ischemic heart disease (International Classification of Diseases [ICD-10]: I20-I25), and stroke (ICD-10: I60-I62, I63-I66, I690-I692) following baseline.

Results: During the follow-up, the incidence of MACE was 29.4 person-years and 52.6/1000 person-years (P<0.001) in the urban area and the rural area, respectively. In the univariate logistic regression model, urban residence was related to MACE [hazards ratio (95% confidence interval), P-value: 1.80 (1.47-2.20), P<0.001]. In the multivariate logistic regression model, rural residence was related to MACE [hazards ratio (95% confidence interval), P-value: 1.76 (1.37-2.25), P<0.001] after adjusting for age, sex, and comorbidities.

Conclusions: This study showed that rural residence is an independent risk factor for MACE among elderly population. Early intervention for preventing MACE in rural elderly population is crucial.

Relationship between covariates and development the MACE in multivariate logistic regression analysis

Variables	HR (95% CI)	p-value
Rural residence	1.70 (1.31-2.20)	<0.001
Age, years	1.09 (1.06-1.11)	<0.001
Sex, Female	0.54 (0.43-0.69)	<0.001
Body mass index (kg/m^2)	1.02 (0.98-1.07)	0.260
Income (1,000,000 Korean won/month)	0.95 (0.88-1.04)	0.263
Hypertension	0.98 (0.77-1.24)	0.840
Diabetes	1.42 (1.10-1.81)	0.006
Dyslipidemia	1.00 (0.78-1.29)	0.979
Arthritis	1.28 (1.00-1.63)	0.051
Cerebrovascular accident	2.28 (1.54-3.38)	<0.001
Myocardial infarction	1.08 (0.77-1.52)	0.659
Cancer	1.30 (0.92-1.84)	0.138

A91

Does PUD Pose an Increased Risk for Mortality in United States Older Veterans Diagnosed with COVID-19?

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Background:

Mortality rates in patients with COVID-19 have been associated with multiple comorbidities, but little is known if peptic ulcer disease (PUD) influences COVID-19 mortality. The prevalence of PUD increases with age causing significant mortality as it presents with a high incidence of complications in older adults (OA). The study aim is to determine if PUD is associated with all-cause mortality in older Veterans diagnosed with COVID-19.

Methods:

Using a database of Veterans with COVID-19 ICD10 code diagnosis at South Texas Veterans Health Care System between 1/01/2020 to 3/31/2022 a retrospective cohort study was conducted comparing Veterans with and without PUD. Descriptive statistics were used to evaluate patient baseline characteristics and all-cause mortality within 30 days from the index date of COVID-19 diagnosis. A multivariate analysis was utilized to determine if pre-existing PUD increased mortality.

Results:

166 (2.04%) of 8,131 who tested positive for COVID-19 had pre-existing PUD. Median age of participants with PUD was 65. Of the total, 151 (91%) were males, 66 (39.7%) were White, and 62 (37.3%) were Hispanic. The majority of patients (n=107, 64.5%) with PUD were not hospitalized. Patients with PUD had more chronic comorbidities compared to those without PUD. Within 30 days of COVID-19 diagnosis, 15/166 (9%) of Veterans with PUD died compared to 228/7965 (2.1%) of Veterans without PUD (RR 0.32 95%, CI 0.19-0.52, p<0.001). When adjusted for age, gender, Charlson score and hospitalization, PUD does not predict higher mortality in COVID-19 patients.

Conclusions

PUD does not predict mortality when adjusted for factors in the multivariate analysis. However, increased mortality after COVID-19 diagnosis in patients with PUD was influenced by older age. As the median age of Veterans increases there is a high likelihood of increased PUD diagnoses. Future studies to reduce risk factors for PUD and provide early interventions for OA with PUD should be examined.

A92

The Association Between Obstructive Sleep Apnea and Alzheimer's Disease: What are the Big Data Results?

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Background: Alzheimer's disease (AD) is a neurocognitive condition that progresses over time and is associated with high morbidity and death. Prior literature has suggested that obstructive sleep apnea (OSA) may be associated with AD and a possible risk factor for cognitive decline; however, this connection is still unclear. We investigated the association between AD and OSA using a sizable population-based dataset.

Methods: We evaluated individuals 65 years or older who were included in the National Inpatient Sample (NIS) database from 2016 to 2018. OSA, AD, comorbid illnesses were identified using ICD10 codes. The odds ratios (OR) for the association between OSA and AD were calculated by multivariate logistic regression adjusting for confounders using the R Statistical Software.

Results: There were 7,814,998 discharged in-patients over the age of 65 years identified in the NIS dataset. There are 254,252 hospital discharges for patients with AD as their primary diagnosis. 8695 (3.4%) of AD patient discharges included a diagnosis of OSA. Multivariate logistic regression revealed multiple independent associations with Alzheimer's dementia. Significant positive associations were found for Age 85+(OR 7.09, p<0.0001, 95%CI 7.01-7.17), Black (OR 1.17, p<0.0001, 95%CI 1.15-1.18), Hispanic (OR 1.33, p<0.0001, 95%CI 1.32-1.35), Down's syndrome (OR 11.15, p<0.0001, 95%CI 9.29-13.39), and traumatic brain injury (OR 1.92, p<0.0001, 95%CI 1.59-2.32). No significant positive correlations were found for atrial fibrillation (OR 0.79, p<0.0001, 95%CI 0.78-080), T2DM (OR 1.001, p 0.866, 95%CI 0.99-1.01), homocysteinemia (OR 0.91, p<0.0001, 95%CI 0.90-0.92), hypertension (OR 0.84, p<0.0001, 95%CI 0.83-0.85), or obesity (OR 0.54, p<0.0001, 95%CI 0.53-0.56). When adjusted for multiple confounders, a diagnosis of OSA was associated with a reduced odds of AD (OR 0.60, p<0.0001, 95%CI 0.59-0.61).

Conclusion: Our findings are consistent with other studies, which have found links between AD and factors like age, race, Down syndrome, TBI, and hyperlipidemia. We did not find a correlation between OSA and AD, possibly because misclassification bias could have contributed to our findings if AD patients were more likely to have undiagnosed OSA. Increased awareness of the need to screen older adults for OSA is important because this condition is linked to worse outcomes.

A93

Percent Survival to 100 Years is Greatest Among People in Hong Kong then Japan Followed By American Hispanics, Then Blacks and Lastly, Whites.

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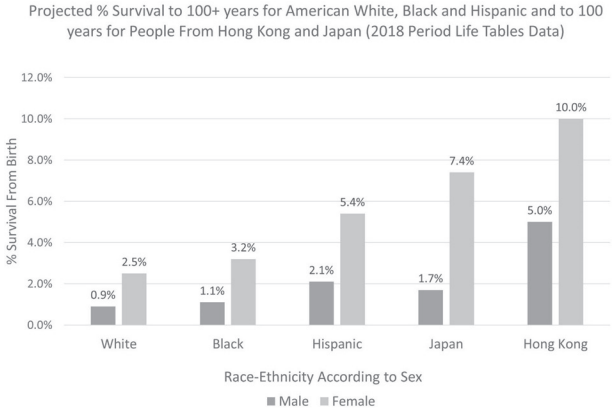
Background: A lower mortality rate of Hispanics and then Blacks compared to Whites at older ages has previously been described. The lower mortality of Japanese and people from Hong Kong compared to

these American populations has also been demonstrated. Comparing the proportion of people from these different races-ethnicities who survive to 100 has not been described.

Methods: The period life table is a "snapshot" of the 2018 mortality experience and shows the long-range implications of a set of age-specific death rates that prevailed in that year. We compiled the 2018 period life tables for U.S. non-Hispanic Whites, Blacks and Hispanics and for people living in Japan and Hong Kong. Percent survival from birth to 100 years was available for the Hong Kong and Japan life tables, but only 100+ for the U.S. tables.

Results:

Conclusions: The strikingly greater rate of survival from birth to age 100 among Japanese and Hong Kong East Asians compared to American Hispanics, Blacks and Whites is noteworthy. The difference is a conservative difference since the number of centenarians in the U.S. tables includes people older than 100 years, not just 100 years old. Studies have also shown that the proportion of variation in survival that is explained by genetic variation increases with older and older ages beyond ~95 years. These findings raise the possibility and hypothesis that generally, Far East Asians have a greater genetic predisposition to extreme old age followed by Hispanics and Blacks compared to Whites. Our observations also underlie the importance of population diversity in understanding the contributors to exceptional longevity.



A94

Association Between Pre-Existing PUD Diagnosis and Hospitalization Risk in Older Adult Veterans Diagnosed with COVID-19

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Background:

Different comorbidities influence COVID-19 hospitalization. Globally, peptic ulcer disease (PUD) is associated with higher hospitalization rates with increased incidence in older adults (OA). We aim to determine if PUD is associated with all-cause hospitalization in OA Veterans diagnosed with COVID-19. We hypothesized that PUD is a risk factor for increased hospitalization rates in OA Veterans diagnosed with COVID-19.

Methods:

We conducted a retrospective cohort study using a database of Veterans with an ICD10 code COVID-19 diagnosed between 1/01/2020 and 3/31/2022 at South Texas Veterans Health Care System. We examined 30-day hospitalization rates after the index date of COVID-19 diagnosis in Veterans with pre-existing PUD to those without pre-existing PUD. Multivariate analysis with independent variables of age, gender, PUD diagnosis and MCCI (Modified Charlson Comorbidity Index) used to determine if PUD independently predicts hospitalization in Veterans.

Results:

Of the 8,131 Veterans positive for COVID-19, 203 (2.50%) had pre-existing PUD. Males were 90% (182) of the total study participants and 2.66% more likely to have PUD compared to females (1.62%) (P=0.028). Participants with PUD were significantly older (Mean=64) compared to those without PUD (mean age=55)(P value<0.0001). The mean modified Charlson comorbidity index (MCCI) was higher among those with PUD (4.75) compared to those without PUD (2.12) (P<0.0001). Patients diagnosed with COVID-19 with pre-existing PUD had a 35.5% rate of hospitalization compared to 18.3% in individuals without pre-existing PUD (P <0.0001; RR 1.94). Multivariate analysis revealed age (OR: 1.021; P<0.0001), gender (OR: 0.691; P= 0.0003) and MCCI (OR:1.237; P<0.0001) are independent predictors of hospitalization, whereas PUD is not an independent predictor of hospitalization (OR:1.197; P=0.2809).

Conclusions

When adjusted for age, gender and CCI, PUD is not an independent predictor of hospitalization. However, OA Veterans with PUD were more likely to be hospitalized after COVID-19 diagnosis. Future studies should examine ways to reduce hospitalization rates in OA Veterans with pre-existing PUD after initial COVID-19 diagnosis.

A95

Relationship between hospital administered antipsychotic medication and length of stay at CLC

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Background:

Older adults may receive antipsychotics while hospitalized due to their increased risk of acute delirium and sundowning. We hypothesize that use of antipsychotic medications upon discharge to skilled nursing facilities (SNFs) could influence the SNF length of stay (LOS). We aimed to determine if antipsychotic use during hospitalization associates with an increased LOS in Veterans admitted to a VA nursing home (i.e Community Living Center or CLC) for SNF care.

Methods:

For this retrospective cohort study, we included Veterans living in a CLC who received an antipsychotic medication in the 3 days prior to CLC admission (December 13, 2020 to December 13, 2021). We excluded Veterans with underlying diagnoses of Bipolar Disorder and Schizophrenia (one year prior to admission), and those discharged to hospice and SCI (spinal cord injury) wards. We determined antipsychotic use at CLC admission and length of CLC stay from CPRS and compared long (>90 day) vs. short stay as the primary outcome. We used a Poisson Generalized Linear model to calculate relative risk and 95% CI.

Results:

Out of 16064 Veterans admitted to the CLC, the mean age was 72 and 663 (4%) were female. Of the 2996 residents with a LOS ≥ 90 days, 571 (19%) received antipsychotics during hospitalization. Of the 13068 residents with LOS < 90 days, 1487 (11%) received antipsychotics prior to CLC admission. After adjustment for age, sex and race, antipsychotic use in the hospital prior to admission was directly associated with increased LOS in CLC (RR 1.63, CI 1.49-1.79).

Conclusion:

In this retrospective study, Veterans receiving antipsychotics in the hospital 3 days prior to admission to a CLC had an increased LOS in the CLC. Additional study is needed to determine whether and what additional assessment of and intervention for those who receive in-hospital antipsychotics prior to CLC admission, or deprescribing at CLC admission will improve outcomes like LOS.

A96 Encore Presentation

Clinical and Immunologic Characteristics of Nursing Home Residents with SARS-CoV-2 Breakthrough Infection after First Booster

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Background: The SARS-CoV-2 vaccines have been lifesaving in nursing home residents, but knowledge regarding durability of protective immunity and clinical characteristics associated with vaccine-induced immunity in this frail population is still evolving. We characterize clinical and immunologic characteristics of nursing home residents with breakthrough SARS-CoV-2 infection following first booster vaccination.

Methods: Prospective cohort study with serial blood sampling of nursing home residents pre/post each vaccine dose and at 6 month intervals. Antibody measures included anti-spike, anti-receptor binding domain (RBD), and anti-Omicron neutralization titers. Clinical data obtained from chart review. Data collection occurred Dec 2020 to Mar 2022 on 438 consented residents of 31 nursing homes in OH and RI.

Results: 58 (13.2%) participants developed new SARS-CoV-2 infection after their first booster; 60.3% of these were asymptomatic. Participants with breakthrough infection were older (median age 81 (IQR 71,90) vs. 74 (IQR 68,83), p<.001); more likely to be SARS-CoV-2-naïve (82.5% vs. 58.7%, p<0.001); and more likely to be on immunosuppressive medication (3.2% vs. 0.5%, p<.001) than participants without breakthrough infection. Other clinical and demographic characteristics were similar between groups. Post-booster antibody levels were on average lower among participants with vs. without breakthrough infection, i.e: median anti-spike (BAU/ML) 2160 (IQR 683, 4586) vs. 3414 (1658, 6415); anti-RBD (AU) 14350 (3425, 38150) vs. 24537 (12593, 53723); and anti-Omicron neutralization (pNT50) 64 (12, 198) vs. 233 (70, 697).

Conclusions: Older age, SARS-CoV-2 naivety, and immunosuppressive medication were risk factors for post-booster breakthrough infection among nursing home residents, however infections were still mostly asymptomatic. Residents with breakthrough infection mounted lower antibody titers post-booster, including anti-Omicron neutralizing antibodies, compared to residents without infection. Keeping this frail population at protective levels of immunity against SARS-CoV-2 is critical for mitigating nursing home outbreaks and reducing morbidity and mortality. These findings identify a subset of residents at particular risk for infection and sub-optimal vaccine-induced immune response.

A97

Modifiable predictive factors and all-cause mortality in the non-hospitalized elderly population: An umbrella review of meta-analyses

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Objective: This umbrella review aimed to summarize the association between modifiable predictive factors and all-cause mortality in the non-hospitalized elderly population, and estimated the credibility and strength of the current evidence.

Methods: PubMed, Embase, Web of science, and EBSCOhost were searched up to February 28, 2022. Random effect summary effect sizes and 95% confidence intervals, heterogeneity, small-study effect, excess significance bias, as well as 95% prediction intervals were calculated. Methodological quality was assessed with the AMSTAR-2 tool.

Results: In total, 32 predictive factors involving 49 associations extracted from 35 meta-analyses were analyzed. Forty-three of the 49 (87.8%) associations presented nominal significant effects by the random-effect model ($P < 0.05$), of which 34 had harmful associations and nine had beneficial associations with all-cause mortality. Frailty (FRAIL scale), low short physical performance battery (SPPB) score, and fewer daily steps carried a more than three-fold risk for all-cause mortality. Convincing evidence showed that weight fluctuation, prefrailty and frailty status, sarcopenia, low SPPB score, fewer daily steps, and fatigue increased the risk of all-cause mortality, while daily moderate-to-vigorous physical activity duration and total physical activity participation reduced the risk of death. There were twenty, nine, five, and six associations that yielded highly suggestive, suggestive, weak, and non-significant grades of evidence. Thirty-four (69.4%) of the associations exhibited significant heterogeneity. Twenty-two associations presented 95% PIs excluding the null value, two indicated small-study effects, and three had evidence for excess significance bias, respectively. The methodological quality of most meta-analyses was rated as low (37.1%) or critically low (42.9%).

Conclusions: A summary of the currently available meta-analyses suggests that a broad range of modifiable predictive factors are significantly associated with all-cause mortality risk in the non-hospitalized elderly population. The most credible evidence indicates that physical function represented by frailty and sarcopenia, as well as physical activity, are significant predictors for all-cause mortality.

A98

Administrator and Provider Perceptions of Integrated Substance Use and HIV Care

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Background: Since the 1980's when the HIV epidemic began, HIV and substance use have been intricately linked. Ongoing substance use may result in accelerated damage to the brain, higher viral loads, poor medication adherence, and higher AIDS-related deaths. A promising area for improving access to care and treatment for people living and aging with HIV and substance use is through integrated care (i.e., "the systematic coordination of general and behavioral healthcare"). There is a recognized need to increase collaboration and integration of mental health, substance use, and primary care providers, including infectious diseases specialties. Yet little is known about the barriers and facilitators to integrated care, especially in practices serving vulnerable populations, such as older adults or PLWH in rural areas.

Methods: We conducted in-depth interviews with 15 administrators (e.g., clinic managers, care coordinators) and 21 providers (e.g., Physicians, APPs, RNs) across Georgia between January 2021 and November 2022. Interviews explored administrator and provider perceptions about clinic integration and desire, or lack of desire, to increase integration. Data were analyzed using inductive and deductive thematic analysis guided by the Consolidated Framework for Implementation Research.

Results: Overall, both groups perceived important benefits to integrated care, especially for older or more vulnerable populations. More integration allowed for greater access to care with less interruption to patients' lives. Barriers to increasing integration included, but were not limited to, physical space, staffing and budgetary constraints, and limited opportunities for collaboration. Among clinics with higher levels of integration, both groups cited leadership values, infrastructure, and increased use of telemedicine. Surprisingly, providers expressed a minimal need to provide substance use treatment for patients, and the patients they did treat with co-occurring substance use disorders primarily used stimulants as a drug of choice, limiting the option within the primary care setting. Most providers, except those in practices with the highest levels of integration, experienced barriers to getting patients to treatment when needed.

Conclusion: Integrated care is vital to treating older adults and vulnerable individuals living with HIV, especially those with co-occurring substance use disorders.

A99

Human Centered Design as an Approach to Understand and Develop Innovative Social Isolation Solutions

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Background: Social isolation impacts the health of many older adults. Low-income older adults are at high risk for social isolation. Interventions to reduce social isolation, have been largely unsuccessful. Leveraging Human Centered Design (HCD) has the potential to reveal insights and generate novel solutions by including older adults in intervention design.

Methods: HCD (Figure 1) is a collaborative process to understand social problems and design solutions to support positive change. Our design team sought to capture the perspectives and insights of older adults living in subsidized housing to identify opportunities and generate ideas with the goal of promoting social connections in 2 subsidized housing communities for older adults in Baltimore. Our team engaged more than 50 older adults, 2 service coordinators, and other building staff through 2 listening and 3 brainstorming sessions over a 5-month period. Key insights and ideas were recorded during each of these facilitated engagements and thereafter discussed and synthesized by the design team.

Results: Community-based engagements yielded 6 themes: feelings of exclusion among residents, missed opportunities for broader community connections, cumbersome transitions to communal living, concerns about the physical environment, and the impact of changes in building policies. These themes informed intervention ideas including: physical materials for older adults, strategies for service coordinators to promote cultural inclusion and connection, opportunities for resident leadership, and methods for creating a culture of community ownership.

Conclusion: HCD can facilitate authentic engagement, assist in developing unique insights rooted in empathy, and help clarify innovative opportunities to address social isolation, which older adults living in subsidized housing often experience.

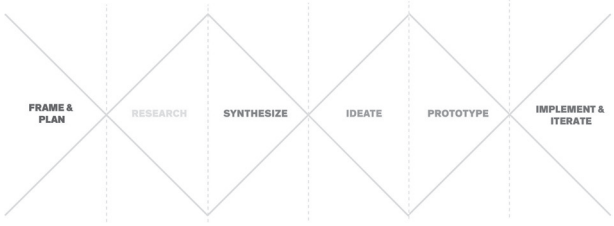

Figure 1: Human Centered Design Process

A100

Eliciting Needs and Concerns among Caregivers of Rural Older Veterans

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Background: The population of older adults in the United States has been growing and becoming increasingly rural. Many older adults have complex medical and functional needs, and rely on the support of informal caregivers. We aimed to understand how rural older adults' caregivers conceptualized their needs and concerns and discussed them in healthcare settings.

Methods: We conducted semi-structured interviews with 30 caregivers of rural, older (age ≥ 65) Veterans. The interviews explored the caregivers' experiences of caregiving, including their perceived needs and the extent to which these are shared with providers. The interviews were transcribed and analyzed using a rapid qualitative analysis approach.

Results: Caregivers described experiencing many barriers to discussing their needs and concerns with healthcare providers and others, and most caregivers did not readily share their needs and concerns when directly asked by the interviewers for this study. With discussion and supportive inquiry, however, a broad range of challenges surfaced - some of which the VA and community currently have services to address. Caregivers identified concerns regarding their abilities to meet the patients' current and/or future needs, often stemming from anticipated changes in the health status of the Veteran and/or the caregiver. Discussion elicited caregiver, Veteran and dyad needs for physical assistance, knowledge/information, emotional support, and respite.

Conclusions: Caregivers of rural older patients have concerns and needs related to current and anticipated challenges, which they may not readily share even when asked. Caregivers and patients may benefit if clinicians are offered training in eliciting the concerns of caregivers and connecting caregiver-patient dyads with relevant resources.

A101

Role of a Hospital-Based Ethics Team in Elder Mistreatment Response

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Background: Providing care to older adults experiencing elder mistreatment often involves complex ethical dilemmas. A hospitalization, when an older adult is out of their regular living environment, provides an opportunity to consider how to address these issues. Hospital ethics consultation teams can provide expert advice to frontline inpatient providers. Despite this, little is known about the current or optimal role of hospital ethics teams in the care of these patients. Our goal was to describe in detail the participation of a hospital ethics team in the care of patients experiencing elder mistreatment.

Methods: NewYork-Presbyterian Hospital/Weill Cornell Medicine has a multidisciplinary Vulnerable Elder Protection Team (VEPT) that is activated when providers are concerned about elder mistreatment. Collaboratively, the primary inpatient care providers and VEPT may involve the hospital's ethics consultation team to provide guidance when issues arise. We examined VEPT cases from 3/31/17–6/30/22 which had ethics consultation and compared them to other VEPT cases.

Results: During this time period, VEPT had high/moderate concern for abuse in 466 cases, and ethics was consulted for 42 (9%). The frequency of ethics consultation increased during the time period. Cases of neglect were more often to have ethics involvement than other mistreatment types. The 5 most common reasons for ethics consultation were: an appropriate health care agent/surrogate (HCA/S) could not be identified, the HCA/S was the alleged abuser, the HCA/S wanted the patient to return to an unsafe home environment, the patient wanted to return to an unsafe home environment, or the HCA/S was not in agreement with the medical team regarding care. Recommendations typically involved working closely with the patient's support system, even if concerns for mistreatment existed, and trying to balance their safety with their goals/wishes.

Conclusions: A hospital ethics team can make contributions to the management of patients experiencing elder mistreatment, particularly when an appropriate decision-maker cannot be identified or when concern exists about an HCA/S' decisions.

A102

A Scoping Review of the Experiences of Older Persons During Conflict Situations

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Background: Conflict situations, like war, can have a devastating impact on older persons. A detailed understanding of their lived experiences and unique needs is required to develop age-appropriate responses and supports, yet there is no known review of existing data. Our study aimed to synthesise the current knowledge of how older persons are affected by conflict situations, explore their support needs, and identify gaps in the literature which may inform future research.

Methods: Using a 5-step scoping review methodology informed by Arskey and O'Malley (2005), we reviewed the literature regarding older adults in conflict situations. In September 2022, we searched 6 databases using the terms 'aged' OR 'older adults' AND 'war' OR 'conflict situations'. The same terms were used for a grey literature search in October 2022. Articles were included if they focused on the experiences or needs of older adults during conflict situations. Results were limited to full text empirical studies, opinion pieces or commentaries in English. Review articles were excluded. Extracted data were analysed thematically.

Results: 7790 articles were identified from the database search, 320 underwent full text review and 18 were included. 3 articles were added from a bibliographic search and 63 were identified from the grey literature. Our thematic analysis found that conflict situations often exacerbate existing inequalities and vulnerabilities faced by older adults. Within this overarching theme, we identified 4 specific sub-themes relating to older adults being frail, left behind, poorly supported, and victimized. We also identified a separate theme noting resilience amongst some older adults.

Conclusions: Our study demonstrates that the vulnerabilities of older adults are amplified during conflict situations, but that resilience can also occur. Deliberate consideration of this is required to maintain the wellbeing and better meet the needs of older persons experiencing conflict situations when developing and designing policies, responses and supports. Further research into the experiences of caregivers is needed, as are studies on how to effectively incorporate older persons into developing policies and responses in response to conflicts.

A103

Characterizing Aging-in-Place Conflicts Experienced by Older Adults

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Background: Older adults often are faced with making decisions about aging-in-place as their health changes. These decisions may create conflicts with others, causing stress, frustration, and anxiety. We sought to characterize the conflicts that older adults experience about aging-in-place.

Methods: As part of a study on decision making about aging-in-place versus moving into long term care communities (R01AG058777), we are longitudinally following a cohort of older adults with surveys every 6 months. Subjects are asked to describe any conflicts that have occurred about their living situation. Responses were coded using constant comparative analysis examining type, content, and whether statements were interests, rights, or power-based.

Results: We enrolled 293 subjects (mean age 73.5 yrs, SD 5 yrs, 40.4% non-white; 94.5% retention rate) and 124 conflicts were reported over 18 mos. Thematic analysis revealed three types of conflicts:1.) Interpersonal (subcategories: spouse, intergeneration, other) (e.g, my son sometimes comes from Florida and tries to tell me what to do with my house), 2.) Task (e.g, Mostly the maintenance, up-keeping the place), 3.) Value-based; Content were coded into 6 themes: 1.) Location change (e.g. my sister says i can be incapacitated and she said i should live in senior housing), 2.) Home maintenance issues (e.g., My son insisted I put in a new lower tub and I didn't want to), 3.) Different ways of completing tasks (e.g., it is about my children and the way we do things, I don't take my time, and I don't eat the same stuff), 4.) Safety (e.g., Neighbor's boyfriend kicked in the door and destroyed our property) 5.) Financial (e.g. I discovered that my spouse secretly met his attorney and changed his will so I would get nothing), 6.) Health-related (e.g., the family next door is always having bonfires which messes with my asthma. we've argued), The majority of atatements were interests or rights-based.

Conclusion: Older adults experience a wide range of conflicts pertaining to aging-in-place decision making. Most often older adults experience interpersonal conflicts with supporters about moving from their home or adapting the home for their needs. Training in dispute resolution may help alleviate these conflicts between older adults and their supporters.

A104

Family Caregiver Support Apps: Questionable Evidence, Content, Security and Unmet Needs

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Background: As the number of family caregivers of older adults has increased, so has the need for informational support resources to help educate family caregivers on geriatric needs. As a result, there has been a growth of mobile apps and linked websites offering paid advice and information to family caregivers seeking support. We sought to characterize family caregiver support apps specifically examining the content, evidence-base, security, and incurred costs.

Methods: An interdisciplinary team of area agency on aging nurse leader, gerontology-focused social worker, and geriatricians utilized common search engines to identify family caregiver support mobile apps and linked websites. To be included in the review, mobile apps had to be available either in the Apple App or Google Play store. After identification, details (e.g., content, source of material, ownership background, evidence-based, security, cost, reviews) were collected on each of the apps. Reviews were also collected on each of the apps. When possible, caregiver support app companies were contacted to complete and verify details. Qualitative analysis was completed using three coders who used the framework method.

Results: Of the 23 caregiver support apps identified, 19 were available in either the Apple App or Google play store. Content of the 19 apps included informational resources, medication reminders, shared calendar, social networking. Ten did not provide any data security information and four were cloud-based. Three stated they were 'evidence-based' with one producing a small qualitative study as evidence of its effectiveness. Average rating was 2.7 across all apps. Content producers/owners were frequently non-healthcare, lacking expertise in caregiving and without geriatric training. Several were lay family caregivers with solo caregiving experience. While aimed at caregivers, apps did not appear to be set up to meet their needs from analysis of reviews.

Conclusion: Family Caregiver Support apps created to assist caring for older adults were found to be inconsistent with the support offered as well as the data security. Questions remain about the effectiveness of these apps in supporting family caregivers. Research is needed to help family caregivers and area agencies on aging vet and identify apps that effectively support quality care of older adults.

A105

Using an ethnographic approach improves a randomized control trial for tele-pharmacy virtual visits for older adults

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Background: Although clinical trials are increasingly using mixed methods, most have not articulated the ways that qualitative methods complement and enhance randomized clinical trials (RCT) study design. We describe how our ethnographic assessment improved the delivery of an RCT of pharmacist video visits for medication management with older adults.

Methods: In preparation for this RCT conducted an ethnographic assessment of 20 older adults to understand their experience prior to and during the video visits. An anthropologist on our team oversaw recruitment and data collection, including direct observation of participants in their homes, fieldnotes, and qualitative interviews to capture participants' experience of the virtual visit.

Results: For most participants, video conferencing applications were new, and some had little to no experience with the necessary technology. By meeting patients in their home, we identified critical barriers to participation and retention in the RCT that many older adults face including deficits in mobility, transportation, technology devices, experience with technology, hearing, and vision. We found that the anthropologist was able to bridge the knowledge and comfort gap for these older adults who had previously been unable to engage in videoconferencing by helping ease fears of technology by providing hands-on guided technology tutorials before and during the virtual visit. These novel findings informed the development and tailoring of recruitment and technology trouble shooting approaches in the subsequent RCT.

Conclusion: Using ethnographic methods, our team was able to document the challenges older adults face before joining a virtual visit. Our team provided support for older adults interested in learning more about technology beyond standard medical facility practice. Without the application of ethnographic approach and methods, we would not have been able to reduce existing barriers for older adults to engage in the clinical research. This hands-on and engaging approach maximized recruitment of a population traditionally excluded from clinical research, who may have less experience with technology, and ultimately offered us rich data to improve our RCT protocol.

A106

Stable isotope labeling reveals obligate increased glucose oxidation after acute inflammation in a mouse model for delirium

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Background: Delirium is an acute confusional state associated with inflammation and neuronal hypometabolism. Lipopolysaccharide (LPS) is a potent inflammatory stimulus that is used to model delirium-like pathophysiology in mice. LPS acutely lowers blood glucose in mice. Ketone bodies provide an alternative energy source for neurons when glucose is scarce, but we previously found that a ketogenic diet (KD) does not rescue delirium-like behaviors induced by LPS. LPS lowers blood ketone bodies in mice on KD, analgous to its effect on glucose. Changes in blood levels could be due to reduced supply or increased demand. Here we tested if these metabolic changes after LPS are due to changes in whole-body oxidation rates of glucose and ketones.

Methods: Young (2-3 mo) wild-type C57BL/6 male mice were fed either KD or matched control diet for one week. Mice were then injected intraperitoneally first with 0.5mg/kg LPS or saline and then, two hours later, with ^{13}C-labeled tracer of either D-glucose (600µg) or D-3-hydroxybutyrate (BHB, 350µg for control-fed mice and 650µg for KD-fed mice) Whole-animal oxidation rate of glucose/BHB was measured within a comprehensive lab animal metabolic activity monitoring system with stable isotope detectors in the exhaust to quantify the $^{13}C/^{12}C$ ratio in exhaled CO_2 (Promethion BX1, Sable Systems). N=4 per condition, group differences via T-test.

Results: In control fed mice, LPS increased relative glucose oxidation vs. saline (mean AUC 19,443 vs 11,763 $^{13}CO_2$ ($^0/_{00}\delta_{VPDB}$); P=0.004). BHB oxidation was also higher after LPS vs. saline (mean AUC 9,473 vs 5,700; P=0.05). In mice fed KD, neither glucose nor BHB oxidation was significantly different after LPS vs. saline (mean glucose AUC 15,619 vs 18,820, ns; mean BHB AUC 20,560 vs 23,388, ns). LPS slightly increased overall energy expenditure and CO_2 production vs. saline in control fed but not KD fed mice in the 2 hours following injection.

Conclusions: In this mouse model for delirium, acute inflammation increases the relative demand for glucose oxidation in the context of overall increased energy expenditure. The demand for glucose is not offset by increased ketone oxidation regardless of diet context. Acute inflammation therefore may create obligate glucose metabolic demands that diminish relative glucose availability for neuronal function.

A107 Encore Presentation

An integrated computational approach to uncover potential therapeutic targets in type 2 diabetes skeletal muscles by analyzing differentially expressed genes and enriched signaling pathway

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Background: Type 2 diabetes is a common chronic disease in elderly population. Because inflammation and endoplasmic reticulum stress in skeletal muscle take charge of an important role for developing the disease, we tried to explore potential mechanisms by analyzing differentially expressed genes (DEGs) and enriched signaling pathway in skeletal muscles of elderly population with type 2 diabetes.

Methods: We obtained data for gene expressions in skeletal muscles of normal and abnormal (with high level of glucose) elderlys from GEO, and conducted DEGs screening using GEO2R, functional enrichment analyses using DisGeNET, Protein-Protein Interaction network analyses using Cytoscape, CytoHubba, and MCODE, and candidate genes network analyses using GEPIA2.

Results: We found several hub genes related with type 2 diabetes. Interestingly, top five hub genes (*HNRNPH1*, *HNRNPA1*, *HNRNPK*, *SRSF1*, and *HNRNPA2B1*) among them were known to be associated with a variety of environmental chemicals, including air pollutants, bisphenol A, and heavy metals such as cadmium and copper (inference score=39.83).

Conclusions: Our results indicate that environmental chemicals could be important causal factors for developing type 2 diabetes in elderly population.

A108

Development of a Professionalism Curriculum for Geriatrics Residents

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Background: Medical education societies require teaching professionalism, but few residency programs have formal curricula addressing this need. We developed a novel, longitudinal year

curriculum on professionalism and related competencies for geriatrics residents at the University of Toronto. This report describes the development and initial outcomes of the Professionalism Plus (PP) curriculum.

Methods: We used the CanMEDS framework and collaborated with local content experts to develop learning objectives and teaching sessions for a two-year longitudinal curriculum. Topics included personal-professional identity, physician well-being, communication, collaboration, and leadership. Opportunity for self-reflection was common across all sessions. We piloted one workshop each year in 2017-18 and 2018-19. 2019-20 was the first year of the full longitudinal curriculum and we taught 5 workshops. Participants completed written evaluations immediately after each session. Graduated residents who attended at least one workshop were invited for semi-structured interviews to understand how PP impacted them and identify areas for improvement. De-identified transcripts were coded for emergent themes.

Results: 30 written evaluations of the 7 individual workshops were analyzed. The average teaching effectiveness score was excellent: 90%. Seven of 13 eligible graduated residents (53%) were interviewed. Four key themes emerged: (1) PP provided a unique opportunity for self-reflection that enhanced participants' understanding of themselves; (2) participants gained a sense of community; (3) the facilitator played an essential role in establishing a safe environment, and (4) participants did not link PP to any change in their medical practice as they felt it was either too little, too late, or too removed from clinical practice.

Conclusions: Residents valued formal curricular time dedicated to personal and professional growth. These evaluations have been used to improve the curriculum in subsequent iterations. A formal program evaluation, interviewing physicians who graduated in 2021 and 2022 after completing the full two-year curriculum is underway.

A109

Modification of a Virtual Simulation Experience Teaching Fall Risk Assessment and Interprofessional Team Care Planning

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Background: One in four adults over the age of 65 falls every year, resulting in potentially avoidable injury, institutionalization, and mortality. Fall risk assessment and fall prevention interventions are optimized using an interprofessional (IP) team approach. We designed a successful in-person fall prevention teamwork simulation training which was modified to fully online during the pandemic. We have further modified the online simulation through RCQI to include a recorded team meeting among interprofessional faculty to demonstrate the team process. Comparison of the two online methods is reported here.

Methods: In the in-person and online model, students prepare for the simulation by completing online didactics. In all models, on the day of the training students participate in synchronous virtual condensed didactic content training to reinforce online learning. In all models, students are split into profession-specific huddles to introduce the simulated case of an older adult with falls. In all models, they break into IP teams to discuss the case in small groups and to practice the IP team care planning process on an actual person at actual or simulated high fall risk. This recent modification of this simulation training involved video role-modeling of the team communication and collaboration process.

Results: In addition to gathering qualitative comments, we measured interprofessional team attitudes using the ISVS-9B pre and post simulation. Results showed a mean difference in change scores of 0.914 (S.D.=0.9) for the original online model and 0.069 (S.D.=0.11) for the revised simulation with team video (p=0.11). Qualitative data showed many nursing students did not receive the case prior to the event for the revised model, likely diminishing the impact of the revised model.

Conclusion: An IP team approach is recommended to optimize fall prevention. Education efforts that teach the ability to assess patients and team virtually are needed.

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A110

Training Geriatric Fellows to Perform a Telephone-Based Comprehensive Geriatric Assessment-Frailty Index: Needs Assessment and Pilot

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Background

Telemedicine visits present unique challenges in the assessment of frailty, and there is a lack of curriculum to teach trainees to perform telephone-based geriatric assessments. We present an educational quality improvement (QI) project with the following objectives: 1) to conduct a needs assessment of geriatric fellows in performing a telephone-based comprehensive geriatric assessment with frailty index (tCGA-FI), 2) to improve and expand telemedicine training, and 3) to identify potential barriers and adapt training materials based on feedback.

Methods

In September 2022, we initiated this QI project to better understand trainees' experience with tCGA-FI. The program involves 1) a group didactic session on the concept of a tCGA-FI; 2) a 1:1 session reviewing the electronic medical record (EMR) including documentation and the EMR-embedded CGA-FI calculator; and 3) self-directed review of digital resources created by a team of experts experienced with tCGA-FI. Trainees completed a needs assessment which informed individual training sessions. The trainees then performed an initial tCGA-FI under the supervision of a 2nd year geriatrics fellow and then transitioned to performing tCGA-FIs without direct supervision.

Results

In a cohort of 7 fellows, 6 (86%) completed the needs assessment. The respondents felt that learning skills in telemedicine was 'very' (67%) or 'extremely important' (33%). Half of responders felt 'moderately confident' in their ability to deliver geriatric care via telemedicine and 50% felt 'slightly confident.' Regarding the use of frailty index, 33% were familiar with the concept but unsure of the components, 50% were comfortable calculating a frailty index and identifying domains driving frailty, but none were confident in creating domain-specific management goals or teaching other trainees how to calculate or interpret a frailty index.

Conclusions

Telemedicine is an important part of geriatric care, and this needs assessment indicated a significant opportunity to provide training in the areas of telephone based CGA and FI. Through this digital curriculum, asynchronous learning could help to improve the skills of geriatric fellows.

A111

Enhancing Dementia Care Training: Recommendations from Nursing Home Staff

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Background: Given the large portion of nursing home residents diagnosed with Alzheimer's disease and related Dementias, there is an increased interest from nursing home staff to expand training beyond the minimum standards established by Centers for Medicare and Medicaid Services. The purpose of this presentation is to identify the areas of additional training recommended by nursing home staff to improve the overall care for residents with Dementia.

Method: Embedded within a pragmatic clinical trial examining two approaches to staff dementia training, we executed a qualitative multiple case study to examine staff perspectives on training, across different job roles. Within each participating facility (n=23; a subset of nursing homes from parent study), an average of 16 staff members were recruited to participate in one-on-one interviews (n=327 total staff). Interviews were recorded and transcribed verbatim. A rapid qualitative analysis approach was used to analyze the data.

Results: Over 90% of all participants expressed their desire for more training. Five themes emerged addressing additional training needs including: (a) understanding stages of dementia (e.g., the progression of the disease, how to best support residences at each stage), (b) managing challenging behaviors (e.g., redirecting aggressive behaviors, exploring the root cause of the behavior), (c) communicating with families and patients (e.g., best strategies for sharing patient updates, educating families about disease progression, strategies for communicating with patients, such as optimal body position, tone of voice), (d) care approaches and strategies (e.g., environmental adaptations, use of adaptive equipment) to improve care, and (e) mode and frequency of training (e.g., discussion and application to current residents, enhanced learning tools to meet diversity of learning needs and abilities).

Conclusion: Dementia-related training for nursing home staff is crucial to the delivery of high-quality care. Nursing home staff have expressed a desire for more training and identified specific content areas which may improve the care they provide to residents diagnosed with dementia.

A112

Mentored Independent Learning Plans among Psychologists: A Mixed Methods Investigation

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Background: Geriatric mental health continuing education courses provide important training for practicing psychologists serving older adults. However, these courses may not provide the targeted learning needed to enhance previous training for current clinical settings. To address this, we implemented mentored independent learning plans (ILPs) for Veterans Health Administration (VHA) psychologists as part of their participation in the Geriatric Scholars Program. We conducted a mixed methods evaluation to (1) characterize the learning activities, (2) identify barriers and facilitators, and (3) characterize participants' experience completing the ILPs.

Methods: A survey completed after the ILP contained quantitative items about increases in geropsychology knowledge and skills rated on a 5-point scale (5 = strongly agree) and open-ended questions regarding barriers and general feedback. Participants submitted reports that summarized their ILP activities and included responses to questions about their overall experience, usefulness of learning, and intent to pursue further learning. Open-ended responses were coded using content analysis.

Results: Fifteen of 19 participants (78.9%) completed an ILP; 12 of 19 (63.2%) completed the survey. On average, each ILP consisted of 3.3 learning goals and 6.7 learning activities. Learning goals often corresponded to specific needs in participants' setting (e.g., goals of care discussions in context of specific illnesses). Most planned activities were readings (38%), application of knowledge/skills with patients (19%) or coursework/training (14%). Almost all (93%) activities were completed. The ILPs were perceived to increase geropsychology knowledge (M = 4.8 of 5) and skills (M = 4.5 of 5). Finding time was identified as a barrier. Consultants were viewed positively and seen to be integral to the process.

Conclusions: The findings showed that the ILPs were feasible and acceptable to the participants. The ILPs provided specialized knowledge and were deemed to be a jumping off point for continued learning. Mentored independent learning shows promise as a novel approach to providing geriatrics education to the workforce.

A113

Comfort First: Web-based video training for Comfort Matters dementia care

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Background: Alzheimer's disease and related dementias (ADRD) are a leading cause of disability and death. In moderate to severe ADRD care partners prioritize comfort, but high-quality care to achieve comfort is rare. *Comfort Matters*, developed at the Beatitudes in Phoenix, AZ, is a leading program of nursing home dementia care, but in-person training reaches few sites. To improve dissemination, we developed *Comfort First*, a web-based dementia care training toolkit with video demonstration of *Comfort Matters* staff practices.

Methods: Our team developed *Comfort First* training by combining best practices in geriatrics, dementia, and palliative care, in collaboration with the *Comfort Matters* team. Stakeholder Advisors representing nursing home resident, care partner and clinical perspectives guided training development. Professional videographers filmed staff at Beatitudes to illustrate comfort-focused dementia care skills. Video modules, supported by an implementation manual, address Understanding the Person with Dementia, Promoting Quality of Life and Comfort, Working as a Team, Responding When People with Dementia are Distressed, Addressing Pain, and Making Comfort First a Reality. We delivered *Comfort First* at 3 nursing homes. Evaluation measures were a) number and b) diverse roles of trained staff and c) post-test knowledge scores.

Results: Training participants' roles (n=146) were diverse: certified nursing assistants (40%), nurses (19%), administrators (11%), activities staff (6%), therapy staff (5%) and other roles. Average post-test knowledge scores were high, ranging from 90% (Addressing Pain) to 99% (Promoting Quality of Life and Comfort, Making Comfort First a Reality). Perfect post-test knowledge scores were achieved by 47% of participants for Addressing Pain, and by 98% of participants for Making Comfort First a Reality.

Conclusions: The *Comfort First* web-based training toolkit uses video demonstrations of best practices - a novel approach to disseminate dementia care skills. Initial evaluation demonstrates acceptability and knowledge uptake for staff in diverse roles. Consistent with the intent of its public funding, *Comfort First* will be widely disseminated at minimal cost.

A114

Nutrition in Geriatrics-Focused Continuing Medical Education

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Background

Poor dietary choices are a risk factor for mortality. Evidenced-based dietary patterns are associated with reduced risk of chronic disease. Nutritional states are related to functional states and clinical outcomes. Nutrition is not routinely taught in medical education at the undergraduate, graduate or continuing education level despite being a known determinant of health. Moreover, malnutrition screening is not standardized for hospitalized patients nor is dietary assessment in the ambulatory setting a standard of care.

Methods

We assessed adequacy of nutrition education provided at major geriatrics-related conferences that offer continuing medical education (CME). We reviewed conference agendas of three major geriatric professional societies from 2018 to present. We searched 12 agendas for the keywords "nutrition", "diet", "lifestyle", "food", "fat", "carbohydrates", "protein", "vitamin", "mineral" to screen for further review for nutrition-related topics.

Results

Up to 300 minutes were dedicated to nutrition-related topics within any one conference, with most conferences offering less than 90 minutes in total. There was no identifiable trend in nutrition offerings over time. In 2022, only one conference offered any nutrition-related sessions. In that conference no nutrition-related talks applied to clinical practice or were presented by a Registered Dietitian Nutritionist.

Conclusions

This is the first known review of geriatrics-focused CME conferences to highlight the lack of nutrition learning opportunities at medical conferences. Nutrition education in medical training has been inadequate despite continued minimal physician knowledge and confidence in providing nutrition care. Increasing nutrition-related CME may enhance provider confidence in discussing nutrition with patients and may increase rates of these discussions in clinical care.

A115

Interprofessional Leadership in Healthcare: Training Development and Evaluation

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Background: Leaders of healthcare teams have a critical role in coordinating services to deliver high-quality care to the patients and communities they serve. Leading teams can be challenging in the context of complex healthcare systems, increasing costs, resource limitations, and workforce issues. Leadership training is important in preparing healthcare leaders with the skills and abilities to be effective in their roles.

Method: We created the Interprofessional Leadership in Healthcare Certificate, a five-month, online program for health professionals who lead, or aspire to lead, interprofessional teams. Learners complete courses relating to interprofessional collaboration, effective communication, mentoring and supervision, business acumen, and contemporary leadership models. The live classroom sessions use Project ECHO® to facilitate technology-enabled, collaborative learning. After each course, participants complete an evaluation survey which includes questions about course learning objectives, presentation of learning materials, engagement in learning activities, application of content to professional practice, and interprofessional learning. The survey includes open-ended questions about the most helpful aspects of each course and suggestions for changes.

Results: Evaluation data for each of the courses was collated across the four cohorts and synthesized. Participants represented over 10 healthcare professions. There was over 90% agreement that content met each of the 12 learning objectives for each course. There was over 90% agreement that participants learned from other professions and engaged in interprofessional collaboration in each of the five courses. The qualitative data indicated that learners found that the course content helped them to be more intentional with their collaborative and leadership practices in their existing workplaces.

Conclusion: The certificate program had a positive impact on participants' knowledge, skills, and workplace practices relating to interprofessional collaboration and leadership. This may be attributable to intentional interprofessional collaboration in both program development and learning experiences and the use of the Project ECHO® model.

A116

Community-integrated partnership between the Hospital Elder Life Program and the McGill School of Physical and Occupational Therapy

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Background

A community-integrated partnership between the Hospital Elder Life Program (HELP) and the McGill School of Physical and Occupational Therapy aimed to address the need for increased HELP resources and the desire for students to gain clinical experience. This study illustrates the development, application and outcomes of integrating HELP into an undergraduate health profession curriculum.

Methods

Over 1 year of planning resulted in an innovative program: students received theoretical and simulation-based training by an interdisciplinary team in fall on topics including infection prevention, delirium, functional decline, communication, nutrition, and ageism. They engaged in HELP interventions with users in the winter semester.

Hospital databases were used to measure services rendered. Student perspectives were measured via course evaluations, student led surveys and reflection papers. HELP-McGill partners initiated and supervised master's research projects to gather further data on student perspectives. The 1st project was a qualitative study using surveys and semi-structured interviews. Results were analyzed using content, competency and thematic analysis. The 2nd project was a mixed methods study using a pre-post design of student's perceptions of older adults. Responses were analyzed using inferential statistics and interpretive synthesis.

Results

Over 3 years, 246 students participated in HELP resulting in 1877 user visits. Course evaluations indicated an overall satisfaction of 3.8/5 (fall 2019) and 4.0/5 (winter 2020) compared to 2018-19 scores of 3.2 and 3.6. Results of the Master's projects indicated a positive learning experience that reinforced the attainment of professional competencies. They demonstrated slight shifts in perceptions of older adults. Student reflections suggest that HELP may increase students' awareness of ageism and willingness to work with older adults.

Conclusion

The partnership between the user-centered HELP and a university professional program enabled pedagogical and community-integrated clinical opportunities for learners early in their professional training and supports the development of professional identity, user-centered care and exposure to geriatrics. It has the potential to bring multiple benefits to the users, institutions, and future health care professionals.

A117

Exploring Implicit Bias and Racism in Geriatric Medicine

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Background: Implicit bias and racism can affect decision-making, thereby affecting clinical care. We examined issues of race and bias affecting care of older adults and strategized ways to mitigate bias and racism. Outcomes include confidence in identifying and addressing bias or racism in patient encounters or workplace.

Methods: We used the 5M's framework of geriatrics to outline examples of implicit bias and racism during geriatrics grand rounds. This was followed by small group discussions to evaluate a patient scenario. Structural modifications to mitigate implicit bias and racism were discussed for implementation. A survey was distributed to investigate confidence levels.

Results: Fourteen attendees responded to the post-session questionnaire. Eighty-six percent reported feeling somewhat or very confident in their abilities to identify bias in patient encounters or workplace. Of the respondents, 71% felt confident in their abilities to address bias in patient encounters or workplace, with 14% feeling neutral and 14% not very confident. Takeaways included: "burnout can influence tendency toward bias," and "how things are documented in the chart may be subjective and bias future clinicians." Of the four fellows who responded, two had received prior training on implicit bias, three were "somewhat confident" in their ability to identify bias in patient encounters, and three were "somewhat confident" in their ability to address bias in patient encounters.

Conclusions: Implicit bias and racism may influence medical decision-making. Increasing self-awareness has the potential to improve care. There is a desire to learn more in the way of evaluating one's own bias, using anti-bias/racism strategies, and developing skills to address concerns. One approach could be implicit bias and racism rounds, which may allow providers to become more adept at identifying and addressing concerns, leading to improved clinical care.

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A118

Expanding a Geriatrics and Palliative Medicine Leadership Training Curriculum

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Geriatrics and palliative medicine physicians are frequently recruited to leadership positions by health systems seeking to meet the needs of older adults with multiple chronic conditions. Leadership training is lacking in medical education. In 2019, a one-year Leadership and Life Skills (LLS) Course was inaugurated to improve leadership education during fellowship. 4 course directors taught 17 geographically dispersed geriatric and palliative medicine fellows via webinars. To assure sustainability, a Train-the-Trainer element was added to LLS course in 2020 to develop additional faculty.

The 6 faculty scholars recruited for the training were graduates of the Tideswell Emerging Leaders in Aging (ELIA) Program. Selection criteria included previous leadership training and experience. Faculty scholars joined the LLS course initially as observers, then progressed to mentored facilitators. Course directors role modeled content and format. Faculty scholars helped lead small group sessions. Bi-monthly "check in" sessions with course directors allowed for feedback and discussion to facilitate training. For second half of the course, faculty scholars, mentored by a course director, createdmaterial to co-lead a monthly webinar. Each scholar workedwith an executive coach to build leadership skills. Pre-, mid-, and post-course evaluation included quantitative and qualitative surveys.

All participants were fellowship trained geriatricians in practice for 3 years, with the majority 6-10 years. 80% attended all monthly webinars; 60% attended monthly "check-ins." Pre-and mid- course evaluations showed increased comfort withknowledge of leadership topics(lowest levels emotional intelligence and mindfulness). Baseline comfort in teachingleadership topics was lower than knowledge comfort, especially for emotional intelligence and resilience skills teaching comfortimproved during course. Due to 30% post-course survey response, overall change in comfort levels is unclear. Top participation barriers were scheduling conflicts and confusion over roles and expectations, but strong support for coaching.

This project suggests it is feasible to coach faculty to help lead and sustain a national remote-learning LLS course. Based on the reported experience of this initial cohort of faculty scholars, we have been able to further refine, expand and scale up the reach of this leadership training and create additional courses.

A119 Encore Presentation

Validity, reliability, and acceptability of the CanMEDS "Resident as Teacher Multisource Feedback" assessment tool

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Background: We evaluated the usefulness of the CanMEDS "Resident-as-Teacher Multisource Feedback" (RaT) tool currently used for obtaining audience feedback on resident teaching sessions in the postgraduate geriatric medicine training program at the University of Toronto.

Methods: The RaT is a 2-page tool consisting of 10 items rated on a 5-point Likert scale and space for written feedback of strengths and weaknesses. Completed RaT evaluations from current residents and recent graduates were analyzed by descriptive statistics for internal consistency and inter-rater reliability, and content analysis of comments. Resident teachers were surveyed to comment on the acceptability of the tool to develop teaching competencies.

Results: 32 teaching sessions consisting of 132 evaluations were collected prospectively from 11 residents from April 2020 to April 2022, and retrospectively from 7 graduates from 2016 to 2019. An a priori decision excluded evaluations with ≥2 missing ratings (n=11) or with ≥2 items rated "not able to comment" (n=56) for descriptive statistics. 65 evaluations were analyzed, showing high internal consistency with Cronbach's alpha of 0.97, 95% confidence interval (CI) 0.89-0.99, and substantial inter-rater reliability with Fleiss kappa at 0.73, 95% CI 0.13-0.80 across 10 items. The overall performance rating was very positive, 4.75 (standard deviation 0.47). Of 132 learner evaluations, the most common comments also captured in the rated items were organization to teach (n=53), openness to questions (n=36), and agreeing on expectations (n=19). Written comments regarding delivery style (n=52), audience interactivity (n=44), and content knowledge (n=43) were not captured on the rated items. Residents valued written comments, the familiarity of the Likert scale, and its ease of use. 11 of the 13 residents who responded to the survey found the RaT tool acceptable to help improve teaching skills.

Conclusion: The RaT tool demonstrated high internal consistency and inter-rater reliability. Poor discriminatory power limited the usefulness of the ratings. Residents valued written comments and a majority felt the RaT to be an acceptable teaching feedback tool. Results of this study can be used to modify the RaT tool design to help residents gather quality feedback on their teaching performance.

A120

Artificial Intelligence Perpetuates Ageism via Imagery Selection

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Introduction:

Artificial intelligence (AI) image generators use text prompts to produce original images pulled from databases of stock photography and artistic representations. This project examined how various Geriatric terms were interpreted by AI platforms that produce word – linked images.

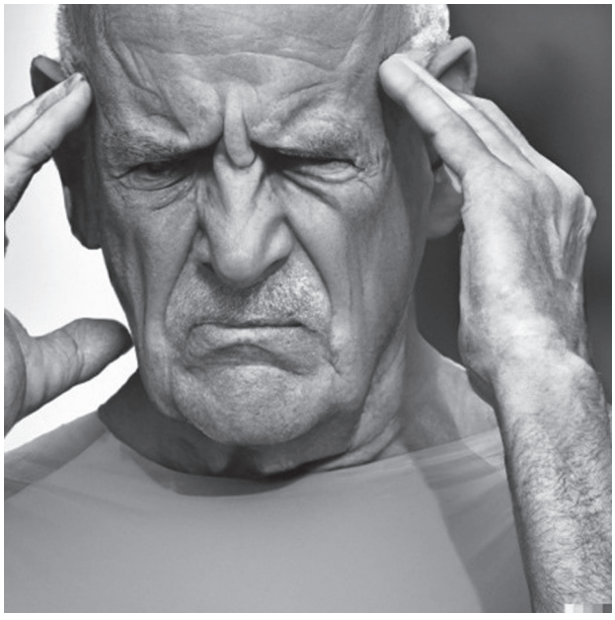
Methods:

This qualitative and quantitative project inputted terms from the Geriatrics lexicon (e.g., frail older adult, dementia, successful aging) using the DALL-E 2 image generator. Resulting images were evaluated for age, race, gender, bias, and authenticity.

Results:

The image search strategy generated 120 images for interpretation. 70% of these pictures demonstrate elements interpretable as ageism or derogatory stereotypes. 80% of images show older white people with the remainder show Asians. Half of the images did not authentically match the queried term. For example, a search for "frail older adult" resulted in images of a scowling old man.

Conclusion: AI as a tool to generate images on human aging reflects ongoing biases extracted from existing pools of web-accessible imagery. AI driven searches did not accurately retrieve images for Geriatric syndromes. Future work needs to examine how AI can be harnessed for less ageism, better gender and race representation as well as better authentication of Geriatric syndromes.



A121

Increasing Institutional QI Capacity: Training Second Year Fellows as Quality Improvement (QI) Leaders

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Background: Quality improvement and patient safety (QI/PS) experiences are offered as a core educational curriculums for trainees in residency and fellowship programs. Institutions have creatively applied QI models tailored-to-fit their learners to make them more meaningful. The role of mentorship is essential to increase learner engagement and help expand QI knowledge.

Methods: A QI curriculum for geriatric and palliative medicine fellows was introduced in 2013 and since adapted annually based on stakeholder input and iterative review, evolving into an interprofessional departmental collaboration. Due to high level of knowledge and comfort with QI concepts but variable engagement noted during the 1st year, in 2020 2nd year fellows were designated as "Junior QI coaches" and trained in leadership skills. This included the Train-the-Trainer Model to coach faculty to facilitate team projects during faculty-fellow "co-learning" QI curriculum. Over time, project engagement was enhanced through the maturation of a mentorship network.

Evaluation consisted of prospective pre/post surveys including a 6-item questionnaire on comfort with QI concepts based on a Likert Scale (1= Very Uncomfortable, 5= Very Comfortable), 3 Quality Improvement Knowledge Application Tool (QIKAT) cases, and a 2-question open-ended course feedback for all participants.

Results: 37 coaches (24 faculty + 13 2nd year fellows) mentored 37 1st year fellows on 12 QI initiatives from 2019-2022. Despite post-curriculum improvements in 1st year fellow (33) knowledge (QIKAT PRE 19.1, POST 22 Paired T-test $p < 0.03$) and comfort with using QI concepts (Paired T-test $p < 0.0001$), 2nd year fellows' (11) did not show significant increase in confidence as QI coaches (PRE 3.27, POST 3.63; Paired T-test $p = 0.37$).

Conclusion: Despite a strong performance of 1st year fellows mentored by junior QI coaches, 2nd year fellows did not feel comfortable leading QI initiatives. Incorporation of 1) Leadership bootcamp for 2nd year fellow coaches to adapt to new role, 2) Appointment of 2nd year fellow "QI champions" to mentor all projects while partnering with course facilitators, and 3) Allocating weekly "open-office hours" with QI course director for 1:1 fellow and faculty mentoring to the faculty development for QI coaches will be undertaken.

A122

Improving General Psychologists' Clinical Competencies to Care for Older Adults

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Background: The Geriatric Scholars Program is a national workforce development program that prioritizes improving geriatric competencies for providers in the Veterans Health Administration. The program was expanded to include psychologists in 2014. Participants completed a weeklong course covering 5 geropsychology competency domains: Knowledge about Adult Development and Aging, Assessment, Therapy, Consultation, and Clinical Program Management. We assessed if prior geriatric training or work setting (urban vs. rural) would be linked to confidence in these geropsychology domains pre-course or change in confidence over time.

Methods: Participants completed a survey assessing their confidence on 5 geropsychology competency domains rated on a Likert scale from 1 (no confidence) to 6 (extremely confident). Participants reported previous training in geriatrics (practicum, internship, post-doc, post licensure, other training), which were tallied to create a sum of prior geriatric training. Confidence was assessed before the course and reassessed 3 months after the course. Participants were from urban (0) or rural (1) work settings.

Results: Prior geriatric training was positively correlated with confidence ratings of Knowledge about Adult Development and Aging ($r(115) = .36$, $p < .001$), Assessment ($r(115) = .23$, $p = .011$), Therapy ($r(114) = .26$, $p = .005$), and Consultation ($r(114) = .35$,

$p < .001$) pre-course. Urban work setting was associated with higher confidence ratings of Knowledge about Adult Development and Aging ($r(115) = -.32$, $p < .001$), and Consultation ($r(114) = -.24$, $p = .011$) pre-course. Change scores (pre-post) for the domains increased by 1.12 on average (range: 0.75 – 1.32) on the 6-point scale. There were no significant associations between work setting or prior geriatric training and change in confidence over time.

Conclusions: The findings indicated that previous geriatric training and urban work setting were associated with greater confidence for the geropsychology competency domains pre-course. Participants experienced an increase in confidence in the geropsychology competency domains after completing the course regardless of prior geriatric training or urban vs. rural work setting.

A123

Scholarly Activity among Geriatric Fellowship Programs: Findings from a National Survey

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Introduction: There is a critical need for training and engagement of geriatricians in research to inform high-quality care for older adults. However, it is unclear how much scholarly activity training is provided during geriatric fellowship. Our objective was to understand the type, barriers, and facilitators of research training and scholarly activities among ACGME-accredited US geriatric fellowship programs.

Methods: We conducted a cross-sectional survey of geriatric fellowship program directors from September-November 2022. Surveys assessing program characteristics, requirements for scholarly activity, program director demographics, and program director attitudes toward scholarly activity were distributed to 116 directors of geriatrics programs via email. We used descriptive statistics to assess fellowship scholarly activity requirements, facilitators, and perceived barriers.

Results: The survey response rate was 35.3% (41/116 programs). Most programs (82.9%) required participation in scholarly activity for graduation and provided protected time (73.1%). The most common scholarly activity definitions included participation in a scholarly project (39.2%), local presentation (23.0%), national presentation (9.5%), and written report to the fellowship program (9.5%). Program directors reported funding to present accepted work at a conference (15.4%), opportunities for fellows to present their work-in-progress (14.4%), and availability of faculty mentors (14.4%), as facilitators towards participation in scholarly activity. Major barriers reported were the short duration of fellowship (70.3%) and lack of training resources for fellows (31.7%). Lastly, 34.1% of directors reported satisfaction with the quality of research training provided, while 65.9% of directors reported satisfaction with the opportunities provided to participate in scholarly activities.

Conclusions: Program requirements, facilitators, and perceived barriers to scholarly activity were heterogeneous among geriatric program directors. A complementary survey was sent to first year geriatric fellows as a part of this study. Future work will compare program director and fellow attitudes and perceptions of barriers and facilitators towards participation in scholarly activity.

A124 Encore Presentation

Using the Driving and Dementia Roadmap (DDR) to Address the Emotional Impact of Driving Cessation and Dementia

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Background: The emotional impact of driving cessation for people living with dementia (PWD) and their family carers (FCs) can be significant, often contributing to their avoidance of this issue. In addition to the grief and anger associated with PWD's loss of identity and independence, feelings of fear and distress can accompany PWD's and FC's lack of knowledge about driving cessation. In this study, we conducted an implementation evaluation of the Driving and Dementia Roadmap (DDR). The DDR is a web-based collection of resources and tools to support PWD and FCs through the decision-making process and transition to non-driving, including information on managing the oft-neglected emotional implications of stopping to drive.

Methods: Semi-structured interviews were conducted with 19 Alzheimer Society (AS) staff after a three to six month period of delivering the DDR to their clients in six AS sites in four Canadian provinces. Eight PWD and 13 FCs who engaged with the DDR were also interviewed. Participants were asked about their experiences of delivering or using the DDR. An inductive thematic analysis of the data was conducted.

Results: According to study participants, the DDR had both a direct and indirect impact on the emotional aspects of driving cessation for FCs and PWD. FCs described how the emotion content gave them insight about the grief and loss the PWD was experiencing. This understanding helped them to attend to the emotional ramifications of driving cessation and to initiate conversations about driving with compassion, empathy and patience. Indirectly, the DDR also helped PWD and FCs feel that they are not alone, thus "normalizing" driving cessation. They reported being reassured that the actions they had taken and decisions to stop driving were appropriate. Strategies about remaining mobile also brought relief and hope that PWDs' quality of life could be maintained once driving ceased.

Conclusion: By providing resources and tools that not only directly address the emotional impact of driving cessation, but also attend to other aspects of managing the decision-making and transition to non-driving, the DDR has the potential to lessen the associated grief, fear and distress often experienced by PWD and FCs.

A125 Encore Presentation

Implementing and Evaluating the Driving and Dementia Roadmap (DDR) During the COVID Pandemic

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Background: To address the gap in evidence-based interventions and resources to support people living with dementia (PWD) and family carers (FCs) through the challenging process of driving cessation, we developed a web-based educational resource called the Driving and Dementia Roadmap (DDR). An implementation evaluation, which took place during the COVID pandemic, was conducted to explore the delivery, acceptability, adaptability, preliminary benefits and limitations of the DDR.

Methods: The DDR was delivered to Alzheimer Society (AS) clients by staff from six organizations in four Canadian provinces from December 2020 to September 2021. Semi-structured interviews were conducted with 19 AS staff, eight PWD and 13 FCs. In addition to questions about their experiences of delivering and using the DDR, participants were asked about the impact of COVID on using the DDR. Data were examined using a thematic analysis approach.

Results: AS staff reported that client concerns about driving cessation and the need for the DDR were less than anticipated due to COVID. They attributed this to other pressing issues such as the need to stay safe from COVID, a lack of access to services and activities, caregiver burnout and PWD's isolation. FCs and PWD also indicated that driving was not an immediate concern because they were driving less in the pandemic. However, AS staff expressed apprehensions about increased driving risk in the aftermath of COVID due to reports of PWD's profound cognitive decline and lack of driving experience during the pandemic.

Conclusion: Although COVID's impact on driving cessation initially lessened PWD's and FCs' urgency in attending to this issue, the longer-term implications of neglecting this issue may be considerable for PWD and FC. The need for resources, such as the DDR, to support PWD and FCs in the decision-making and transition to non-driving will be particularly critical post-COVID.

A126

Using the 4Ms Framework to Guide Innovative Didactic and Experience-Based Learning Curriculum for a Pilot Geriatric Nursing Course.

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Background: Nursing school curriculum remains deficient in geriatric content at the baccalaureate level. The AACN *Essentials* initiative supports competency-based nursing education and prepares students to pass the NCLEX—which may stimulate a nursing workforce capable of caring for older adults with complex healthcare needs. The 4Ms framework can guide geriatric nursing education and aligns with the AACN *Essentials* to prepare nursing students to confidently enter a workforce that demands complex decision-making and clinical judgment skills to manage the increasingly diverse and challenging needs of older adults across care settings.

Methods: We piloted a 6-week, hybrid, baccalaureate nursing course, and implemented the 4Ms framework to guide teaching and learning. Outcomes were assessed from 1) exam scores to ascertain students' feasibility of learning the course content, and 2) students' reflective essays to learn students' perceptions about the ExBL workshop--involving peer-to-peer collaboration, group decision-making, and clinical judgment using an evolving case study focused on the 4Ms framework and the following domains: 1) social determinants of health, equity, and diversity, 2) complex geriatric syndromes, and 3) transitions of care.

Results: *S*tudents' average grades were 90.77% *(SD*= 5.09) from quizzes *(M*= 87%; *SD*= 2.82) the midterm (*M= 93.3%; SD*= 2.43), and the final exam (*M*= 92.0%; *SD*= 6.45), suggesting the content was appropriate for an introductory geriatric nursing course. Students scored highest on the unfolding case study midterm which required students to complete critical thinking and clinical judgment steps. This high average may be a result of the ExBL workshop where students engaged in simulation and group thinking strategies to work through a complex case study prior to the midterm. Qualitative content analysis of students' reflections revealed the following key themes: 1) Readiness to Learn, 2) Communication and Collaboration, 3) Shared Knowledge 4) Building Peer-to-Peer Relationships, and 5) Dispelling Implicit Aging Biases.

Conclusion: This pilot course supported students' knowledge development, complex decision-making skills, and peer-to-peer learning using both didactic and ExBL guided by the 4Ms framework--this approach fostered students' self-confidence and an appreciation for caring for diverse older adults with complex healthcare needs.

A127

Teaching What Matters Most Using a Narrative-based Goals of Care Curriculum for Geriatrics Fellows

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Background: Central to geriatric fellowship training is understanding what matters most, a core tenet of Age-Friendly care. The Johns Hopkins Bayview Palliative Care Program, led by Dr. David Wu, has successfully created the 3-Act Model, a narrative curricular approach to goals of care (GOC) discussions. We present outcomes from implementation of this curriculum into our geriatric medicine fellowship program.

Methods: Through collaboration between Palliative Care and Geriatric Medicine, we implemented a training for geriatric medicine fellows that includes didactics on use of the 3-Act Model in GOC conversations, reflective practice (anchored in the literature), role plays with direct observation and immediate structured feedback. Fellows were then directly observed using the 3-Act Model in GOC discussions on the Palliative Care consult service. Role plays and patient encounters were observed and scored using the Goals of Care Assessment Tool (GCAT) specifically validated to assess proficiency with the 3-Act Model. Learner confidence and satisfaction were also measured using a 5-point Likert scale. This work was approved with exempt status by the Johns Hopkins IRB.

Results: 17 Geriatric Medicine fellows participated in the 3-Act Model curriculum between 2019-2022. Using the GCAT, 11/17 (65%) fellows were considered proficient in the 3-Act Model prior to and 16/17 (94%) were proficient following the role play training. Of the fellows directly observed with patients, 91% were deemed proficient after the 3-Act Model training. 59% of fellows responded to the post-training survey; of these, 100% rated GOC communication skills as extremely important and 100% rated their confidence in GOC discussions as "confident" or "very confident" after the training. Fellows reported an intention to use these skills in their practice after fellowship.

Conclusions: The 3-Act Model is rooted in the core principles of medical education and centers the patient's story, something core to the practice of geriatric medicine. We have successfully implemented this training in our Geriatrics fellowship program and have shown improvement in proficiency in role-play scenarios and in patient care. Future directions may include applying the 3-Act Model to the home setting, partnering with community members to incorporate robust cultural humility in training, a longitudinal follow up with graduates and measuring impact on patient-level outcomes.

A128

The 4Ms in Four Weeks: An Age Friendly Curriculum

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Background: The US population over 65 years old is expected to nearly double over the next 30 years[1]. Age friendly care based on the 4Ms provides an evidence-based practice concept to teach physicians how to best care for our aging population. Currently, our affiliated family medicine residency doesn't have formalized teaching in age friendly care. We developed an inpatient geriatric 4M curriculum to facilitate teaching of essential geriatric topics to family medicine residents.

Methods: The 4M curriculum takes place over each 4-week geriatric inpatient rotation within the family medicine residency. The medical team consists of one senior resident and two intern residents. Each week residents receive pre-made educational materials on the featured 4M subject, which are self-reviewed asynchronously before the live session. During the 30-minute teaching session, the residents actively participate in a faculty led case study based on the featured "M". The subject is presented in self-review and case-based learning to

achieve higher levels of Bloom's taxonomy. A pre- and post-rotation survey is given on the first and last day of the rotation, respectively. Likert scale surveys are used to assess confidence in caring for geriatric patients and experience with the curriculum.

Results: The initial study is over 4 rotations, assessing 12 resident participants, including 8 PGY1s and 4 PGY2s. Responses are collected to assess confidence in caring for geriatric patients pre- and post-rotation. Based on a previous similar curriculum[2], we expect a 10% increase in confidence in caring for geriatric patients in the post-rotation survey.

Conclusion: Our 4M curriculum for the inpatient geriatric medical team provides an efficient approach to teach essential geriatric topics to family medicine residents. Actively engaging future primary care physicians in geriatric medicine ensures the best care for our aging population and hopefully encourages more interest in geriatric medicine.

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A129

State of the Academic Pharmacy Workforce Specializing in Geriatrics

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Background: Pharmacy education programs inconsistently deliver geriatrics content, and programs differ in length, format, and educational philosophy. No study has previously asked geriatrics pharmacy academics about their experiences, support, and satisfaction. The objectives of this study were to describe the roles, activities, and extent to which geriatrics faculty in American and Canadian schools of pharmacy engage with geriatric-focused teaching, research, and practice.

Methods: A questionnaire was developed and piloted and refined to include 52 questions encompassing teaching, scholarship, practice, and service. Listservs from pharmacy academia were used for the USA and Canada, with invitations sent directly to pharmacy faculty and associate/assistant deans to forward to relevant faculty. The cross-sectional-survey was administered through Qualtrics in summer/fall 2022.

Results: A total of 150 surveys were submitted with 129 completed responses. A total of 89.8% of participants had a PharmD degree, 4.6% had a PhD, and 32.6% had a PGY2 specialty residency. Participants were mostly non-tenure track (59.7%) and 76.7% maintained an active clinical practice. Teaching effort was highest at 40-59% (37.2% of participants), and 6.2% of participants had 80% or more teaching effort; teaching was primarily for clinical sciences or therapeutics (90.2%), then foundational science principles (66.7%). A total of 84.5% agreed (strongly agreed or agreed) that teaching assignments were aligned with geriatrics expertise, but 23.6% felt they did not have adequate time to teach geriatrics content. Only 10% of respondents had 40% or more time dedicated to research, although 72.6% were involved in some scholarly work. Only 35.6% agreed that they could obtain research funding, and 37.8% agreed that they had adequate training in research methodology.

Conclusions: Pharmacy faculty members specializing in geriatrics report fairly heavy teaching and clinical workloads, but require further support for scholarly engagement.

A130

A curriculum framework for an interprofessional approach to deprescribing

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Background: Health care providers acknowledge that they lack knowledge and skills to feel confident in deprescribing. Although published educational frameworks are available for prescribing, there are no similar frameworks for deprescribing. Our objective was to design an interprofessional curriculum framework for deprescribing that could be implemented into undergraduate medical, pharmacy, and nursing education.

Methods: The Health Care Provider Committee of the Canadian Medication Appropriateness and Deprescribing Network conducted a literature search regarding deprescribing education, frameworks for prescribing and deprescribing, and then proposed competencies and curriculum structures that could embed the competencies.

Results: A framework was structured around a published 5-step deprescribing process and integrated with two international competency frameworks for prescribing. A total of 7 competencies are proposed (e.g. starting with gathering and interpreting patient information, including weighing benefits and harms to make shared decisions and then implementing monitoring for deprescribing interventions). A distribution based on early, mid, and advanced learners was structured for all competencies. Teaching and assessment strategies are provided as examples where appropriate for each profession. A 4-6-year implementation plan is proposed for programs to map their curriculum, identify gaps and create opportunities to integrate deprescribing education.

Conclusions: An interprofessional curriculum framework for deprescribing was developed with supporting framework structures from prescribing frameworks. Educators specializing in geriatrics can use the framework to implement curriculum in the professions of medicine, pharmacy, and nursing.

A131

What Providers Want From an Interdisciplinary Dementia Training: A Qualitative Analysis

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Background

Dementia is projected to affect over 13 million Americans by the year 2060 and is becoming a leading cause of morbidity and mortality in the United States. Illinois is the first state to require dementia training for all healthcare professionals, a policy which goes into effect January 1, 2023.

Methods

An interdisciplinary team at the University of Chicago created a pilot one-hour module covering dementia epidemiology, assessment, and management principles. Sixteen participants received the module

(three registered nurses, one advanced practice nurse, two social workers, four physicians, one dietician, four occupational therapists, and one adult education specialist). Participants viewed the module, then four focus groups were conducted to gather feedback. Themes were extracted by two raters.

Results

Five major themes emerged from the focus groups. First, participants found the module novel in either delivery method or subject matter. Second, it was critical that the education gained was worth the time spent. Third, participants felt it was important that the module cover a broad overview but also be specialized enough to deepen education for participants who already have familiarity with the disease. Fourth, fixing technical issues was of the highest priority for a required module that would be broadly disseminated. Finally, participants placed a high value on presentation flow and user experience with particular emphasis on narration timing and cultural competence.

Conclusions

Dementia education modules for interdisciplinary healthcare professionals should be novel, target an unmet need, provide an overview of the disease as well as opportunities to pursue more specialized knowledge if desired, be free of technical issues, and provide a culturally competent user experience.

A132

Impact of IPE Geriatrics Post Graduation on Collaborative Clinical Practice

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Background: Interprofessional (IP) geriatric education prepares students to work in teams to provide optimal care for complex problems of older adults. Since most studies of interprofessional education (IPE) have focused on changes in student attitudes and knowledge within a short time after completion of IP experience, little is known about the long-term impact of IPE on former students' collaborative clinical practice.

Methods: This study used a cross-sectional mixed-methods design combining quantitative and qualitative data. An online Qualtrics survey was sent to all 247 former health-profession students who had participated in the 6-month community-based Interprofessional Geriatrics Curriculum (IPGC) program at the University of Southern California between 2016 and 2018. The survey included questions about the respondent's current practice (including the proportion of older adults seen), any impact and lasting effects of IPGC, and the prompt: "List up to three things you learned from participating in IPGC that you use regularly."

Results: Responses were received from 145 (58%) graduates, representing all 7 professions participating in IPGC. Nearly half (46%) reported that a majority of their patient population is at least 65yo, with 80% of those respondents declaring the impact of the IPGC experience on their daily practice "significant." This impact did not vary by whether the respondent had participated in IP activities other than IPGC *(P* =.066). Most respondents reported conducting screenings that, although consistent with their discipline-specific training, made significant utilization of assessments typical of other professions that had been included in the didactic education provided in IPGC. Qualitative responses revealed 8 themes: 3 related to team-based care, 4 to care of older adults, and 1 to professional development.

Conclusion: Geriatric-focused IP and team-based training has positive long-term impact on the clinical and collaborative practices of health-profession students.

A133

Keeping the Focus on Older Adults in Undergraduate Nursing Population Health Course

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Background: It is estimated that by 2050, the number of adults aged 60 and older will double and those aged 80 years and older will triple.[1] The healthcare workforce needs to be prepared to best care for older adults. Nurses make up the largest healthcare profession.[2] To prepare future nurses, students need to learn about the current needs of the population and best care practices via experiential learning.

Methods: Senior-level Bachelor of Science in Nursing (BSN) students enrolled in a population health course completed didactic and clinical experiences focused on older adults. All students completed the following in groups of 11 to 13 students: a worksheet with 19 questions focused on older adults; 1-hour lecture delivered by geriatricians on the 4Ms; 3 visits to an independent living facility (ILF) resulting in the delivery of an hour health presentation; and 3 visits to a senior center resulting in a mini health fair with each student hosting a booth. Also, most students were assigned to a 4-hour rotation in a geriatric care site (i.e., skilled care, home care, geriatric primary care, hospice).

Results: Eighty-two students participated in the course. Partnerships were made with 7 senior centers, 7 ILFs, and 11 geriatric care sites. Most students indicated they were able to learn about older adults at senior centers (78.2%) and would recommend the site to future students (83%). The results were positive for ILFs with 97% indicating they learned about older adults and 99% recommending the site for future students. The majority (98.8%) completed at least one geriatric rotation resulting in 560 hours spent at the care sites.

Conclusions: This model was feasible to integrate into a nursing population care course. Students can learn about older adults outside hospital rotations in various settings resulting in positive experiences. All site partners indicated the community-based model was mutually beneficial. More research needs to be done to understand how this model may impact students' stereotypes and biases related to caring for older adults.

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A134

Elder Abuse InterProfessional Education Using Simulation With Standardized Patients

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Background: Self-neglect (SN) accounts for approximately 70% of Adult Protective Services reports and investigations nationally. Many health professionals receive little to no training on identifying and responding to SN in older adults. We report the impact of a novel interprofessional (IP) clinical simulation on health profession student's (HPS) knowledge, self-reported confidence, and attitudes towards identifying and responding to SN.

Method: One hundred ninety-six HPS students (22 in-person and 174 virtually) participated in a clinical simulation which consisted of four teams of 5-6 on-site students providing care for patients presenting with SN. Approximately 44 IP students observed each team virtually followed by a faculty-led debriefing. Prior to participation, each student reviewed a recorded 1-hour PowerPoint presentation on elder abuse (EA) including SN and read two related journal articles. Demographic information was collected along with pre- and post-test on EA and SN knowledge, confidence, and attitudes. McNemar's test was used to assess changes in knowledge and dependent sample t-tests were used to assess confidence and attitudes.

Results: Students (n=166) completed both surveys (95 nursing, 43 pharmacy, 20 medicine, 6 social work, and 2 physician assistant). At baseline, students agreed that identifying and reporting EA and SN were an important role of health care professionals. These attitudes remained high post-training ($p > 0.05$). Knowledge ($p < 0.0001$) and confidence ($p < 0.0001$) for recognizing EA and SN as well as reporting EA increased post-baseline.

Conclusion: The IP learning experiences improved learner knowledge and confidence. Attitudes towards importance of identifying and reporting EA and SN remained high. Students learned the importance of IP collaboration to provide the best clinical care for older adults presenting with SN.

A135

Outcomes of a Hybrid Geriatrics and Palliative Medicine Clerkship for Medical Students

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Introduction: In response to the COVID pandemic and local curricular transform, we transitioned our mandatory 2-week Geriatrics & Palliative Medicine clerkship for 4th-yr medical students to a hybrid virtual and in-person model. We present this hybrid curriculum and student evaluation/feedback data.

Methods: In our curricular redesign, we focused on the Geriatrics 5M framework (Multi-complexity, Mind, Medications, Mobility, What Matters Most). For palliative medicine, we targeted serious illness communication skills and pain & symptom management. We implemented a series of highly interactive case-based synchronous and asynchronous didactics and assignments that included: 11 Aquifer modules; independent geriatric assessment, medication reconciliation and deprescribing assignments; serious illness communication videos with a reflective writing activity; student presentations on "Choosing Wisely" topics; and a telehealth standardized patient activity on fall risk assessment. Students rotated 2 days on our Palliative Medicine consult service, during which time they completed a "Patient Story" narrative medicine assignment. We provided individualized and group feedback on assignments with opportunities for students to revise their work.

Students completed a standard clerkship evaluation with a 4-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree" which included 8 core metrics ranging from the clerkship organization, opportunities to learn clinical medicine, provision of feedback, to satisfaction with the overall learning experience.

Results: 143 students completed the evaluation. Greater than 95% of students either "agreed" or "strongly agreed" with each of the core metrics evaluated. Students commented: "The rotation provided a fantastic hybrid model," The diverse learning modalities… significantly enhanced this rotation," "This course challenged me to think holistically about patients in a way I have not before," and "Strong clerkship, I feel very prepared to tackle issues involved in geriatrics."

Discussion: We successfully transitioned the clerkship to a hybrid format. The variety of learning and assessment activities kept students engaged while our high expectations and standards combined with individualized and group feedback ensured learning. Students appreciated the flexibility in the schedule especially during the residency interview season.

A136

Improving participation in advance care planning in the Guam/ Micronesia geriatric community through education

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The University of Guam (UOG) School of Health (SOH) received a grant in 2019 for the Guam/Micronesia Geriatrics Workforce Enhancement Program (GWEP) funded by the Health Resources and Services Administration (HRSA) of the Department of Health and Human Services (DHHS). The vision of the grant is to transform current health systems serving the elderly and those with Alzheimer's disease and related dementias. The framework of the 4Ms – what matters, medication, mentation, and mobility is being used to help make this vision a reality through the creation of age-friendly health systems for the elderly. The Guam/Micronesia GWEP chose to focus on what matters out of the 4Ms during years 1-3 of its grant cycle. Specifically, advance care planning (ACP) was addressed at the Guam Memorial Hospital Authority (GMHA) Skilled Nursing Unit (SNU) and in the Guam/Micronesia geriatric community. A chart review was done at the GMHA SNU, which showed low participation in ACP, 25% of the census for that time period. Several reasons for this were revealed through discussion with GMHA SNU personnel. They included lack of awareness or knowledge about ACP as well as language and cultural barriers. After training about ACP was conducted by Guam/Micronesia GWEP, chart reviewed showed participation in ACP improved to 100% at the GMHA SNU. Given this success, the intention is to continue with trainings in ACP through grant year 3 in the hopes of helping patients and their families as well as health care personnel in the Guam/Micronesia community understand how ACP helps to ensure that health care systems respect what matters most to geriatric patients and their families, and in doing so works toward establishing a more age-friendly health system.

A137

Multidisciplinary Falls Prevention Curriculum

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Background: Complications related to falls can lead to a significant decline in older adults' wellbeing. We believe that an interdisciplinary, community-based approach to falls prevention will be most effective in decreasing the number of clinically significant falls. The purpose of this curriculum is to prepare health care professionals to screen, evaluate and manage falls in a primary care interdisciplinary setting and teach learners and practitioners in their fields.

Methods: We piloted our curriculum with geriatric fellows because we expect them to be teachers in this area. We developed a needs assessment survey and based on the results we designed objectives and educational methods. The interventions included:

1: 1-hour didactic session; targets cognitive objectives

2: 1-hour scenario based interactive learning; targets cognitive, skill, psychomotor and behavioral objectives

3: OneDrive resources; targets cognitive objectives

4: Role modeling video; targets behavioral and affective objectives

Results: We had 80% response rate for our needs assessment survey in our pilot group. 75% identified that they are primarily screening for falls yearly during Medicare wellness visits only. 75% had never used the STEADI document by CDC. Mean confidence level for managing medication list of patients at risk for falls is 4.25/5, for using falls assessment tools is 2.75/5, performing gait assessment is 3.75/5, for identifying community resources and suggesting appropriate use of assistive devices is 3.0/5.

Our needs assessment showed that there is a knowledge gap regarding the existence of falls risk assessment tools and room for

improvement in confidence levels for geriatric fellows who are supposed to be experts in managing geriatric syndromes such as falls. Therefore, we sought to not only review evidence-based material to address falls but also to develop a tool to evaluate and document their skills.

Conclusion: This curriculum provides a concise review in a short amount of time. One of the major strengths is how parts of this curriculum can be modified and easily adapted by different health care professionals. It also helps build knowledge and develop psychomotor skills to address falls with minimal disturbance in clinic flow.

A138

An Online Geriatric Teaching Resource for Internal Medicine Attendings

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Background: Rising percentages of hospitalized older adults make it a priority for hospital-based clinicians to understand and implement geriatric approaches to care. Teaching points during work rounds, particularly those utilizing teaching scripts, are especially beneficial to learning, by tying principles and frameworks directly to patient care (Irby 1992). Our Acute Care for the Elderly (ACE) unit is an important site for teaching inpatient geriatrics to residents and students and transferring geriatric principles and approaches to non-geriatrician internists. The unit structure blends two teams: one supervised by a geriatrician, and the other supervised by a general IM attending. We sought to optimize the educational experience for trainees by implementing an online teaching resource for IM attendings to use before and during their weeks on the ACE unit.

Methods: The IM attendings were introduced to the teaching resource project at a faculty meeting. A needs assessment survey was sent to all 10 IM attendings who would be working on the ACE unit for the remainder of the academic year. Based on survey results, we developed an online teaching resource. The resource includes written teaching scripts on specific geriatric topics, as well as links to publicly available videos and podcasts and key journal articles with summaries.

Results: Preliminary needs assessment data (n=3, 30% response rate) found that comfort with teaching geriatric topics varied by respondent and topic. All respondents expressed interest in using teaching scripts and 2 out of 3 respondents expressed interest in key journal articles with written summaries. Post-implementation survey data collection is in process.

Conclusions: Given the shortage of geriatricians, it is critical that internists be able to teach geriatric principles to trainees. Our ACE unit structure presents a unique opportunity to enhance geriatric teaching by IM attendings who supervise trainees on this service. Our online teaching resource is readily accessible and can be easily adapted to the needs of IM attendings. We plan to formally incorporate the resource into pre-service orientation materials to encourage ongoing use over time.

Reference: Irby, D M. How attending physicians make instructional decisions when conducting teaching rounds. Academic Medicine 1992;67:630-638

A139 Encore Presentation

Therapeutic Face-to-face Nursing Home Visits During COVID-19 Pandemic: A Safe Intervention to Mitigate Social Isolation of Long-term Care Residents

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Background:

COVID-19 pandemic has had a major disproportionate effect on morbidity and mortality of nursing home residents, accounting for 40% of all COVID-19 deaths, which necessitated "lockdowns" to limit exposure. This has prevented loved ones from visiting, leading to significant social isolation and loneliness amongst our nursing home residents, exposing them to medico-psychological issues and increased risk of premature deaths from all causes.

Objective:

To foster behavioral health and mitigate the adverse health impact of social isolation on long-term care residents, a nursing home employed a novel non-pharmacological approach using therapeutic outdoor visits with loved ones at the lush tropical gardens.

Methods:

Award-winning therapeutic gardening program at a nursing home began in 2005 to improve the quality of life of its residents. Gardens overlooking the pond next to the facility have grown subtropical flowering plants teeming with butterflies, attracting birds and chameleons. These gardens were used as a venue for the face-to-face outdoor visits. Thirty minute-visits were allowed 4 times a week per resident. Safety ensured by strict compliance to CDC guidelines. Visitors and nursing home residents gowned up, gloved, and wore masks, to allow human touch.

Results:

The outdoor gardens were opened for face-to-face visits in December 2020 to September 2022, with a total of 2,238 therapeutic visits without any documented exposure to COVID-19. Participants were extremely appreciative that they can touch and hug loved ones, though many wished for longer time during visits.

The nursing home opened its doors for indoor visits in October 2022, but the outdoor gardens remain to be a favorite venue for visits by loved ones up to this time.

Conclusion:

To overcome social isolation related to COVID-19 lockdown, the novel approach of therapeutic face-to-face outdoor visits employed by a nursing home has been successful in allowing loved ones to safely visit their nursing home residents.

This could serve as a model for similar facilities to address the negative consequences of social isolation during the COVID-19 pandemic lockdown, and in the event of future pandemics.

A140

Does baseline patient-reported pain level predict overall survival among newly diagnosed older adults receiving cancer chemotherapy?

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Background: Pain continues to be a prevalent and undertreated symptom among cancer patients. The association between self-reported pain levels and long-term survival remains uncertain. The objective of this study was to examine whether patient-reported baseline pain levels are associated with overall survival (OS) in newly diagnosed older cancer patients receiving chemotherapy.

Methods: Consecutive patients (N=509) aged 65 years or older with newly diagnosed lung, colorectal or breast cancer in 2017-2020 receiving cancer chemotherapy were identified from our cancer registry. Self-reported pain levels on a scale of 0-10, categorized as none (0), low (1-4), moderate (5-7), or high (8-10), were obtained from the medical record if reported within 30 days of initiating chemotherapy. Baseline demographics were collected along with frailty status as calculated by an electronic health record derived frailty index (eFI), utilizing demographics, vital signs, tobacco use status, ICD-10 diagnosis codes, outpatient laboratory data, and functional information over a 2-year look back period. Cox proportional hazards models evaluated the adjusted association between pain score categories and mortality.

Results: 519 adults were included in the cohort (median age 72.2 years, 55% female, 83.5% white, 13.4% black) with lung (N=312,

61.3%), colorectal (N=111, 21.8%) and breast (N=86, 16.9%) cancer. The distribution of baseline pain categories was low (N=84, 16.7%), moderate (N=100, 19.8%), high (N=88, 17.5%), and none (N=232, 46.0%). Adjusting for age, gender, race, stage, cancer type, and frailty status, pain level was significantly associated with mortality for high pain (Hazard Ratio (HR) 1.79, Confidence Interval (CI) 1.31-2.45) and moderate pain (HR 1.61, 95% CI 1.18-2.20) as compared to patients without pain.

Conclusions: Baseline pain was common, with 37% of patients having moderate to high pain, and was negatively associated with OS in older patients receiving cancer chemotherapy. Future work should examine whether treatment of uncontrolled pain improves survival for older adults with cancer.

A141

Patterns of Statin Therapy use in Older Veterans Across Kidney Function

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Background:

Atherosclerotic cardiovascular disease (ASCVD) and chronic kidney disease (CKD) are independent predictors of morbidity and mortality. While the use of statins in non-geriatric adult patients without CKD is well established for primary and secondary prevention of ASCVD, the guidelines are less clear when it comes to the older adults and non-dialysis CKD patients. We describe the current practice patterns around use of statins among older adult patients across kidney function in the US Veterans Health Administration (VHA) national population.

Methods

EMR data abstraction from the national VA data warehouse. Inclusion: patients attaining age 75+ from 2000-2018; any statin prescription. Exclusions: turned 75 yrs prior to 2000 or after 2018. Data elements: demographics, chronic diagnoses, statin prescriptions, eGFR. Analysis: descriptive statistics computed at baseline (age 75), and logistic regression to predict new statin prescriptions at age 75 vs no statin (before or after age 75) run using R statistical software.

Results

640,191 patients who turned 75 years between 2000-2018 were included. 74,088 were considered statin-naïve based on EMR and 86,486 were identified as having a new statin prescription from VA only at age 75. Those newly prescribed statins were less likely female (1.2% vs. 2.1% female, p<0.001), and more likely to have preexisting CAD/CVA/PAD. The majority of patients fell in intermediate ASCVD risk (7.5 – 19.9%). In logistic regression, prior CAD (OR 2.8, CI 2.1-3.7, p< 0.001), prior CVA (OR 1.7, CI 1.3-2.3, p< 0.001), and a lower eGFR (OR 0.99, 95% CI 0.98-0.99, p=0.008] were all associated with a higher probability of new statin prescription at age 75. Baseline dementia or PAD were no longer associated with statin prescriptions.

Conclusion

New statin therapy in older adult veterans appears more likely to be prescribed for tertiary prevention, in patients with existing CAD / CVA, and more likely to be prescribed in those with decreased renal function. In terms of primary prevention use of statin therapy requires a better risk calculator that should incorporate life expectancy, medication tolerance, polypharmacy, patients' frailty, and functional status.

A142

Identifying Complementary Alternative Medicine (CAM) and Prescribed Medications Drug Interactions Among Older Adults

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Background: CAM products are used by 68% of older adults in the US yet 50% of older adults disclose CAM use to their primary care provider (PCP). PCPs should be aware of CAM use in older adults given the increased risk for drug interactions with each additional medication, including non-prescribed medications. The objective of this study was to determine if there were interactions between CAM products and prescribed medications among older adults.

Methods: In this IRB-approved, cross-sectional study, participants 65 years and older in a geriatric primary care clinic were administered a questionnaire over a 2 year period to identify their supplement and over the counter (OTC) medication use and disclosure of this use to their PCP. Chart reviews were performed to identify the participant's prescribed medications. CAM products and prescribed medications were entered into Lexi-Comp interaction checker and any identified interaction were documented. Data was exported to Statistical Package for Social Sciences® (SPSS) version 26.0 for analysis directly from Excel. Descriptive statistics were used in the form of count and percentage to describe qualitative variables.

Results: Moderate (49%) and major interactions (35%) were the most common interactions identified. Gingko biloba and garlic were the most common supplements associated with major (57%) and moderate interactions (43%), respectively. Ibuprofen and calcium were the most common supplements associated with major (44%) and minor interactions (43%), respectively. Increased risk of bleeding (20%) was the most common drug interaction identified. Seventy-one percent of participants informed their PCP of their CAM use.

Conclusion: It is evident that CAM use may place an older adult at risk for major and moderate drug interactions. Thus, it is pertinent that PCPs are made aware of CAM use to readily identify and address any observed interactions in the clinical setting.

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A143

"Don't worry, you're just getting older": Patient-Informal Caregiver (Dyadic) Perspectives on Diagnostic Delays in Multiple Myeloma

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Background:

Diagnostic delays in multiple myeloma (MM) are especially problematic for older adults due to non-specific symptoms and signs (e.g., fatigue, back pain, and anemia) at presentation, mimicking other non-cancer conditions. Lengthy delays in diagnosis can lead to end-organ complications (e.g., bone fractures and end-stage kidney disease) that further impact quality of life and lead to poor survival.

Methods

We recruited and interviewed 21 dyads affected by MM from a Comprehensive Cancer Center in NC. Our semi-structured interview guide explored the joint perspectives of older adults with MM and their informal caregivers concerning the initial MM diagnosis. We used the Sort and Sift, Think, and Shift data analytic approach (ResearchTalk Inc).

Results

Among 21 racially concordant dyads (11 Black, 10 White), topics around diagnostic delays centered on the interval between presentation to non-oncology specialty care and referrals to an oncologist. Initial presenting symptoms included recurrent infections, fatigue, back pain, and anemia. Our findings show (1) clinical disregard for symptoms, (2) recommendations to have labs rechecked periodically, (3) additional referrals to non-oncology specialists, and (3) disparities regarding time to referral based on race. More specifically, dyads reported having symptoms dismissed. For example, "*I would go in every three months, and my platelets were getting lower and lower, and I was getting so lethargic. I didn't have a lot of energy and didn't feel good. I felt okay, but I just couldn't move or do like I used to (Dyad 18 PT Black)", "I was anemic, and my doctor said not to worry, you know I'm getting older. I was 55 at the time (Dyad 5 PT White)."* Another shared*, "the [local doctor] just diagnosed me and said we'll get back with you. I think that doctor got back with me a month later (Dyad 2 Black)."*

Conclusion

Delays in diagnosing MM remain challenging for older adults, particularly those who self-identify as Black. Interventions focused on addressing the diagnostic interval within healthcare systems (e.g., provider education and centralized cancer referral pathways) are needed to minimize diagnostic delays and potential disease-related complications and to drive more equitable health outcomes in MM.

A144

Interprofessional pilot study comparing younger and older community-dwelling adults in balance, gait, mobility, and concerns about falling assessments to evaluate fall risk.

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Background: Age-related changes affect muscle strength, sensory feedback, and response time that affect balance while walking and may increase concerns about falling and fall risks. Most falls occur during walking in the home and community, reflecting the need to change walking speeds and directions frequently. How muscle coordination impacts concerns about falling and fall risks while walking in the community is unclear. This abstract highlights an interprofessional pilot study comparing younger and older adults in mobility and gait assessments as part of a larger study evaluating the influence of muscle coordination on fear of falling for community-dwelling older adults.

Methods: Physical therapy students, undergraduate nursing students, and graduate nurse practitioner students helped recruit four community-dwelling adults and four older adults who could walk independently and continuously with or without an assistive device for 15 minutes and were medically stable. Participants completed the Single Limb Stance (SLS), Functional Gait Assessment (FGA), Timed Up&Go (TUG) tests, and Falls Efficacy Scale-International (FES-I) to assess balance, gait, mobility, and concerns about falling, respectively.

Results: Compared to younger adults, older adults expressed significantly greater falling concerns (16.3±0.3 vs. 22.3±1.1, p=0.01) with shorter SLS (54.1±5.9 vs. 13.5±7, p=0.005). However, FGA and TUG were similar between younger and older adults' group (FGA: 28.8±0.8 vs. 26.5±0.9, TUG: 7.3±0.6 vs. 7.1±1.0).

Conclusions: The pilot data indicated that concerns about falling might well reflect on balance control (e.g., SLS) but not general gait and mobility function (e.g., FGA and TUG). It is possible that general gait and mobility assessments were unlikely to identify balance change and address concerns about falling in active older adults. Research is in progress to identify the impact of muscle coordination on fear of falling and fall risks among community-dwelling older adults since daily walking necessitates frequent changing walking speeds and directions.

A145

Feasibility of Virtual Geriatric Assessment in a Veterans Affairs (VA)-Based Oncology Clinic

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BACKGROUND

The geriatric assessment (GA) is a validated, multi-system assessment tool. Prior studies have shown GA integration in oncology practice can significantly reduce chemotherapy-related toxicities, falls, polypharmacy, hospital length of stay (LOS), increase completion of advanced directives, and improve quality of life. Despite these benefits, implementation into clinical practice has remained low. This study aimed to utilize telemedicine to integrate GA into a busy VA oncology practice.

METHODS

In this study, we enrolled adult patients aged 70 years and older with solid tumors or hematologic malignancy, either newly established or receiving systemic treatment through a multidisciplinary VA oncology clinic. Patients were assigned to the intervention (virtual GA conducted by a geriatric specialist) if they scored ≤14 on G8, a validated screening tool. Outcomes were compared with a historical cohort who received usual care (no virtual GA). Outcomes were measured at 3 months from enrollment and included hospitalizations, LOS, ER utilization, oncologic therapy, therapy toxicity, chemotherapy dose modifications, and overall survival.

RESULTS

We enrolled 116 patients from a US VA-based population. Patients had a mean age of 76.8 (SD 6.2) between both cohorts and all patients were male (100%). Among patients in the intervention cohort, average hospital LOS was significantly reduced (11.5 days vs 4.3 days) compared to the historical cohort (p = .01). In those who received the intervention, all patients (100%) derived benefit in at least 1 element of the 5M's framework (Mind, Mobility, Medications, Multicomplexity, and Matters Most) from GA. No significant differences were observed in hospitalizations, ER utilization, oncologic therapy, therapy toxicity, chemotherapy dose modifications, and overall survival at 3 months from enrollment.

CONCLUSIONS

Incorporating GA via telemedicine into routine oncologic care was feasible within this VA-based population of older adult patients with cancer. GA in this format resulted in significantly reduced hospital LOS and benefit for all patients under the 5 M's framework. Future directions include clinic-wide expansion of this program.

A146

Measurement of 2 Frailty Indicators to Predict Physical Recovery after Rehabilitation in Older Patients Admitted to Acute Geriatric Ward

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Frailty is common in hospitalized older patients, and increases risk of hospitalization-associated functional decline. Rehabilitation has been shown to be a beneficial treatment for frailty. In this study, we screened prefrailty and frailty in hospitalized older patients, and determined whether frailty status impacted functional recovery after rehabilitation. From January first, 2021 to December 31, 2021, 597

older people admitted to an acute geriatric ward were enrolled at a medical center in middle Taiwan. Prefrailty was defined as Fried frailty criteria score 1 or 2; or clinical frailty scale (CFS) from 3 to 4; and frailty defined as Fried frailty criteria score 3, 4 or 5; or CFS scale from 5 to 7. In addition, functional, and nutritional parameters were assessed during hospitalization, and accordingly, multidisciplinary interventions were performed by geriatricians, nurses, rehabilitation therapists, and dietitians. In a total of 597 admitted older patients (334 male and 263 female; mean age 82.9±9.0 years), they had a mean hospital stay was 11.5±7.9 days, and mean ADL (activities of daily living) score was 30.4, MNA (Mini Nutritional Assessment) was 16.7 at admission, and improved to 39.5, and 17.7, respectively, at discharge. By Fried criteria, there were 597 patients underwent the screen, of which there were 50 prefrail patients and 543 frail patients. Otherwise, there were 315 patients underwent the screen by clinical frailty scale at the same time, and there were 58 subjects in pre-frailty group, and 235 frail subjects. After tailored rehabilitation program intervention, ADL score was improved from 65.5 at admission to 81.9 at discharge in pre-frailty group, and from 26.8 to 35.3 in frailty group using Fried criteria (p<0.05); and ADL score was improved from 70.3 to 78.7 in pre-frailty group, and from 23.8 to 31 in frailty group using CFS (p<0.05). In conclusion, frailty was common in hospitalized older patients by either Fried frailty phenotype criteria or clinical frailty scale. Prefrail status seemed to predict better physical recovery in older patients admitted in acute ward after rehabilitation. It is proposed that an early integrated care plans in this older population is especially important for them to regain their physical activity or prevent disability during acute hospitalization.

A147

Older adults with geriatric syndromes in acute cardiac care units

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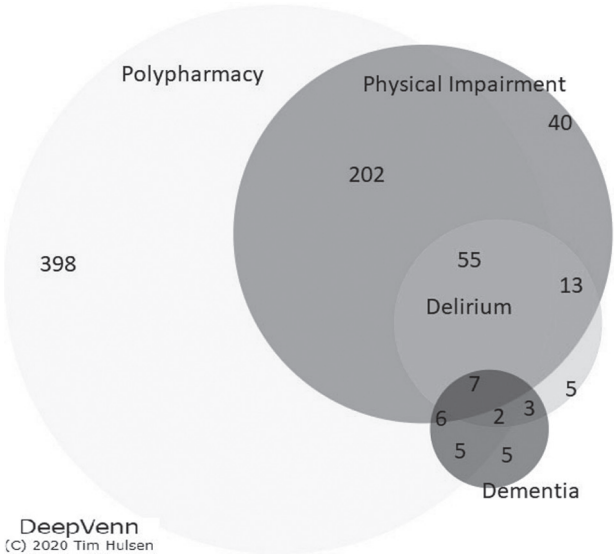
Background: We aimed to assess the distribution of geriatric syndromes and their association with in-hospital mortality.

Methods: We conducted a retrospective study of older patients admitted to two acute cardiac care units of an academic medical center in Houston (2019). We assessed the prevalence of 4 geriatric syndromes – physical impairment, dementia, delirium, and polypharmacy, and their odds ratios (OR) on in-hospital mortality.

Results: Among the 842 patients, 91.4% had at least one geriatric syndrome. Polypharmacy (81.8%) was most common, followed by physical impairment (38.8%), delirium (11.8%), and dementia (3.8%). Physical impairment and delirium increased the odds of in-hospital mortality (OR 3.3 and 7.2, both p<0.01). Polypharmacy on admission was associated with decreased odds (OR 0.4, p=0.025). No patient with dementia died in the hospital.

Conclusion: Most older adults at the acute cardiac care units had at least one geriatric syndrome. Physical impairment and delirium significantly increased in-hospital mortality, but not polypharmacy or dementia. A future study to identify each geriatric syndrome's impact on various clinical outcomes is warranted.



Distribution of geriatric syndromes in acute cardiac care units (N=842)

A148

Physical impairment, delirium, and disposition for older adults admitted to acute cardiac care units

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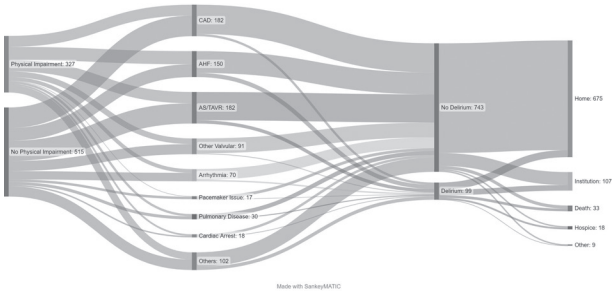
Background: Older adults with cardiovascular diseases have high prevalence of physical impairment and may be at higher risk of developing delirium and institutionalization after hospitalization. We assessed the prevalence of delirium and non-home discharge among older adults at acute cardiac care units with and without physical impairment.

Methods: We conducted a retrospective cohort study of older adults (65 and older) admitted to two acute cardiac care units at an academic medical center in Houston in 2019. Physical impairment was defined as documented need for personal assistance with ambulation prior to admission. A trained research assistant reviewed medical records to identify those who developed delirium and documented reason for admission, and discharge disposition. We compared the rate of delirium and non-home discharge between those with and without physical impairment through a chi-square test.

Results: Among the total 842 patients, 327 patients (38.8%) had physical impairment. The rate of delirium among those with physical impairment (23.2% vs. 4.5%, p<0.01), the rate of patients discharged non-home (35.5% vs. 9.9%, p<0.01), and in-hospital mortality (6.7% vs. 2.1%, p<0.01) were significantly higher compared to those without physical impairment.

Conclusion: Physical impairment on admission was significantly associated with higher delirium, in-hospital mortality and non-home discharge among older adults admitted to acute cardiac care units.



Sankey flow diagram of older adults admitted to the acute cardiac care units with or without physical impairment, reason for admission, development of delirium and disposition

A149

The use of a passive exoskeleton to support the performance of activities for older adults: possibilities for the future.

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Background: Many seniors experience a decline in their physical abilities as they age. This can result in difficulty to perform activities that are important to them. The emergence of technologies now allows us to consider new avenues to support the participation of seniors in their activities, despite the presence of pain or physical limitations. Among others, passive exoskeletons has been studied with an adult population and showed good results for the realization of work tasks with less energy and less physical effort. However, very few studies have been conducted on the impact of the use of a passive exoskeleton for an older population. In this context, a research project was conducted to observe the impact of the use of a passive exoskeleton with an aging population (65 and older). More specifically, the project aimed to identify the effects of wearing a passive exoskeleton on movement, the performance of daily tasks, the performance of leisure activities, productive activities and the impact on lumbar muscle activation. Methods: The project employed a mixed (quantitative and qualitative) and multimodal methodology with different data collection tools (in laboratory and following a two-month trial at home). The participants (n=18) had a variety of functional profiles, including people with disabilities resulting from a health condition. Results: The analysis of the data showed that the exoskeleton had a favourable impact on the reduction of lumbar effort when performing a trunk flexion task. In addition, participants found a positive impact on the performance of domestic tasks considered physically demanding (e.g., yard maintenance), but also highlighted several aspects of the exoskeleton that do not fit the needs and characteristics of older adults. Conclusions: The use of a passive exoskeleton appears to us as a promising avenue for a senior population, particularly for aging workers, or for seniors who wish to continue to perform tasks considered more physically demanding. Considering that exosuelettes were not created specifically for seniors, we believe that the next step is to set up a research and development project in order to involve seniors in the design phases of this type of technological aid.

A150

Beers Criteria Prescribing Patterns Among Hospitalized Patients at a Tertiary Academic Hospital

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Background:

The Beers criteria are the most widely cited resource used to identify potentially inappropriate medication prescribing in the geriatric population. Administration of these medications has been associated with high rates of adverse drug events in older adults. The purpose of this study is to assess if prescribing trends reveal lower use of these medications in hospitalized patients >65 years of age given these risks.

Methods:

This is a retrospective cross-sectional study from a tertiary care, academic hospital in Charleston, SC. Hospital admissions from August 1, 2018 to February 1, 2020 were divided by age into two groups, 18-64 and >65 years of age. Potentially inappropriate medications were defined according to the American Geriatrics Society (AGS) 2019 Beers Criteria. Chi square analyses were used to compare the administration of 0, 1, 2, 3 or 4+ Beers List medications among these patient populations.

Results:

34,083 admissions were included in the study. 60.4% (n=20,598) were age 18-64, and 39.6% (n=13,485) were age 65 or older. 91.2% of patients 18-64 years old received a Beers Criteria medication, and 88.3% of patients older than 65 years received a Beers Criteria medication. Further analysis of the percentage of patients aged 18-64 who received 0, 1, 2, 3 and 4+ were 8.8%, 13.0%, 14.8%, 13.7%, and 49.74%, respectively. The percentage of patients older than 65 years who received 0, 1, 2, 3, and 4+ were 11.7%, 18.3%, 17.4%, 13.7%, and 38.9%, respectively.

Conclusions:

Most hospitalized older adults received at least one potentially inappropriate medication. There was only a modest difference in the percentage of adults 18-64 and >65 years of age who received one or more of these medications. These results suggest that there is opportunity for more discretion when prescribing these medications to hospitalized older adults. Further analysis focused on falls, delirium, length of stay, and discharge disposition may underscore the impact of these potentially inappropriate prescribing practices in the geriatric population.

A151

Risk of Urinary Tract Infections with Sodium Glucose Co-Transporter-2 Inhibitors in Geriatric Patients

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Guidelines have incorporated the use of Sodium-glucose co-transporter-2 inhibitors (SGLT2i) in heart failure patients particulty with a history of diabetes due to significant benefits in mortality and outcomes. Concerns have been raised for complications in geriatric patients. Studies support the efficacy and safety in this population. We evalauted patients in our instituition on the outcomes of empagliflozin use on diabetic patients with heart failure and outcomes of development of urinary tract infections (UTI).

We retrospectively evaluated patients from 01/01/2020 to 01/01/2022, included those aged 65 or older and started on empagliflozin with a history of heart failure and type 2 diabetes. Medication compliance for at least a 12 month period was confirmed with dispensation of prescriptions from the VA pharmacy. We evaluated primary outcomes of hospitalizations, frequency of UTI, frequency of sepsis with urinary tract infections and all cause mortality.

We obtained 71 patients who met criteria, with a median age of 72.83 years. These patients were found to be 100% male, and self-identified racial profile as White 80.3%, Black 8.5%, Asian 2.8%, American Indian 1.4%. Additionally, 7.0% individuals did not have racial profile data available or declined. The median empagliflozin use was 575.45 days, ranging 360 to 870 days. We found 8.4% of patients developed a UTI, both inpatient and outpatient. Within the patients that developed UTIs, incidence ranged 1 to 5 episodes in individuals. We found 23.9% of patients had a hospitalization during the study period, however only 2.8% had a primary diagnosis of urinary tract infection, and none developed sepsis. There was a 2.8% all-cause mortality over the study period.

This real world data provides us with clear safety measures for the use of SGLT2i in the geriatric population. Our study standardizes the socioeconomic level of our patient population as veterans are given access to this medication when formulary, regardless of their socioeconomic status. SGLT2i has shown cardiovascular and mortality benefits for heart failure patients, and our paper highlights the potential side effects for UTI development should not be a reason to withhold this medication in our geriatric population. Further investigations including females in the study population will help navigate guidelines for high risk groups.

A152

Impact of training in geriatric prescribing on hospitalists' confidence and prescribing practices

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Background: Hospitalized older adults in a geriatric trauma unit have an increased risk of adverse drug events with high-risk medications like benzodiazepines. Appropriate prescribing skills is essential to providing Age Friendly Care for geriatric patients. Hospitalists received training on appropriate prescribing, then confidence level in performing medication-related geriatric skills and prescriber practices (benzodiazepine orders) were assessed for impact.

Methods: Educational intervention for hospitalists in a level 1 trauma academic center was part of a Hospitalist Geriatric Certificate which utilized a flipped classroom. Hospitalists completed pre-work activities, attended 1 hour skill-based session on appropriate prescribing in older adults. Pre- and Post-intervention, participants rated their confidence in performing 3 geriatric skills (0=not confident at all, 100=extremely confident): 1) Identify potentially inappropriate medications, 2) Reduce polypharmacy, 3) Reduce use of high risk/low benefit drugs. We analyzed pre-post responses from 26 hospitalists using paired *t*-tests.

We then assessed prescriber practices using EMR data to compare frequency of hospitalists' benzodiazepine orders for older adults on a geriatric trauma unit during two, 3-month intervals before and after intervention using descriptive statistics.

Results:

Mean confidence level (%) across all 3 skills increased by 16% [Pre 70% (SD=20) vs. Post 86% (SD=11), $p<.001$.

Percentage of benzodiazepines orders for older adults admitted to the geriatric trauma unit decreased post-intervention. (Pre 18.6% vs. Post 11.9%), a 6.7 point % decrease in rate of benzodiazepine orders.

Conclusion: Our results show that a targeted educational session increased confidence in prescribing skills and reduced benzodiazepine prescriptions in hospitalized older adults.

A153

Do Veterans infected with SARS-CoV-2 and with atrial fibrillation have lower mortality when taking metoprolol or diltiazem?

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Background:

Nursing home residents accounted for over 30% of COronoVIrusDisease-19 (COVID-19)-related mortality in the early months of the pandemic in the US. Our preliminary work found less mortality in residents taking beta blockers. To extend this observation, we hypothesized that SARS-CoV-2 infected residents with atrial fibrillation using metoprolol or diltiazem have lower mortality than those taking neither of these medications.

Methods:

We retrospectively compared Veterans with atrial fibrillation living in VA Community Living Centers (CLCs), VA-operated nursing homes, with confirmed SARS-CoV-2 between December 13, 2020 to December 13, 2021 who did and did not use metoprolol and/or diltiazem (M/D). We divided residents by whether or not they received at least 10 doses of M/D during the 14-day period (7 days prior to and 7 days after) around the test confirming infection. We compared baseline characteristics of age, gender, race, vaccination status and comorbidities recorded in the VA's Computerized Patient Record System (CPRS) by smd. Primary outcome was severe COVID-19 (hospitalization, death and selected ICD 10 codes J80, J96, R65, R65.2, A41, M35.81, I26) recorded within the 30 days of SARS-CoV-2 diagnosis in CPRS. A Poisson Generalized Linear model was used to determine relative risk and the confidence intervals.

Results:

Of 381 subjects, average age of 77.3 ± 9.8 and 99% male, 40% (n=153) had severe COVID-19 infection, 41% (n=54) vs 40% (n=99) of these were taking M/D vs no M/D, respectively (RMD 0.03). After adjustment for age, race, gender, hypertension, congestive heart failure and diabetes mellitus, groups with and without M/D did not differ in their COVID-19 outcomes(RR: 1.053 (0.751, 1.461)).

Conclusion:

Previous exposure to metoprolol or diltiazem did not appear to affect the COVID-19 severity in Veterans with atrial fibrillation and SARS-CoV-2 infection. Further studies are required to determine the factors including vaccination status that could potentially affect the influence of metoprolol-like medications on mortality in SARS-CoV-2 infected patients.

A154

Risk of venous thromboembolism after SARS-CoV-2 infection among residents of VA Nursing Homes

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Background:

The SARS-CoV2 infection causes immune dysregulation that leads to a hypercoagulable state. We aimed to investigate if this prothrombotic state may exist 6 months after confirmation of

SARS-CoV2 infection (SARS+) in the CLC resident population causing an increased risk of venous thromboembolism (VTE).

Methods:

This was a retrospective cohort study with SARS+ confirmed individuals between December 13, 2020 and June 13, 2022 and individuals without SARS infection (SARS-) during the same time period. We excluded SARS+ subjects receiving an anticoagulant for at least 90 days prior to testing positive and throughout the length of the study period. The primary outcome of this study was the occurrence of DVT or PE within 6 months from the day of the SARS+ confirmation. We used a Poisson generalized linear model including covariates for adjustment.

Results:

In total, there were 17,795 patients.12,66 in the SARS+ and 16,529 in the SARS -. 43(3%) developed DVT/PE in SARS+ and 369(2%) developed VTE in SARS - (RR: 1.52 [95% CI:1.09, 2.06]). After adjusting for age, gender, and race, the relative risk of VTE after COVID-19 was similarly significant (ARR: 1.53 [1.10, 2.08]).

Conclusion:

This finding demonstrates an association between residents experiencing DVT/PE and SARS+ up to six months after confirming SARS infection. We need to determine if this relationship should encourage consideration of anticoagulant use for up to 6 months after SARS-CoV-2 infection.

A155

Impact of Geriatric-Oncology Multidisciplinary Clinic on the Care of Older Cancer Patients

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Background:

Older adults' heterogeneity in functional status and disease burden undercuts assessment of their physiologic age, risking under or over-treatment of their cancer. At the multidisciplinary Geriatric-Oncology clinic (GOC), we perform frailty assessment with Comprehensive Geriatric Assessment (CGA) and determine chemotherapy toxicity risk using Cancer Aging Research Group (CARG) tool to better assess the fitness of the older cancer patient and guide treatment modifications for optimal cancer care.

Methods:

This observational study evaluates patients ≥ 60 years of age seen in GOC from January 2017 to May 2022. We collected data from the cancer registry and the medical record on demographic and clinical characteristics, comprehensive geriatric assessment (CGA), Charlson Comorbidity Index (CCI), ECOG Performance Status Scale, chemotherapy toxicity risk and fitness level (fit, vulnerable, or frail). We compared ECOG to CGA in determining fitness for cancer chemotherapy treatment.

Results:

Of 81 GOC patients, we excluded 15 patients due to inadequate data, leaving 66 with a mean age of 78.9 years, BMI 28.7 and 85% Caucasian for analysis. Breast (30.3%) and gynecological (25.8%) cancers dominated our group, and 33% were stage 4. The CGA assessed 35% as fit, 48% as vulnerable, and 17% as frail. ECOG classified only 20% of patients as having abnormal functional status. Meanwhile, the CGA assessed 56.6% of 'fit' patients by ECOG as vulnerable or frail (p<0.000). Chemotherapy toxicity risk was moderate in 64.2% and high in 30.2% of patients classified as 'fit' by ECOG (p=0.002). The GOC recommended a treatment downgrade in 36.5%. Most (81.8%) received first-line treatment and 53.1% completed treatment. Providers accepted 98.4% of GOC treatment change recommendations. Chemotherapy toxicity risk was moderate in 64.2% and high in 30.2% of patients classified 'fit' by ECOG, p-value =0.0015.

Conclusion:

GOC's CGA and chemotoxicity risk stratification identified greater vulnerability and risk for chemotherapy than the ECOG evaluation and changed recommended treatment in a third of the patients.

A156

Preliminary evaluation of the G8 screening tool in identifying frailty among older cancer patients: An cancer center's experience

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Background: A comprehensive geriatric assessment (CGA) is time and resource intensive. The G8 tool is a practical test for screening older cancer patients that may benefit from CGA. In this study, we preliminarily validated whether G8 is suitable for identifying impairments in their CGA in older patients undergoing treatment. We also investigated the differences in their performance measures between the G8-CGA concordant and G8-CGA nonconcordant group, defined by CGA.

Methods: Fifty new cancer patients ≥ 65 older, with G8 scores ≤14, were included in this study. They were referred to our Senior Adult Oncology Center (SAOC) @ Sidney Kimmel Cancer Center, Jefferson Health for a CGA to define whether the patient is Fit, Vulnerable or Frail[1]. The predictive value of the impaired G8 was determined by comparing the results with the CGA as a reference test. Patient characteristics, ECOG performance and CARG toxicity scores were compared between the concordant group (G8 impaired and CGA Vulnerable/Frail) and nonconcordant group (G8 impaired and CGA Fit).

Results: Average age was 75 y/o, 52% female, 69% White and 56% with solid tumors. 84% of patients referred with an abnormal G8 were considered Vulnerable or Frail by CGA (95% CI 71-93). In the concordant group, a significantly higher CARG score (12.3 vs. 7.4, $p < 0.000$) and worse ECOG score (ECOG 2-4, 38% vs. 0%, p=0.005) were observed. Although the concordant group had worse ECOG compared to nonconcordant, 62% in the concordant group had ECOG score 0-1.

Conclusion: Screening for frailty with subsequent referral for CGA is feasible in older cancer patients in our cancer center. Our study preliminarily suggests that screening for frailty by G8 correlates with frailty designation by CGA and higher CARG score. Since the majority of patients with an abnormal G8 had an ECOG score 0-1, ECOG may not as useful in predicting frailty status. CARG score might help to refine the identification of older patients with higher risks for frailty, which will ultimately maximize limited resources for conducting CGA and providing tailored support.

Balducci, L., & Extermann, M. (2000). Management of cancer in the older person: a practical approach. *The oncologist*, *5*(3), 224-237.

A157

Swallowing Treatment in Older Adults: Does it Work?

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BACKGROUND: Dysphagia (swallowing impairment) affects 1 in 25 adults in the US (Bhattacharyya, 2014) and up to 68% of adults in long term care setting (Steele et al., 1997). It leads to health complications, mortality, increased caregiver burden and costs to the health care system. Dysphagia management is targeted to accelerate rehabilitation of swallowing function and reduce the associated risks and burden.

METHOD: We conducted a multi-site nationwide retrospective study of patients with oral, pharyngeal, and oropharyngeal dysphagia,

whose functional swallowing status was submitted in the American Speech Language Hearing Association (ASHA) National Outcome Measures (NOMS) data registry. NOMS utilizes a disorder specific rating scale called functional communication measures (FCMs) to examine the amount of change in swallowing abilities after dysphagia intervention provided by a speech-language pathologist (SLP). All participants were adults, 65+ years in age, who received services in acute care, inpatient rehabilitation hospitals, outpatient rehabilitation centers and skilled nursing facilities. Functional outcomes that were examined included (i) change in functional swallowing status, (ii) reduced supervision for swallow safety, (iii) length of stay in SLP treatment for patients with >75% of calorie intake through non-oral means at admission, and (iv) duration of SLP treatment to effect change from primarily non-oral to oral means of nutrition.

RESULTS: Data analysis indicated that all patients demonstrated statistically significant improvement in swallow function subsequent to SLP intervention for dysphagia as demonstrated by improved FCMs in all treatment settings ($p<0.05$). The average change in functionality on swallow FCMs improved by 17.9% in acute care and inpatient rehabilitation, 8.1% in outpatient rehabilitation and 10.2% in SNF. An average of 44.9% patients required less supervision/assistance at mealtime at discharge. SLP treatment time to advance these patients from non-oral to oral means of hydration/nutrition varied from 1.9 hours in acute care to 15.4 hours in skilled nursing facilities with an average of 10.7 hours across all settings. The length of stay in SLP treatment varied from 10.19 days in acute care to 70.02 days in outpatient rehabilitation with an average of 35.5 days across all four settings.

CONCLUSION: Overall improvement in swallow function and decreased caregiver burden resulted as an outcome of dysphagia therapy performed by SLPs.

A158

Lift Assist and Fall Activations of Emergency Medical Services by Adults Aged 65 and Older

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Background: Falls are a major challenge to public health, particularly among older adults. Early identification of those at risk for falls and subsequent intervention could prevent falls and related injuries. This study evaluated risk factors for lift assist or fall activations of emergency medical services and transport to further care for adults age ≥65 over 9.5 years.

Methods: A retrospective review of a patient care report system at a single fire-based emergency medical service agency in a suburban Midwest city. Type of call (lift assist/fall), time of injury (time, day, and month), and demographics (sex, age) were collected for residents age ≥65 who activated 9-1-1 for a lift assist or fall.

Results: 1169 calls met inclusion criteria. More males requested lift assists than females (256 vs. 238) and more females called for falls than males (408 vs. 267, Pearson Chi-Square=17.360 df=1 p-value=<.001 with a small effect size Cramer's V=.122). Falls were more likely to be transported to the hospital than lift assists (78% vs. 7%). Females were at an increased risk for transport to the hospital (Pearson Chi-Square=12.187 df=1 p-value=<.001 with a small effect size Cramer's V=.102). Mornings and afternoons were the time of day associated with increased falls (Pearson Chi-Square=14.707 df=3 p-value=.002 with a small effect size Cramer's V=.112) while day of the week and month were not associated with falls or lift assists.

Conclusions: This study found female sex and fall calls have a relationship with transportation to the hospital, whereas male sex, lift assists, and age did not have a relationship with transportation to the hospital. Falls were more likely to occur in the morning and afternoon than evening and night. and day of the week and month of call were independent of lift assists and falls.

A159 Encore Presentation

CHASE: A Novel Inpatient Rotation For Palliative Fellows Focusing On Hemotologic Malignancies

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Background:

Hematologic Malignancies are the fourth most diagnosed cancer worldwide, with 60% of patients older than 65 years. Palliative Medicine has evolved to play an integral role in cancer care. However, integration of palliative care for hematologic cancers remains suboptimal, with many elderly patients receiving intensive treatments in their last weeks of life. New palliative physicians are called to help close this gap in cancer care. To that end, we collaborated with oncologists to design a study to assess and improve clinical competencies for palliative fellows in patient care for hematologic cancers.

Methods:

From July 2021 to June 2022, four palliative fellows at North Shore University Hospital participated in a novel 2-week rotation focused on integrated palliative medicine for patients with hematologic malignancies. This rotation was named CHASE (Cellular therapies, Hematologic malignancies, And Stem cell transplant Experience). Fellows participated in a survey before and after the rotation to assess their knowledge, attitudes, and practice across 12 domains applicable to care of patients with hematologic malignancies. The rotation consisted of 4 parts: i) palliative consultation for stem cell transplant patients, cellular therapy patients, or leukemia patients; ii) self-directed learning from an 8-day curriculum using an inverted classroom model; iii) targeted chart reviews to reinforce reading; and iv) two capstone presentations highlighting a specific disease (e.g. APL) or treatment modality (e.g. CAR-T).

Results:

All four fellows completed the pre-rotation and post-rotation survey. There was a substantial increase across all domains of knowledge, attitudes, and practice. Survey components included questions on familiarity with diagnosis and prognosis, disease and treatment-related symptom burden, treatment indications and toxicities, and reported outcomes. Patients reported positive feedback from fellow interactions.

Conclusion:

As palliative medicine continues to integrate with care in hematologic malignancy, workforce development involving this population is paramount for trainees. The CHASE rotation for fellow physicians cultivates expertise in recognizing and managing complexities within this cohort. Broader adoption of innovative palliative rotations may foster greater access to palliative care for hematologic cancer patients and a deeper knowledge base for fellows.

A160

Frailty and Perioperative Mood Symptoms in Older Women Undergoing Prolapse Surgery

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Background: Frail patients are more likely to exhibit symptoms of emotional distress such as anxiety and depression, compared to age-matched, non-frail counterparts. The relationship between frailty and mood symptoms before and after surgery has not been well-examined in the urogynecologic population.

Methods: This is a secondary analysis of a prospective study of postoperative cognitive dysfunction in women ≥60 years old undergoing pelvic organ prolapse surgery. We assessed anxiety and depression symptoms using the Beck Anxiety Index (BAI, score range 0-63) and the short-form Geriatric Depression Scale (GDS, score range 0-15) 2 weeks preoperatively and 2 weeks postoperatively. Frailty was measured using the Fried Frailty Index (FFI) prior to surgery.

Univariable and multivariable linear regression analyses were used to compare frailty status with pre- and postoperative BAI and GDS scores.

Results: The study cohort included 165 women with a mean ± standard deviation (SD) age of 72.5±6.1 years and body mass index of 28.0±4.4 kg/m^2. Most participants were White (93.3%, n=154), and 11.5% (n=19) met criteria for frailty. Thirty-nine women had a history of anxiety, and 26 had a history of depression. This did not differ by frailty status. Mean BAI scores were 6.4±6.3 preoperatively and 5.4±5.5 postoperatively. Mean GDS scores were 1.7±2.2 preoperatively and 2.0±2.2 postoperatively. Frail patients scored on average 2.05 points greater on GDS preoperatively and 2.01 points greater on GDS postoperatively, compared to non-frail patients, but there were no significant differences in BAI scores pre- or postoperatively between frail and non-frail patients. Change in GDS or BAI score after surgery did not differ significantly by frailty category.

Conclusions: Older, frail women undergoing elective prolapse surgery are more likely to have depressive symptoms pre- and postoperatively. This finding emphasizes the importance of assessing for mood symptoms perioperatively in this patient population.

Association between Pre- and Postoperative Anxiety and Depression Scores and Frailty Status

	Preoperative BAI score	Postoperative BAI score	Preoperative GDS score	Postoperative GDS score
Prefrail	2.26 [-0.19 – 4.71]	2.58 [0.23 – 4.93]*	0.55 [-0.27 – 1.36]	1.03 [0.14 – 1.92]*
Frail	5.52 [2.0 – 9.04]*	4.76 [1.47 – 8.05]*	2.81 [1.64 – 3.98]*	2.58 [1.33 – 3.82]*
Adjusted coefficients [95% confidence interval]†				
Prefrail	0.78 [-1.48 – 3.04]	1.82 [-0.48– 4.12]	0.27 [-0.58 – 1.11]	0.78 [-0.11 – 1.67]
Frail	2.22 [-1.38 – 5.81]	2.96 [-0.58 – 6.50]	2.05 [0.70 – 3.39]*	2.01 [0.64 – 3.39]*

BAI: Beck Anxiety Index; GDS (Geriatric Depression Scale); Pre-frail (score of 1-2 on Fried Frailty Index); Frail (score of 3 or greater on Fried Frailty Index).
Data presented as coefficient and 95% confidence interval in brackets.
*Significance defined as p <0.05, as compared to Not Frail (Fried Frailty Index score = 0)
†Variables included in multivariable linear regression analyses are age, history of smoking, use of medication for depression and/or anxiety, Pelvic Floor Distress Inventory (PFDI-20) score, Modified Mini Mental Status (MMMS) score, baseline Numerical Pain Rating Scale (NPRS) score, and laparoscopic surgical approach.

A161

Prevention and treatment of traumatic brain injury-related delirium: a systematic review

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Background: Delirium is an acute complication occurring in an estimated 46.3% to 69.4% of adults with traumatic brain injury (TBI). We conducted a systematic review of the effectiveness of interventions to prevent or treat TBI-related delirium.

Methods: We searched five electronic databases (MEDLINE, EMBASE, CENTRAL/CDSR, and PsycINFO) to identify randomized controlled trials (RCTs), quasi-experimental, and observational studies (with treatment and comparator groups). Studies had to include adults with TBI, measure delirium as an outcome and occur in the acute care setting. Risk of bias assessment was completed using Version 2 of the Cochrane risk-of-bias tool for randomized trials (RoB2) tool for RCTs and Risk Of Bias In Non-Randomized Studies - of Interventions (ROBINS-I) tool for observational studies. We implemented the PROGRESS-Plus framework to describe reporting of the social determinants of health. Our review protocol was registered with PROSPERO (CRD42022308013).

Results: We identified 20022 citations, reviewed 301 full texts, and included eight studies in the descriptive synthesis. Four studies reported significant between-group findings for TBI delirium prevention favouring the intervention condition. These studies evaluated TBI-related delirium pharmacologic prevention strategies: rosuvastatin was compared to placebo, dexmedetomidine was compared to propofol and haloperidol, and aripiprazole was compared to placebo. The other four studies evaluated two interventions for the treatment of TBI-related delirium that were not efficacious when compared to usual care: reorientation programs and an intervention bundle including non-pharmacologic and pharmacologic strategies. Included studies had low-quality evidence. Participants' social determinants of health, including ethnicity, social capital and time-dependent relationships, were poorly reported.

Conclusions: Three effective strategies were identified for preventing posttraumatic from four studies: dexmedetomidine, rosuvastatin and aripiprazole. These strategies were shown to have the largest effect sizes but are limited by their small sample size and low quality of evidence. Although limited evidence exists to support the reorientation program and the intervention bundle, they are low-risk interventions that may be readily implemented.

A162

Montefiore-Einstein Center for the Aging Brain (CAB): Polypharmacy and potentially inappropriate medications (PIM) in individuals with cognitive concerns.

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Background: Older adults with multimorbidity are at high risk for polypharmacy. Those with polypharmacy and cognitive impairment are at even higher risk for adverse events. Studies have identified polypharmacy as a potentially reversible cause in dementia. We implemented an Electronic Medical Record (EMR) template using current evidence and our clinical experience to help assess rates of polypharmacy and PIM. We hypothesize the template will help identify patients with cognitive impairment and polypharmacy.

Methods: The Montefiore-Einstein CAB provides a multidisciplinary approach with geriatrics, neuropsychology, and neurology evaluations for patients with cognitive complaints. A Comprehensive Geriatric Assessment (CGA) template was built in our EMR to help gather information from history and physical exam to assess cognitive state and identify polypharmacy (defined as ≥ 5 medications) and PIM (documented by the provider based on the clinical situation). Excel and SPSS 27 were used for data analysis with Chi-Square for significance of differences by cognitive state.

Results: Charts of 271 patients seen from January to June 2022 were reviewed. Demographics included average age 76 years; 74% female; 31% African American, 47% Hispanic, and 10% white. Cognitive diagnoses were Subjective Cognitive Complaints (SCC) in 15.5%; [ARE1] Mild Cognitive Impairment (MCI) in 31%; and Major Neurocognitive Disorder (MND) in 53.5%. Polypharmacy was identified in 67% and PIM in 41%. Most common medications were gabapentin 12%, over the counter agents 9%, anticholinergic agents 8.5%, diabetic medications 8%, benzodiazepines 4%, cardiac meds 4%, diuretic 2%, opioids 0.4%. Polypharmacy increased with worse cognitive state (60% in SCC, 67 % in MCI, 72% in MND) but this difference did not reach significance (p=0.3).

Conclusions: Polypharmacy and PIM were highly prevalent in individuals with cognitive concerns referred for specialist evaluation. Lack of statistical significance for differences by cognitive state may be due to small sample size and referral bias. The CAB template is a practical and useful tool in helping geriatricians assess for polypharmacy and identify PIM as secondary cause of cognitive decline.

A163

Baseline Shock Index and Postprandial Hypotension in Older Adults

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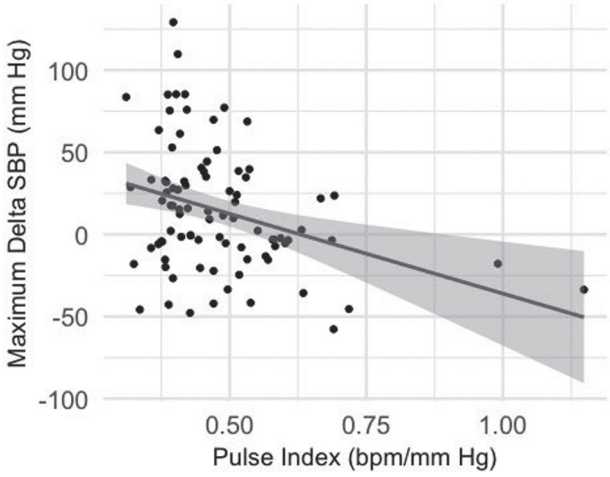
BACKGROUND: Postprandial hypotension (PPH) in older adults predicts an increased rate of syncope, fracture and mortality, and is rarely screened for clinically. Shock index (SI, heart

rate/systolic blood pressure) is a longstanding measure used in the emergency department to predict the risk of hypotension, even in the presence of normal vital signs. We examined the relationship between SI and the PPH response in older adults.

METHODS: 95 subjects (age >= 65; mean age 77.4±0.6 years, 52 women, 43 male) were recruited sequentially from 5 geriatric medicine clinics at an academic center. A 90 minute meal test as well as orthostatic vitals were performed. Blood pressure during the meal test was measured using a Finometer (Finapres Medical Systems).

RESULTS: Only SI (Standardized β = -0.236±0.094; p=0.014) and age (Standardized β = 0.143±0.092; p=0.127) showed significant correlations with the maximal decrease in systolic blood pressure during a meal test. Subjects that met criteria for PPH (n=14) showed significantly higher SI than subjects without PPH (independent samples t-Test, 0.55±0.06 vs. 0.47±0.01, p=0.032). There was no difference in SI between subjects with and without orthostatic hypotension.

CONCLUSIONS: SI is associated with both an increased PPH response and is higher in PPH subjects, suggesting SI might act as a good initial screening test for this condition. SI showed no association with the orthostatic response.



The maximum change in systolic blood pressure (SBP, mm Hg) versus pulse index (PI, bpm/mm Hg) during a 90 minute meal test.

A164

Antimicrobial Management of Community Acquired Pneumonia in Hospitalized Patients with Dementia

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Background: Community acquired pneumonia (CAP) is a common diagnosis among hospitalized older adults (OAs) with dementia. The objective of our study was to describe antimicrobial prescribing practices for CAP in hospitalized OAs with and without dementia.

Methods: This retrospective chart review utilized an existing data set of all OAs (65+) with dementia, in addition to a randomly selected sample of OA without dementia admitted to a large integrated health system in the Northeast in 2017. For this study, data was refined to include only OAs with a primary/secondary diagnosis of CAP. A total of 77 randomly selected charts were reviewed (dementia n=37 and n=40 without dementia). Data variables were: patient characteristics, pneumonia severity (based on the American Thoracic Society/ Infectious Diseases Society of America, ATS/IDSA, guidelines), and antimicrobial management.

Results: Of 77 charts reviewed, the average age was 82.0, 51.9% (n=40) were male, 45.5% (n=35) were white and 10.4% (n=8) were Hispanic; 79.2% (n=61) presented from home, and 23.4% (n=18) were independent. Compared to OAs without dementia (n=40), OAs with dementia (n=37) were more likely to come from a facility (27% vs. 15%). OAs with dementia were more likely to have a documented diagnosis of dysphagia (75.7% vs. 15%) and meet ATS/IDSA CAP definitions of severe pneumonia on admission (24.3% vs 12.5%). Risk factors for resistant organisms (i.e., methicillin resistant staphylococcus aureus or pseudomonas), were less common in patients with dementia (24.3% vs. 30%). The average number of antibiotics was similar in both groups (average 2.9). Yet, OAs with dementia received more broad-spectrum antibiotics (64.9% vs. 47.5%) than those without dementia. Further, when excluding all OAs with ATS/IDSA defined severe pneumonia and/or risk factors for resistant organisms, OAs with dementia received more broad-spectrum antibiotics (50% vs. 24%) compared to OAs without dementia. Lastly, of OAs with dementia (n=20) without risk factors, those with dysphagia (n=9) received more broad spectrum coverage than those without dysphagia (n=11, 67% vs. 36%).

Conclusions: This study reveals differences in broad-spectrum antimicrobial prescribing patterns for CAP among OAs with and without dementia. Further studies need to evaluate the potential to improve antimicrobial stewardship in the management of CAP in hospitalized OAs with dementia.

A165

The identification and prediction of frailty based on Bayesian network analysis in a community-dwelling older population

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Background We have witnessed frailty, which characterized by a decline in physiological reserves, become a major public health issue in older adults. Understanding the influential factors associated with frailty may help prevent or if possible reverse frailty. The present study aimed to investigate factors associated with frailty status and frailty transition in a community-dwelling older population.

Methods A prospective cohort study on community-dwelling subjects aged≥60 years was conducted, which was registered beforehand. Participants who had completed two visits during 2020–2021 were included. Frailty status was evaluated using the Fried frailty phenotype. The least absolute shrinkage and selection operator (LASSO) regression was applied for variable selection. Bayesian network analysis with the max-min hill climbing (MMHC) algorithm was used to identify factors related to frailty status and frailty transition.

Results Of 1,981 subjects at baseline, 1,040 (52.5%) and 165 (8.33%) were classified as prefrailty and frailty. After one year, improved, stable, and worsening frailty status was observed in 460 (35.6%), 526 (40.7%), and 306 (23.7%) subjects, respectively. Based on the variables screened by LASSO regression, the Bayesian network structure suggested that age, nutritional status, instrumental activities of daily living (IADL), balance capacity, and social support were directly related to frailty status. The probability of developing frailty is 14.4% in an individual aged≥71 years, which increases to 20.2% and 53.2% if the individual has balance impairment alone, or combined with IADL disability and malnutrition. At a longitudinal level, ADL/IADL decline was a direct predictor of worsening in frailty state, which further increased the risk of hospitalization. Low HDL-C and DBP levels were related to malnutrition, and further had impacts on ADL/IADL decline, and ultimately led to the worsening of the frailty state. Knowing the status of any one or more of these factors can be used to infer the risk of frailty based on conditional probabilities.

Conclusion Older age, malnutrition, IADL disability, and balance impairment are important factors for identifying frailty. Malnutrition and ADL/IADL decline further predict worsening of the frailty state.

A166

Value-based Acute Care at Home: Sustainability, Savings, and Reduction in Emergency Department and Inpatient Service Utilization

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Background: Over the past five years, the Institute for Healthcare Improvement (IHI) and West Health have partnered to hone and refine the application of the Model for Improvement to support advancement of Value-Based and Home-based Acute Care. Together with our collaborators, IHI and West Health condensed the overall endeavor to three quantitative aims that provide the context for application of rapid cycles tests of change:

Aim 1: Reduce service utilization of emergency department (ED) and/or inpatient visits and/or associated costs by 10%.

Aim 2: Associated cost savings to the payor of at least 5% of the projected service utilization.

Aim 3: Objective evidence of financial sustainability, e.g., non-negative operating margin.

Aim 3 required organizations to create custom financial sustainability measures with their internal finance team. This provides justification to leadership to continue programing. By using process improvement strategies, teams are creating sustainable and iterative programs that provide quality care and cost savings.

Methods: Teams define a population of focus in their network. Once identified, teams used a secure data tool to submit monthly data that tracks progress to the three aims. Teams recorded weekly data (e.g., counts of averted ED visits and hospitalizations, program expenses, payer reimbursement, patient satisfaction). Custom financial sustainability and equity measures were reported quarterly. Teams engage in monthly coaching calls with IHI and West Health and in biannual learning sessions to support peer-to-peer learning and problem solving.

Preliminary Results

Aim 1: Reducing service utilization: As of 10/31/2022

300 averted ED visits

330 averted hospitalizations

Estimated Cost Savings

$4.1 million net savings(March 2022-August 2022)

Financial Sustainability:2/3 teams with positive trends toward goal.

Equity Goals(e.g., enroll certain percentage of MSSP/MA patients located in Health Equity Zones, exploration of medical records SDOH and risk levels, utilizing Medicare data to better understand patient demographics in service area, improving race/ethnicity data collection methods).

Conclusion: The participating healthcare organizations provide innovative home care programs that reduce utilization of ED visits, inpatient stays, and associated costs. Having aligned incentives demonstrates that care redesign is possible and have the potential to yield better health outcomes for patients.

A167

Point-of-Care Ultrasound in Geriatrics Clinics: a National Survey of VA Medical Centers

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Background

Point-of-care ultrasound (POCUS) has been proposed as a tool to aid geriatricians in caring for complex, older patients. Limited literature exists on training and POCUS use by geriatricians. We conducted a national survey to assess current POCUS use, training desired, and barriers among Geriatrics and Extended Care ("geriatric") clinics at Veterans Affairs Medical Centers (VAMCs).

Methods

A prospective observational study of all VAMCs between August 2019 and March 2020 was conducted using a web-based survey sent to all VAMC chiefs of staff and chiefs of geriatric clinics.

Results

All chiefs of staff (n=130) completed the survey (100% response rate), and 52 of 76 chiefs completed the survey (68% response rate). Geriatric clinics were located throughout the United States, mostly at high complexity, urban VAMCs. Only 15% of chiefs responded that there was some POCUS usage in their geriatric clinic. More than 60% of chiefs would support implementation of POCUS use in their geriatric clinic. The most common POCUS application used in geriatric clinics was evaluation of the bladder and urinary obstruction. Barriers to POCUS use included a lack of trained providers (56%), ultrasound equipment (50%), and funding for training (35%).

Conclusion

Currently, only 15% of geriatric clinics at VAMCs use POCUS, and a majority of geriatric chiefs would support implementing POCUS use as a diagnostic tool. Top barriers included lack of trained providers and equipment. Future studies shall investigate the utility of specific POCUS applications in geriatrics and approaches to overcome known barriers to POCUS use.

A168

***"This place can beat you up"*: Perspectives on victimization among unsheltered homeless people and street medicine clinicians**

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Background: Previous research and current statistics on homelessness describe a growing population that is aging and at increased risk for violent victimization. Previous quantitative studies show that persistent homelessness is associated with greater odds of victimization among older adults, yet a dearth of qualitative research has explored this troubling phenomenon. Additionally, no prior study has included perspectives of street-based clinicians. The purpose of this study was to elicit perspectives on victimization of unsheltered homeless individuals and street medicine clinicians who care for them.

Methods: Qualitative individual interviews with street medicine clinicians (video conferencing) and individuals (in-person) who identified as experiencing unsheltered homelessness and receiving street medicine. Interviews were guided by a research protocol developed by the team, audio recorded, and transcribed verbatim. Field notes were also obtained during patient interviews to compensate for environmental noise and patient preference. Transcripts and field notes were independently analyzed by two researchers following a thematic analysis approach.

Results: Eight street medicine clinicians and eight patients were interviewed (n=16). Clinicians were interdisciplinary, commonly white (50%), females (50%), aged 41 years (average). On average, patients were 56 years old, male (63%), and diagnosed with 3+ health conditions (100%). Analysis revealed two prominent categories of themes related to victimization and Adult Protective Services (APS). The victimization category included characteristics that make someone susceptible, types of victimization, environmental factors, and coping mechanisms. The APS category included nuances of making a report, clinician expectations, and challenges.

Conclusions: Victimization of homeless older adults is a known issue that significantly impacts dignity and wellbeing. Understanding the perspective of unsheltered homeless individuals and clinicians who deliver street-based care and services to these individuals can inform the development of new programs and interventions specifically designed to better support people at greatest risk. Abuse and victimization of unsheltered homeless older adults holds person-, healthcare-, and payer-level implications and deserves further attention.

A169

An Incremental Journey: Tracking Resident Outcomes Using a 4Ms Framework in Affordable Housing

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In 2019, NJGWEP embarked on a journey in partnership with the NJ Housing and Mortgage Finance Agency (HMFA) and 4 affordable housing (AH) sites in underserved, disadvantaged communities to implement a Resident Health Risk Assessment (RHRA) incorporating the elements of the 4Ms framework (Mind, Medication, Mobility, What Matters). The goal was to support the concept of aging in place by assessing residents' health and biopsychosocial needs and provide information not otherwise available to building staff that would enable them to link residents to needed services and supports and improve access to care. NJGWEP engaged its academic partners, Rutgers School of Nursing-Camden and Stockton University, to promote interprofessional education (IPE) and team-based learning among health professions students from nursing, PT, OT, SW, behavioral counseling and health sciences. The 4Ms provided a framework for developing person-centered care plans based on problems identified and recommended action plans. In fall 2022, AH sites were provided with a customized electronic database that flagged resident risk factors, captured multi-complexity (the Geriatric 5th M), and facilitated the tracking of interventions, outcomes, and impact. Over 3 semesters (2021-2022), IP teams of students, paired with social service and community health workers, completed 75 RHRAs. Preliminary data showed on average residents had more than 3 risk factors related to the 4Ms (M=3.31); 25% +screen for depression, 25% +screen for cognitive impairment, 64% w/mobility deficits, 83% w/polypharmacy, and 80% on at least 1 high-risk med. Based on the presence of chronic conditions (i.e., 53% w/diabetes, 65% w/hypertension) and other biopsychosocial factors related to social determinants of health, 91% could be characterized as complex and in need of services and supports to allow them to age in place. An interprofessional approach to resident health risk assessment in affordable housing, in addition to the implementation of a customized database, has served as a valuable starting point for collecting baseline information on health risks, with the potential to improve access to care, overall function, and quality of life in residents in community-based settings.

A170

Gender differences of older adults psychosocial needs in home-care services

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Background: In Quebec, Canada, the psychosocial needs of older adults receiving home care services represent the third most often identified need after difficulties in carrying out their activities of daily living and their health problems. In addition, there is growing recognition of gender differences in older adults' psychosocial characteristics and social functioning. Purpose: To identify gender differences in needs and the shared decision-making process.

Methods: This cross-sectional design entailed an 18-month observation period. Comprehensive clinical data for 6370 users with geriatric profiles between August 2016 and December 2018 were extracted from electronic health records. The comprehensive geriatric assessment covers 16 major dimensions and a specific module to support a structured decision-making process. Univariate descriptive statistics were provided to describe needs, the chi-square test was used to evaluate the relationship between two categorical variables, and Anova to test the equality of means.

Results: People are, on average, 84 years old, most of the sample were females (65%), and 46% lived alone. Overall, men have, on average more problems assessed than women(10.4 versus 9.6). Men have significantly more difficulty fulfilling their social roles and receiving help from formal and informal networks than women, while women are more unable to occupy their free time and experience more housing problems. In addition, the emotional state of women is a more frequent problem than men's.

At the time of discussion with their caregiver and the professional, men prioritize a few more problems to solve, and more problems are integrated into the intervention plan.

Conclusions: The results show differences between the needs of men and women. For practice, the results suggest avenues for more targeted interventions or for acting early on specific psychosocial dimensions. For research, it may be interesting to understand if there are also gender differences in how they perceive their needs and defend them.

A171

The Power of Supporting the Caregivers: An Outcome Analysis of the COACH Program at Phoenix-VA

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Background:

Since 2021, the Phoenix VA Medical Center (PVAMC) has put forth the Caring for Older Adults and Caregivers at Home (COACH) program to improve the veterans' and caregivers' quality of life, reduce safety hazards, reduce caregiver burden, and delay nursing home placement. We now present the program's efficacy in lowering dementia-related hospitalizations and the length of stay (LOS).

Methods:

This is a retrospective study where we examined all PVAMC patients with a diagnosis of dementia being admitted since the inception of this program. We then filtered by the chief complaints to determine if the admission was for a dementia-related cause that the COACH program could address. The list of chief complaints includes dementia, failure to thrive, unable to be cared for, and altered mentation not due to another etiology. The study compared the COACH group against similar patients who were not enrolled in COACH. We then used descriptive statistics to analyze the percentage of dementia-related hospitalizations and the average LOS between the study and control groups.

Results:

Since 2021, 153 veterans with a diagnosis of dementia have been enrolled in the COACH program and had 35 hospital admissions. Among these, 3 were considered dementia-related (8.57%). The average LOS was 10.61 days. In comparison, there were 2807 patients with a diagnosis of dementia seen in PVAMC who were not enrolled in the COACH program. Among them, there were 803 total hospitalizations, with 185 considered dementia related (23.04%). The average LOS was 19.29 days. The significant reduction in dementia-related hospitalization and LOS was attributed to the caregivers having better access to caregiver resources and education. As COACH does not address the veterans' medical care, such as fall and aspiration prevention, we did not consider the reduction in all-cause hospitalization to be a direct result of the COACH program.

Conclusions:

In conclusion, caregiver support programs such as COACH prove to be an effective tool in reducing dementia-related hospitalizations as well as shortening the resulting length of stay. We believe that our experience with our pilot program in Phoenix could shed light on the future development of similar programs in the community.

A172

Meeting the needs of older adults in home-care support services: Person-centered care issues.

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Background: In Quebec, Canada, person-centered care (PCC) is increasingly emphasized in home-care support services (HCSSs). PCC refers to the active engagement of users in shared decision-making about their care. Purpose: To determine the prevalence and concordance of user care needs, preferences, and goals, and to describe their involvement in the goal-setting process.

Methods: This cross-sectional design entailed an 18-month observation period. Comprehensive clinical data for 6370 users with geriatric profiles followed in three HCSSs between August 2016 and December 2018 were extracted from electronic health records. It comprised comprehensive geriatric assessment covering 16 major dimensions and a specific module with a summary to support a structured decision-making process. Univariate descriptive statistics were provided to describe needs, preferences, and care goals.

Results: On average, user mean age was 84 years, 65% were women, and 46 % lived alone. Level of disability was low for 14% of them, while 51 % had a moderate level, and 35 % a high level. On average, of the 16 dimensions assessed, 10 needs were identified, including three preferred by the user. The needs with higher preferences were related to activities of daily living (ADLs) (20%), physical health (15%), psychosocial situation (11%), instrumental activities of daily living (IADLs) (9%), and lifestyle habits (8 %). Users were involved in 68% of care goals, but only 28% were shared decisions between them, caregivers, and professionals. On average, two care goals were retained, but only one was related to preferred needs. The most common care goals were in the same preferred dimensions, but only 13% to 30% of each of them was selected as goals. In contrast, some less prevalent needs at assessment (<2%) were chosen as goals more frequently (economic conditions [28%] and special care [38%]).

Conclusions: There appears to be a continuing mismatch between needs, preferences, and care goals. It may be assumed that care plans were sometimes developed based on the availability of resources instead of user preferences despite the latter being a prerequisite for creating an optimal offer of health care and social services for the elderly and their caregivers.

A173

Concept mapping brainstorming results for improving care transitions for adults with hip fracture in Ontario, Canada

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Background: Older adults who experience hip fractures often undergo numerous transitions in care between providers and sectors. These transitions are a time of vulnerability with the potential for poor health outcomes and experiences, yet there are limited recommendations on how to improve this care journey for adults with hip fracture. The aim of this mixed-methods study was to create a list of actionable recommendations to improve care transitions for adults with hip fracture from the perspectives of patients, caregivers, providers, and decision-makers.

Methods: We used a mixed methods concept mapping approach to gather perspectives from key stakeholders in Ontario, Canada. Here, we report on the results of the first phase of the concept mapping study. Participants created a list of statements that they felt would improve care transitions for adults who experience hip fracture. The statements were analyzed inductively and grouped thematically.

Results: Thirty-two individuals participated in the brainstorming phase of this study (2 patients, 5 caregivers, 21 providers, 4 decision-makers). 887 participant statements were condensed into 72 final statements. We identified 7 themes across 4 domains for care transition improvement: 1) patient-related domain (self-management and supports; rehabilitation therapy and activities), 2) provider-related (healthcare provider skills; communication and trust), 3) system-related (continuity of care; health system efficiencies), and 4) care processes (transition planning and follow up care).

Conclusion: Our results highlight the importance of meaningful patient and caregiver engagement, with active involvement in all aspects of care including transition processes. Many statements included policies, assessments, and care specific to individuals with hip fracture and cognitive impairment, emphasizing this as an important area for consideration. There was agreement among stakeholders that there is an important role for patients and caregivers in guiding care and the transition process. They emphasize the importance of creating policies, assessments, and care for those also experiencing cognitive impairment.

A174

A dyadic study of advance care planning readiness among Black older adults with serious illness and their surrogates

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Background: Advance care planning (ACP) is a process that supports adults and surrogates in sharing personal values and preferences for medical care. Black older adults have lower ACP engagement, but the mechanisms behind this are understudied. The purpose of this study is to examine readiness to engage in ACP as well as barriers and facilitators of engagement among seriously ill Black older adults and their surrogates.

Methods: This is an ongoing mixed methods study of older adults and surrogates. We developed a dyadic survey focusing on personal values, readiness for ACP, and barriers and facilitators to engagement. Survey questions were adapted from existing tools and surveys. Black adults aged 60 and older and their identified surrogates were enrolled from the heart failure and geriatric clinics at our large academic hospital. Primary outcomes were readiness, barriers, and facilitators of ACP engagement. Other variables included demographics, health status, relationship quality, loneliness, religion/spirituality, and what matters most. Interviews will be completed with a subset of survey respondents.

Results: Twenty-five older adults and ten surrogates have completed surveys to-date. Older adults felt fairly or extremely confident that they could talk to their surrogate (86%) or doctor (81%) about the care they would want if they were sick or near the end of life, but fewer were actually ready to talk to their surrogate (64%) or doctor (50%). The most common barrier to engaging in ACP was feeling they were not sick enough (43%) or that family or friends don't think they are sick enough (38%). Responding to the multiple-check question, "What is most important in your life? What brings your life meaning or joy?" the most frequent response (86%) among older adults was "not being a burden on your family."

Conclusions: The gap between confidence and readiness to discuss ACP may relate to illness perception and will be further explored through follow-up interviews. A primary concern is becoming a burden on family. Interventions that support communication between older adults and surrogates may improve future ACP.

A175

Use of Chronic Care Management service among Medicare Beneficiaries in 2015-2019

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Background: The Centers for Medicare & Medicaid Services (CMS) introduced Chronic Care Management (CCM) services in 2015 to enhance care coordination for patients with multiple chronic conditions. Few studies examined the geographic variation of CCM service use and the demographic and clinical characteristics.

Methods: This retrospective study used a representative 5% sample of Medicare beneficiaries aged 65 years or older and enrolled at least 1 month in Part B between January 1, 2015, and December 31, 2019. 7,255,717 beneficiaries were included. We determined eligible patients for CCM service as those who had 2 or more chronic conditions. We calculated the number of CCM claims per 1,000 eligible patients by calendar year and census divisions using Current Procedural Technology codes 99490, 99491, and 99487 and examined the demographic and clinical characteristics of the CCM claims.

Results: There were a total of 654,734 CCM claims. The number of CCM claims increased by more than 4 times from 2015 to 2019 (36.3 to 168.7 claims/1,000 eligible patients). The number of patients with 1 or more CCM claims among eligible patients increased from 12,043 (1.1%) in 2015 to 39,837 (3.5%) in 2019. The number of providers who furnished 5 or more CCM claims increased from 1,664 (48.1%) in 2015 to 6,877 (62.2%) in 2019. The mean age of CCM claims was 77.4 ± 7.8 years old, 60.6% were female, 76.9% were white, and 20.9% were dual eligible for Medicare and Medicaid. East South Central (49.3 claims/1,000 eligible patients in 2015; 221.8 claims/1,000 eligible patients in 2019) had the highest use, and West North Central (18.4 claims/1,000 eligible patients in 2015; 66.2 claims/1,000 eligible patients in 2019) had the lowest use of CCM service. Over the 5 years, the proportion of chronic conditions diagnosis among CCM claims was comparable, with hypertension for 624,888 (95.4%), diabetes for 371,140 (56.7%), heart failure for 276,529 (42.2%), Alzheimer's disease for 70,110 (10.7%), and HIV/AIDS for 1,614 (0.2%). Internal medicine practitioners delivered the most CCM claims (43.1%), followed by family practice, cardiologists, and nurse practitioners. Most claims were provided at the office (n=588,396, 89.9%) and home (n=29,324, 4.5%).

Conclusion: This study found disparities in CCM service use by demographic, geographic, and clinical characteristics. To increase CCM service uptake, underlying demographic, geographic, and clinical characteristics may be considered.

A176

Associations with recurrent emergency department visits among people with dementia: a population-based retrospective cohort study

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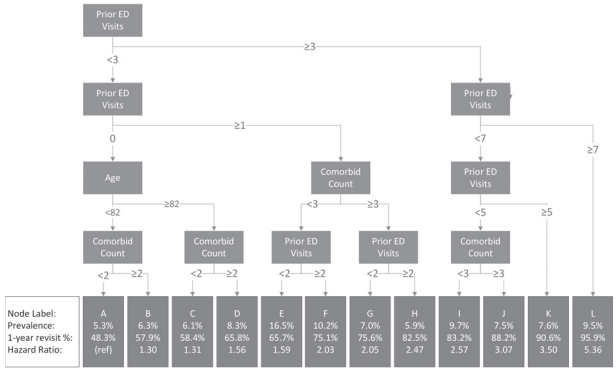
Background: People with dementia frequently revisit the emergency department (ED) for heterogenous reasons. The objective of this study was to examine associations with recurrent ED visits in older adults with dementia.

Methods: We conducted a population-based retrospective cohort study of older adults with dementia using administrative health data from Ontario, Canada. Our cohort consisted of older adults (65+) with dementia who visited the ED and were discharged home. Our primary outcome was recurrent ED visits within 1 year of ED discharge. We examined the association between demographic, clinical, and health service use characteristics and recurrent ED visits using Prentice-Williams-Peterson cox regression. We fit a conditional inference survival tree to identify the most important risk factors and describe subpopulations of varying risk.

Results – Our cohort included 175,863 older adults with dementia and 260,345 ED visits. In the cox regression, the only strong predictor of recurrent ED visits was ED visits in the previous year (1vs.0 HR: 1.23 (1.21,1.24); 2vs.0 HR: 1.46 (1.44,1.48) 3vs.0 HR: 1.92 (1.90,1.95)). The conditional inference tree subdivided the population on previous ED visits, count of comorbidities, and age. Estimated 1-year revisit rates ranged from 48% to 95% across 12 subgroups. Patients in the highest risk groups had substantially higher use of psychotropic medications.

Conclusion: Case-finding for ED revisit prevention programs should focus on prior ED use. Medication review in the ED should be considered for people with dementia.



Conditional inference survival tree of 1-year ED revisit risk

A177

The Strengthening a Palliative Approach in Long Term Care (SPA-LTC) Program: A Mixed Methods Evaluation

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Background: Despite the high mortality rates in LTC, most LTC homes do not have a formalized palliative program. The objective of this proposed research was to implement and evaluate the Strengthening a Palliative Approach in Long Term Care (SPA-LTC; www.spaltc.ca) Program. Specifically, we explored its feasibility, acceptability, and preliminary effects (i.e., resident comfort, use of emergency department at end-of-life, and location of resident death).

Methods: This study used an explanatory mixed method design in four provinces in Canada (Ontario, Manitoba, Saskatchewan, Alberta), including a qualitative description component to assess the acceptability of the program from the perspective of residents, family members and staff. Also, a prospective one group, pre-post test design was used to examine the feasibility and preliminary effects of the SPA-LTC program.

Results: Of the 102 participating residents, 74.5% (76/102) had a palliative care conference during the 18-month data collection period, with 68.2% (30/44) having a one before they died. Rates of hospital use were reduced for participating residents in terms of emergency department use at end of life (RRR: 46%) and hospital deaths (RRR: 88%) compared to baseline. Family members stated the palliative care conferences were informative and felt that good communication was critical in providing quality care. They highlighted that close relationships and mutual respect among staff, residents, and families led to more meaningful care while the resident was alive as well as into bereavement.

Conclusions: The SPA-LTC program appears to feasible and supports a family-centered approach to care, which relies on strong communication. Future work needs to include a more rigorous evaluation that includes a control group.

A178

Health Literacy and Older Adult Longitudinal Ability to Select Skilled Nursing Facilities

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Background: Older adults are frequently asked to select post-acute skilled nursing facilities for care after a hospitalization. Research has shown that both health literacy and cognition can worsen with age. We sought to understand how health literacy impacts an older adult's ability to determine a high quality post-acute setting in their neighborhood.

Methods: Subjects in the longitudinal Literacy and Cognitive Functioning cohort study (LitCog; R01AG030611, recruited from an academic center and four federally qualified health centers) complete comprehensive cognitive, socio-behavioral, and functional assessments every 3 yrs [2008 timepoint 1 (T1)–ongoing (T4)]. As part of the surveys, subjects complete the validated Comprehensive Health Activities Scale (CHAS) that specifically assesses how subjects are able to select a quality nursing facility. The CHAS asks subjects to identify the nursing home that is 1.) closest to their home - based on a given map, 2.) best at preventing pressure sores, and 3.) better choice to stay in (e.g., higher quality). A percentage change score was determined between responses from T1 to T4. Multivariate regression analysis was completed.

Results: A total of 303 subjects [age, mean (SD) 62.6 yrs (5.4); female 81.9% (211), 30.2% black (91), limited literacy 38.3% (116)] completed the baseline and biannual surveys through 9 years. In the multivariate model, we adjusted for gender, race, health literacy, education, decline in cognition between timepoints, number of chronic conditions, and years between interviews. Older adults with limited health literacy and those with a high school degree or less experienced significant decline in their CHAS nursing home scores over time, dropping 7% and 11%, respectively, when adjusting for all other covariates in the model. ($p<0.001$)

Conclusion: Older adults who had limited health literacy and those with a high school degree or less experienced significant decline in their ability to recognize nearby skilled nursing facilities of high quality. Providers and advocates/loved ones should initiate conversations with older adults to plan ahead and identify post-acute options in the event that they are hospitalized.

A179

Alzheimer's Disease and Decision Making about Aging-in-Place Support: Cognitive, Functional, and Social Predictors.

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Background: Most older people with Alzheimer's disease (AD) will need additional support in their lifetime but little is known about how the decision to accept help is made. The goal of this research is to better understand how older adult aging-in-place (AIP) decision making is impacted by worsening cognitive, functional loss, social influences, and environmental factors.

Methods: We are conducting a longitudinal study of older adults from an NIA-funded cohort (LitCog) with extensive cognitive testing, who receive a PCORI-funded intervention, PlanYourLifespan.org (PYL), which facilitates making decisions about AIP needs, specifically with AD. After receiving PYL, subjects are surveyed every 6 months with cognitive, social, functional, health literacy, environmental variables collected as well as questions about decisions made.

Results: Of the 293 subjects enrolled (mean age 73.5 yrs, 72.7% female, 40.4% urm). Almost half (47.4%, n=139) experienced cognition decline with 10.3% identifying worsening memory loss from prior 6 mo timepoint. Subjects were asked: If you developed AD and could not live independently, have you decided your living/support preferences? At 1-mo follow-up, subjects were significantly more likely to have made decisions if they had: limited health literacy (OR 4.36 [$p<0.01$, 1.69-11.24]), larger social networks (OR 1.08 [$p<0.05$, 1.01-1.15]), prior completion of a living will (OR 2.43 [$p<0.05$,1.11-5.33]. At 6-mo follow-up, sufficient social support was found significant (OR 3.39 [$p<0.05$, 1.19-9.70]. At 12-mo follow-up, significant variables included higher social isolation (OR 1.05 [$p<0.05$, 1.01-1.08]) and self-efficacy (OR 1.07 [$p<0.01$, 1.04-1.11]). The COVID-19 pandemic impacted decisions with changes seen in comfort moving into long term care communities depending on the pandemic timepoint.

Conclusion: Making decisions about additional support in the event of worsening cognition, seen in Alzheimer's disease, is associated with both external (e.g., social support) and internal (e.g., self-efficacy, health literacy) variables, which change in significance over time. Catastrophic factors, especially seen with COVID-19, also impact decisions. Variables impact AIP decisions about Alzheimer's disease differently at different time points and further longitudinal study is planned.

A180

Rural Clinician Perspectives on Barriers to Care for Older Veterans and Caregivers

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Background: Older adults with complex care needs often rely on caregivers to attend in-person medical visits. Caregiver stress and burden lead to worse patient and caregiver health and a higher likelihood of long-term care placement; however, it is unclear how logistical challenges related to coordinating in-person medical visits (e.g., arranging transportation and schedule disruption) contribute to these unfavorable outcomes. These logistical challenges may be further amplified among those living in rural areas. The goal of this study was to gain in-depth understanding of the challenges patient-caregiver dyads face when coordinating medical visits utilizing a mixed methods approach that first involved focus groups with clinicians who care for large numbers of older rural patients.

Methods: We convened two virtual focus groups with a total of 15 clinicians from 13 rural community-based clinics across the U.S. Participants were asked about logistical challenges their older patient-caregiver dyads face when attending in-person medical appointments. We used rapid content analysis to identify key themes from focus group transcripts.

Results: Key findings of the rural clinician focus groups were: 1) recognition that dyads find it challenging to obtain adequate and affordable transportation; 2) common preference among dyads for clustering appointments and services due to distance and scheduling of other activities; and 3) clinicians report an uneven distribution of resources between urban medical centers and rural clinics, such that many dyads need to travel even further to get specialty care.

Conclusion: Coordinating older patients' in-person medical visits is logistically challenging for already burdened caregivers. The results of these focus groups were used to develop a recently launched national web-based survey regarding caregiver experience of medical care coordination. Findings will inform efforts to identify strategies and recommendations to reduce barriers to accessing care and lessen caregiver burden for rural older adults.

A181

Utilization of Transitional Care Management (TCM) Service by Medicare Beneficiaries in 2014-2019

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BACKGROUND

CMS launched transitional care management (TCM) service in 2013 to improve care transitions to the community after hospitalization. Little is known about the geographic variation of TCM service use and the patient and provider characteristics associated with service use in recent years.

METHODS

This retrospective study used the 2014-2019 5% random sample of Medicare beneficiaries (N=18,203,930). We calculated the number of TCM claims, identified using Current Procedural Terminology codes 99495 and 99496, per 1000 eligible discharges by calendar year and census divisions. We examined the demographic and clinical characteristics of the beneficiaries who received TCM service and provider specialties.

RESULTS

We identified 306,882 TCM claims, which increased from 28,553 in 2014 to 64,458 in 2019. Overall, 139,741 (67.8%) beneficiaries received TCM service on one occasion, and 53,266 (76.3%) providers were reimbursed for 1-5 TCM services during the study period. The rate of TCM use more than doubled from 2014 to 2019 (30.6 to 71.9/1000 eligible discharges). Middle Atlantic (38.5/1000 eligible in 2014; 101.4/1000 beneficiaries in 2019) and South Atlantic (38.8/1000 eligible in 2014; 101.3/1000 beneficiaries in 2019) had the highest uptake and had the most substantial surge in the utilization of TCM per 1000 eligible discharges from 2014 to 2019. The mean age of TCM service recipients was 76 years old, 57.1% were female, and 82.7% were white. Clinical characteristics of those who received the service were similar across 6 years, with hypertension composing 288,397 (94.0%) and Alzheimer's disease 75,635 (24.6%). The diseases of the circulatory system (27.2%) were the leading principal discharge diagnosis prior to receiving TCM service. TCM was most delivered by internal medicine (44.3%), followed by family medicine (35.0%) and nurse practitioners (9.5%).

CONCLUSION

The recent 6-year trend in TCM utilization suggests a continuous but slow increase in the uptake of TCM. There was substantial variation between regions, and the rates of service receipt were lower among social minorities, suggesting an unmet health-related need for vulnerable patients who may benefit from the service.

A182

Impact of a Community Paramedic Program on Older Adults 30-Day Emergency Department Revisit

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Background

Community paramedic (CP) programs have emerged as an alternative model of care focused on improving access to primary and preventative health care. The objective of this study was to examine the association between a CP program and older adult healthcare utilization including ED revisits, unplanned hospitalization, and primary care visits at 30, 60, and 90 days post index ED visit.

Methods

We developed and implemented a community paramedic referral program for patients 65 and older who were discharged home from the ED or hospital. CP provided home visits within 24-48 hours of receiving a referral. CP home visit components included: home safety assessment, physical assessment, cognitive screening, diet and medication compliance, non-acute community resource referrals.

This was a case-control study. Older adults aged 65 and older who were admitted to one midwestern ED or inpatient unit between January 2018 and June 2022 and were discharged home were included. Case patients (n=101) were older adults who received the community paramedic intervention during this time frame and control patients (n =150) were those who received standard care during this same time frame with a LACE score >=10 or ISAR© score of ≥=4.

Results

50% of the older adult patients were 75-89 years old, >90% were white and 4% were black. Pre and post CP program outcomes were analyzed. Compared to older adults who did not receive the CP program, older adults who received the CP program had fewer ED revisits post CP visit compared to pior CP visit (case group, range -16 to 5 versus, control, range -2 to 3, p <.001). Among the patient diagnoses, fall was significantly associated with ED revisit (OR =.33; 95% CI=.11-.86). In multivariate regression model, older adults with a CP visit, controlling for fall had a higher odds of having more ED visits prior to the ED index visit compared to post CP visit (OR = 2.66; 95% CI = 1.56 – 4.56).

Conclusions

Results suggest that a CP program for vulnerable older adults is associated with reduced ED revisits within 30 days of the community paramedic visit. The program may have the potential to improve health outcomes within 30 days among patients who are frequent ED users for non-emergent conditions by providing access to community resources and proactively managing their health.

A183

Impact of COVID-19 on a Care Transition Program

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Background: The impact of COVID-19 on clinical practice, including home-bound practices, has been profound. In the initial stages of the pandemic, patients avoided the clinic, hospital, and routine care. Enrollment patterns in a post-hospital Mayo Clinic care transition (MCCT) program could have also changed as hospital patterns changed. Our primary aim was to describe enrollment in our care transition program by quarter of the year starting in 2019.

Methods: This retrospective cohort study used electronic health record data for patients >60 years old who were enrolled in MCCT between January 1, 2015, through July 30, 2022, after an index hospitalization (medical or surgical). The MCCT program involves a home visit by an advanced care provider within 5 days of hospital dismissal and enrollment in the program for up to 6 months. We report the absolute MCCT admission numbers by calendar quarter starting in 2019 and characterize admitted patients based on age, gender, marital status, race, English proficiency, total number of chronic conditions, and social determinants of health.

Results: Throughout the study period, 646 patients were enrolled in MCCT. Their median age was 82.4 years (IQR 77.7-89.6), 47% were male, 43% were married, 95% were non-Hispanic White, and 3% had limited English proficiency. They had a median of 9.0 (IQR 6.0-11.0) chronic conditions and 29% had dementia. Enrollment peaked during the first quarter of 2020 (174 per quarter) and declined to 113 per quarter in the second quarter of 2020. Quarterly enrollment remained low for the rest of the study period.

Conclusions: MCCT enrollment declined by 35% during the COVID-19 pandemic. This decline could reflect changes in utilization patterns after COVID-19 and calls for better understanding of post-hospital care transitions and health outcomes among frail older adults.

A184

Relationship between Medication Regimen Complexity and Family Caregiver Medication Administration Hassle in Home Hospice

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Background: Family caregivers are responsible for medication administration in home hospice, where prescribed regimens typically include 10 or more daily medications. Whether the burden of medication administration experienced by caregivers is associated with medication regimen complexity and whether perceived burden differs by the caregiver's relationship to the patient is unknown.

Methods: Within a pilot clinical trial of a home hospice educational intervention that aimed to standardize the approach to goal concordant prescribing and deprescribing conversations with patients and families, we measured medication management burden using the Family Caregiver Medication Administration Hassle Scale (FCMAHS) and patient Medication Regimen Complexity Index (MRCI) at baseline, 2-, 4-, 6-, 8-, 12-, 16-, 20- and 24-weeks. Unadjusted linear regression examined the association between the outcome of baseline Hassle Scale score and Medication Regimen Complexity Index. One-way ANOVA examined the association between baseline Hassle Scale score with the caregiver relationship to the hospice patient.

Results: A total of 22 adults aged 65 and older enrolled in the trial and 21 had a caregiver participate, including 7 spouses, 12 children, and 2 other caregivers. Most caregivers (76%) were extremely involved in managing hospice medications. At baseline, mean MRCI was 30.4 (SD 11.9; range 10-66) and the mean Hassle Scale score was 25.5 (SD 4.2; range 0-60). There was no significant association between increasing MRCI and Caregiver Hassle Score (beta coef -0.13, P=0.73). There was a significant association with caregiver relationship and Caregiver Hassle Score (mean spousal Hassle Score = 17.4 [SD 13.8]; mean children caregiver Hassle Score = 39.1 [SD 19.1]; mean other caregiver Hassle Score = 8.5 [SD10.6]); p=0.048).

Conclusion: Family caregivers reported a wide range of medication administration hassle. Higher medication administration hassle was associated with caregiver relationship with the hospice patient, but not MRCI. When considering the burden of medication administration in home hospice, it is important to understand that the caregiver's relationship to the hospice patient can affect perceived medication administration hassle.

A185

Speeding Events Among Older Drivers with Sleep Disorders and the Effect of Sleep-Promoting Medications

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Background: Maintaining the safety and independence of older drivers among US populations requires ongoing analysis. The objective of this study was to evaluate whether sleep disorders among older drivers increase the odds of a speeding event and whether this relationship is potentiated by sleep-promoting medications.

Methods: In this ongoing multisite prospective cohort study, data were obtained from The Longitudinal Research on Aging Drivers (LongROAD) Study, which recruited 2,990 active older drivers aged 65 to 79 from 5 United States sites between July 2015 through March 2017. The exposure was self-reported sleep disorders and concomitant exposure to sleep-promoting medications. Speeding events were the main outcome. Covariates included total miles driven, age, sex, and study site.

Results: Among 2,863 (1,353 males [47.3%] and 1,510 females [52.7%] aged 65-79 years) with non-missing sleep disorder data, 594 (20.8%) reported having a sleep disorder. Seven hundred participants were taking at least one sleep-promoting medication (24.5%), with anticonvulsants (25.4%), benzodiazepines (23.1%), and anxiolytics/sedatives/hypnotics (18.9%) being the most commonly-used psychotropics. About 7.2% of total participants, according to brown bag review, were taking 2-5 sleep-promoting medications per subgroup analysis. Using binary logistic regression, the presence of a self-reported sleep disorder did not increase the odds of a speeding event (OR 1.24; 95% CI: 0.94-1.63; p=0.1218), after adjusting for total miles driven, age, sex, and study site. However, there appeared to be effect modification by number of sleep-promoting medications taken, with a decrease in odds among those taking 1 and a further decrease among those taking 2-5. When stratified by gender, the effect modification was more apparent among males than females, particularly among those taking 1 sleep-promoting medication compared to not taking any at all.

Conclusions: This study suggests that the presence of a sleep disorder and concomitant use of multiple sleep-promoting medications decreases the odds of speeding events among older populations from the ages of 65 - 79 years old. Future studies should aim to determine different effects by the specific number of sleep-promoting medications among genders.

A186

Bipolar Disorder Diagnosis Delays the Recognition of Frontotemporal Dementia

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Frontotemporal dementia (FTD) is the second most common young-onset dementia with the most common presentation being behavioral variant (bvFTD). Yet it can be challenging to accurately diagnose because it shares several symptoms with primary psychiatric disorders (PPD) and cognitive deficits can be minimal early in the disease. Studies have found that up to one third of bvFTD patients are first diagnosed with a PPD, most commonly depression and bipolar disorder (BD)[1].

The aim of this study is to better understand the timeline and relationship between the clinical diagnosis of FTD and BD.

Methods: This is a retrospective chart review of patients with clinical diagnoses of FTD or bvFTD and bipolar I, II, and bipolar affective disorder in the University of Utah Epic database.

Results: Among 468 FTD patients 16 (3.4%) also had a BD diagnosis (10 women, 6 men). 13 were white and 3 had no racial status documented. Clinical diagnosis of FTD was supported by frontotemporal atrophy in 3 with CT and 13 with MRI. In 6, FDG-PET showed frontotemporal hypometabolism. Mean age of BD diagnosis was 51.3 and mean age of FTD was 61.2 years old with 11.4 year mean delay between diagnoses. 6 of 16 were diagnosed with FTD only 4-6 years after BD diagnosis. 13 were over the age of 40 when diagnosed with BD and 9 of 16 patients had other complicating psychiatric or neurological disorders. FTD was recognized in diverse settings: 4 by hospitalists, 3 by geriatric-psychiatrists, 5 by cognitive neurologists, 3 by cognitive geriatricians, and one was unknown.

Conclusions: The initial diagnosis of BD often delayed the recognition of FTD by several years. Additionally, over half had other conditions that could further impede an accurate diagnosis. A multidisciplinary team of cognitive specialists and psychiatrists is crucial to evaluate behavioral changes after the age of 40 to avoid delayed and misdiagnoses.

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disease: rates of and risk factors for prior psychiatric diagnosis in patients with early neurodegenerative disease. J Clin Psychiatry. 2011 Feb;72(2):126-33. doi: 10.4088/JCP.10m06382oli. PMID: 21382304; PMCID: PMC3076589.

A187

Hand Grip Strength Is a Better Tool to Assess the Risk of Dementia Than BMI, and High Muscle Mass and Strength Might Explain the Cause of the Obesity Paradox

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Obesity and higher BMI were linked to chronic diseases, including dementia. However, some studies showed that individuals with obesity were at low risk of developing dementia. It was well known that high muscle mass increased BMI. We hypothesized that high muscle mass and strength were protective factors against dementia.

In our community health center, we identified 196 patients seen at the frailty clinic from 12/1/2021 to 11/30/2022. The frailty clinic was a new specialty clinic we developed, where we assessed their functional frailty with gait speed, hand grip strength, Mini-Cog, frailty scale, and clinical frailty phenotype. The study protocol included these data from the frailty clinic, sociodemographic data, and BMI. We used hand grip strength and Mini-cog results to assess their muscle strength and memory function. Ten patients were excluded because their Mini-Cog results were not available.

Among 186 patients(mean age 73.1, women(w) 93, men(m) 93), 103 had weak hand grip, and 59 had positive Mini-Cog results. We divided the patients into two groups based on the Mini-Cog results. Among 127(mean age 72.4, w 51, m 76) with negative Mini-Cog results, 60 patients had weak hand grip. 43 out of 59(mean age 73.9, w 42, m 17) with positive Mini-Cog results were found to have weak muscle strength. Thirty-one patients with negative results and eight with positive results had a BMI of 30 or higher.

These results showed that individuals with weak muscle strength were twice likely to develop dementia(RR 2.17, P=0.0003), and persons with obesity seemed to be at low risk for dementia(RR 0.6, P=0.1265). These findings suggested that persons with obesity and high muscle strength lowered the risk for dementia in the higher BMI group, and muscle strength and mass were the better risk indicator of dementia. Our results also showed that gender was a significant risk factor for dementia: women were more than twice likely to develop dementia(RR 2.5, P=0.0003).

Some studies showed protective effects of higher BMI in the progression or mortality of chronic diseases, including dementia. Based on our study results, increased muscle mass and strength might explain these paradoxical effects. Further studies in a bigger cohort are needed to investigate this further.

A188

Gender Differences in Associations between Chronic Pain Status and Perceived Cognitive Function among Older Adults

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Background: Prior work found that individuals with chronic pain have deficits in working memory, processing speed, executive function, and attention. However, the relationship between chronic pain status and perceived cognitive function among older adults remains unclear. Moreover, despite known gender differences in both chronic pain and cognitive function in older adults, no studies were identified that evaluated whether gender moderates associations between pain and cognition among this population. Therefore, the purpose of this study was to evaluate for differences in self-reported cognitive function in older adults as a function of chronic pain status, gender, and their interaction.

Methods: Participants included 123 older adults (44.7% men, 43% chronic pain, M_{age} = 71.9 years) who were recruited from the National Outcomes Research Center's nationally representative AmeriSpeak panel. Chronic pain was defined as having pain on "most days" or "every day" for the past 3 months. Perceived cognitive function was assessed using the Attentional Function Index (AFI), which includes three subscale scores and a total score. The three subscales were; effective action (effectiveness in activities that require focused attention), attentional lapses (difficulties directing attention), and interpersonal effectiveness (ability to interact in a manner that depends on attentional or inhibitory effort).

Results: A significant chronic pain status by gender interaction effect was found for the AFI total, effective action, and attentional lapses scores (all $p < .05$). Specifically, women (but not men) with chronic pain reported poorer perceived cognitive function. Neither chronic pain status, gender, nor their interaction was associated with interpersonal effectiveness ($p > .05$).

Conclusions: These findings provide initial evidence that older women with chronic pain may experience cognitive deficits that interfere with completion of everyday activities. This underscores the importance of assessing cognitive function in older adults with chronic pain. Future longitudinal studies with large samples of older adults are needed to evaluate how changes in chronic pain status/severity are associated with changes in cognitive function.

A189

Frailty mediates the relationship between tau pathology and cognitive decline in a large dataset of healthy controls

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Background: Frailty is a consequence of cumulative deterioration in several physiological domains, leading to increased vulnerability to acute stressors and adverse outcomes (Clegg et al, 2013). Yet, little is known about the effects of frailty on cognitive decline. Here, considering a large healthy controls (HC) dataset, we tested the role of a Frailty Index (FI), and its related items, to mediate the effect of Alzheimer's disease (AD)-pathology on the cognitive trajectories. **Materials and methods:** N=521 HC (74.25±5.8y) were included from the ADNI dataset, with clinical and biospecimens assessment at baseline and follow-up. A 40-item FI was operationalized, as in a previous ADNI study (Canevelli et al, 2021). Cluster analysis provided a data-driven stratification based on FI items. Participants were also stratified according to previously reported cutoffs (Song et al, 2010) as robust, prefrail and frail; the two stratifications were compared. The mediation of FI on AD-pathology and cognitive decline at 6-year follow-up, in terms of MMSE annual deflection, was assessed. **Results:** The clustering algorithm identified three clusters: *Cluster 1* (N=205) driven by cardiovascular, musculoskeletal diseases, and head injuries; *Cluster 2* (N=186) driven by cardiovascular, musculoskeletal, gastrointestinal diseases and head injuries; *Cluster 3* (N=130) driven by cardiovascular, musculoskeletal, head injuries, gastrointestinal, renal-genitourinary, neurological (non-AD), dermatologic-connective diseases, and musculoskeletal pain. Individuals in Cluster 3 were older and most of them were classified as "Frail". Those in Cluster 2 showed greater impairment in functional status and neuropsychiatric symptoms, presence of lymphatic and endocrine comorbidities, and more frequently converted to dementia. FI significantly mediated the effect of CSF-Tau pathology on cognitive decline. **Conclusions:** Our data-driven approach allowed recognition of a pattern of frailty-related

health factors (Cluster 2) associated with AD-pathology and faster cognitive decline. The identification of an array of specific health deficits may serve as a target for detecting the risk to convert to dementia in healthy individuals.

A190

A study to assess the effectiveness of companionship program in correlation with Overall well-being and Disease progression among older adults in an Assisted living Facility

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Background:

Loneliness is a universal emotion which all of us may experience at some point in life where we might lack companionship or feeling left alone. A dynamic, adaptable, and cost-effective method of encouraging seniors in their life to benefit from meaningful companionship is called companion care. For seniors to build important relationships and engage with their community while leading busy and enriching lives, companion care is vital.

Aim:

To measure the effectiveness of companionship program in correlation with overall well-being and Disease progression among older adults in an Assisted living Facility

Method:

Quantitative, Randomized, pre and post-test design was implemented. Probability sampling technique was utilized to select 120 geriatric residents.

Tools

Demographic data

UCLA Loneliness Scale Version 3

WHO- 5 Well-being scale

Questionnaires for Diabetes and Hypertension management

Companionship program includes individual and group activities, selected based on personal interest. The various activities conducted are Gross motor activity (Physical Rehabilitation, Aerobics, Indoor and Outdoor games) Fine Motor Activity (Art and Craft, Threading and Knitting, Sorting and Stacking Coins, Squeezing the Clay, Opening bottles and containers), Individual and Peer group activity, Buddy programs, Trip down the memory, Music therapy, Talent restoration

Result: A significant improvement was found in majority of the residents, with a 50% increase in their wellbeing scale and 33% decrease in their loneliness score compared between pre and post-test. Diabetes and Hypertension care plan compliance was improved to 98% with medication adherence at 95%

Conclusion: Application of Companionship program had a significant effect in reducing disease progression and improving overall well-being through various engaging activities

Keywords: Companionship program, Loneliness, Well-being, Older adults, Diabetes Mellitus, Hypertension, Disease Progression

Scale	Pre Test (Avg Score)	Post Test (Avg Score)
WHO-5 WELL BEING SCALE Scale of (0-5)	2	4
UCLA LONLINESS SCALE VERSION 3	3	2

A191

Frailty as a Predictor of Catatonia in the Critically Ill Patient

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Background: Frailty is a multidimensional syndrome characterized by the loss of physiologic reserve that places a patient in a state of vulnerability and is predictive of subsequent mortality, disability, and cognitive impairment. Catatonia is an under-recognized form of acute brain dysfunction in the setting of critical illness, thus exploration of clinically recognizable precipitating factors of catatonia is warranted. The association between frailty status and catatonia has not been described. We aim to describe the occurrence of catatonia by frailty status in a critically ill, adult population.

Methods: A convenience cohort, nested within two parent observational cohort studies, included 170 adult patients enrolled from intensive care units in an academic medical center. The cohort was restricted to those assessed for pre-existing frailty status within 72 hours of study enrollment using the Clinical Frailty Scale and those having at least one catatonia assessment within the first 14 days of critical illness. Patients were assessed using the Bush Francis Catatonia Rating Scale mapped to Diagnostic Statistical Manual 5 criterion A for the presence of catatonia.

Results: Of 170 patients with median (IQR) age 64 (52-71) years, 62 (36%) were female and 18 (11%) were African-American. Twenty (12%) met diagnostic criteria for catatonia, 41 (24%) experienced delirium, and 19 (11%) experienced both catatonia and delirium during the period of observation. There was no significant association detected between catatonia and frailty status ($p=0.89$). In a logistic regression model, there was not a significant association between frailty and presence of catatonia (OR=0.973 [95% CI: 0.598, 1.583], $p= 0.912$].

Conclusions: Given the vast differences in prevention and management of catatonia compared to other more commonly identified states of acute brain dysfunction, precise recognition and diagnosis is critical. Baseline frailty may not be a meaningful prognostic factor in the development of catatonia based on this evidence.

A192

Comparing Subjective Well-being between the Elderly and Adults in People with Mental Illness

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BACKGROUND/OBJECTIVES:

Some researchers clearly show that subjective well-being is higher in older adults compared to younger adults in Japan. Previously, we have reported that subjective well-being is higher for older adults than for youth with mental illness. However, little is known about the subjective well-being of the various age groups of the mentally ill. In this paper, we compared the subjective well-being of the elderly, 30's and 40's among those with mental illness.

METHOD:

The design was a cross-sectional study. Participants were clinically stable with a schizophrenia, bipolar disorder, and atypical psychotic diagnosis. The subjects were 38 persons, including hospitalized patients, psychiatric daycare centers and employment support centers. Nineteen elderly patients (over 50 years old) and 19 adult patients (9 in their 30s, 10 in their 40s) were examined. The Japanese version of the Short Version of the Subjective Well-being Scale under

Antipsychotic Treatment (SWNS-J) was used to assess subjective well-being. BPRS was used to evaluate the severity of mental symptoms. WHODAS2.0 was used to evaluate activities and participation. Multiple comparison test was used to analyze the differences between three groups.

RESULTS:

The subjective well-being score was 58.0 (mean) in the 30s group, 75.8 in the 40s group, and 75.9 in the 50s and older group. Comparing subjective well-being scores between the three groups showed a significant difference. The significant difference was found between the scores of those in their 30s and those aged 50 and over. There was no difference in WHODAS 2.0 among the three groups.

CONCLUSION:

Subjective well-being scores of people aged 50 and over with mental illness were significantly higher than those in their 30s. We speculated that this result relates to previous research (Shimai, 2018) that showed a U-shaped phenomenon in which the subjective happiness level of healthy people temporarily decreased in middle age and then increased after the age of 50. We conclude that our report could provide useful information for future research in the field of mental health, especially in interventions to promote subjective well-being in older adults with mental illness.

A193

Missed Medication Monitoring Opportunities in a Geriatric Clinic

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Background: Preventable adverse drug errors are a common occurrence among older adults and are linked to increased Emergency Department visits and hospitalizations.[1,2] Medication monitoring of routine medications can significantly reduce these averse events, but is often time consuming and overwhelming for busy providers.[4] This poster reports a quality improvement study aimed at characterizing missed opportunities for medication monitoring in a Geriatric care clinic, the findings of which were discussed with clinic providers to identify why monitoring was not performed.

Methods: Geriatric clinic patient charts were reviewed over a 3 week period. Commonly prescribed medications were identified and charts were reviewed for missed monitoring opportunities. Prescribing providers were then notified via secure EHR messaging of the potential need for medication monitoring. Deidentified data was then presented to clinic providers in a focus group format to illicit expert feedback about why medication monitoring was not completed.

Results: A total of 29 missed monitoring opportunities were identified over a 3 week period. Main medication categories identified were: statins, antihypertensives, thyroid replacements, and vitamins. Common monitoring categories missed were: contraindication review, baseline lab checks, renal dose adjustments, efficacy evaluation, follow up lab checks (including electrolyte monitoring), orthostatic evaluation and toxicity assessments. Identified reasons for not monitoring from the focus group included the assumption that other providers were performing the monitoring, lack of time and complexity of monitoring.

Conclusions: Several barriers to the monitoring of medications were identified relating to poor transition of care documentation, time constraints, complexity of patient care, multiple consultants and group practice culture. These findings provide analogous insights as to why overall clinical medication monitoring is challenging to implement and highlight the need for training, situational awareness, and provider empowerment to implement simple solutions to avoidable medication harm.

A194

Implementing VIONE framework for optimizing medications for veterans in a GeriPACT clinic

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Purpose

In our GeriPACT Clinic at a VA Medical Center, we planned to optimize medications as part of the Institute for Healthcare Improvements (IHI)'s 4 Ms framework. VA Medical Centers have a user friendly medication management methodology scoring system called VIONE. We identified the scope for the quality improvement (QI) project.

Methods

One of the geriatric fellows met with the clinic pharmacist and medical director to design a QI. This geriatrics fellow educated the fellow colleagues about the VIONE scoring system in August and reminded the fellows about using the VIONE tool periodically and brainstormed about the challenges found while using the tool. After 1 month of use, the information was reviewed by providers and evaluated for adherence to the VIONE tool. The primary outcome measured the number of times the VIONE tool was used over the number of times a medication was discontinued. The data was further broken down to see which classes of medications were discontinued. We tracked data once a month and reported it to the fellows.

Results

Data from July showed 37.25% usage of VIONE selections, Since the implementation of this project, each month there was increase in usage after education and weekly encouragement of usage. The Usage of VIONE in October increased to 72.72% and November compliance rate is at 86.36%. In this process 19.48% of the medications discontinued were anticholinergic medications, of which the VIONE selection was used 73.33% of the time. We plan to continue to track this data until we achieve desirable adherence to the VIONE tool over time.

Conclusion

Implementation of a QI project in our clinic improved adherence with usage of VIONE tool in medication optimization for the veterans. We will continue to monitor for adherence over time and make process changes in the clinic for medication optimization.

A195

Implementation of Age-Friendly 4 M's Framework in a Geriatrics Clinic

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Background:

The IHI's Age-Friendly initiative places emphasis on addressing What Matters Most (WMM) and Mobility as vital components of a patient's care plan. We implemented a project in our clinic to increase the geriatrics fellows' utilization of "WMM" and "Mobility" in the veterans' care plans.

Methods:

The geriatrics fellows brainstormed ideas to implement WMM and mobility in the geriatric clinic. In October, the fellows designed a handout for veterans to identify specific items in WMM and mobility to discuss with their fellows during their visits. Veterans were given this handout during the clinic and fellows discussed the identified items from WMM and mobility with the veterans. Fellows participated in a motivational interviewing training activity and used these skills to help identify veteran goals for WMM and mobility. Authors tracked the data from the clinic handouts to see what items were identified by the veterans and WMM and mobility goals were set by them.

Results:

Since November, the handout was used in nine clinical encounters. For WMM, 11.11% of veterans chose social activities, 11.11% chose spirituality, 44.44% chose spending time with friends and family, 11.11% chose choosing where I live, and 22.22% chose other (pain relief, sleep). For mobility, 22.22% of veterans chose walking, 22.22% chose exercise equipment, 11.11% chose outdoor activities, 11.11% chose yoga, and 33.33% chose other (fall prevention, increasing strength). Initial feedback elicited from fellows showed that time constraints during the visit made it challenging to focus on both WMM and mobility in one visit. Moving forward, the fellows will focus on one goal (WMM or mobility) at each visit, and we will continue to track clinical encounters for addressing WMM and mobility in veterans in the next 3 months.

Conclusions:

We implemented a handout in our clinic to address WMM and mobility with veterans. Fellows will work towards increasing the use of this handout in the next few months and track goals that veterans are setting.

A196

Knowledge, attitudes, and practices in addressing loneliness and social isolation in a geriatrics primary care clinic

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Background

Loneliness is the subjective perception of societal interaction. Social isolation is the quantitative assessment of an individual's interactions. Despite their differences, these terms are often used interchangeably. Both can significantly affect the mental and physical wellbeing of older adults. The objective of this initial survey is to assess the knowledge, attitudes and current practices of health care providers and staff in a geriatrics primary care clinic at an academic safety net hospital. This is part of a larger QI project that looks to address loneliness/social isolation in the primary care setting.

Methods

An online survey comprised of multiple-choice questions and a 5-point Likert scale was e-mailed to clinic staff. Questions assessed subjective/objective knowledge and screening methods. Participants rated the importance and frequency of screening and were asked to list resources currently utilized.

Results

Eighteen surveys were distributed to physicians, nurse practitioners, nurses, social workers and pharmacists with an 83% response rate. Most respondents felt confident in their knowledge (60%) and believed that it is important to address loneliness and social isolation among older adults (100% felt it was at least somewhat important); however, screening was infrequent (53.3% and 60% respectively). Infrequent screening was attributed to lack of a standardized referral pathway and staff time. Regarding patient educational materials, providers preferred a smart phrase to add for an after-visit summary (86.7%), physical handout (73.3%), website (46.7%), and mailed handout (26.7%).

Conclusions

This survey illustrates that even in a geriatrics focused clinic, screening for loneliness and social isolation is not universal and patients would benefit from interventions to address these widespread concerns. Based on this needs assessment, we are designing a standardized in-service educational guide and a streamlined referral tool for clinic staff to increase the likelihood that loneliness and social isolation will be addressed. These materials should be considered in other primary care clinics for older adults, given the prevalence of loneliness and social isolation.

A197

Improving Cognitive Screening during Annual Exams in the Outpatient Setting

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Background: Although current USPTF guidelines are to not screen routinely for cognitive dysfunction, a key component of the Medicare Annual Wellness Visit (AWV) includes cognitive screening. Dementia affects 6.2 million adults aged 65 and older and early diagnosis can lead to better outcomes. Early diagnosis of dementia can reduce hospitalizations, institutionalization, and increase the amount of psychosocial support and pharmacologic interventions that are available to patients and their care givers. The AWV is an opportunity to be able to incorporate routine and regular cognitive screening for older adults into outpatient practice. Standardizing this practice within the framework of the AWV could be impactful for both patients and caregivers.

Methods: Data was collected from two geriatric outpatient offices via the EMR. The total office patients who received a AWV between 1/1/22-9/30/22 were collected by billing codes. Chart review was completed to determine whether these patients had cognitive screening at the most recent AWV as well as in the last 10 years. Our intervention would standardize the cognitive assessment component of the AWV with routine Mini Cog assessment as well as staff education in order to ensure this implementation. After a 2 month period of this intervention, data will be examined to determine the amount of positive screenings.

Results: 196 total patients were identified as having an AWV from 1/1/22-9/30/22. Of these 196 patients, 53%were identified as having neither had cognitive screening at the most recent AWV or within the last 10 years. At the end of this project, we anticipate that the cognitive screening will have a statistically significant increased rate in detecting cognitive impairment in the outpatient older adult population.

Conclusions: Cognitive screening is a key component of the AWV as well as within the Age Friendly Care framework. There is a large aging outpatient population that have not had regular cognitive screening. Standardizing this approach could provide meaningful results to patients, clinicians, and caregivers and ensure timely and accurate diagnosis of dementia to maximize support and resources offered.

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A198

Quality improvement initiative to determine the opportunity for earlier involvement of Hospice for older adults with multiple comorbidities

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BACKGROUND:

The number of older adults over 65 is rapidly increasing in the US. This is has led to an increasing number of older adults admitted to critical care units, where both short- and long-term outcomes are shown to be poor.

Hospice Care involvement results in improved experiences for patients and families before, during, and after the death. A commonly observed phenomenon is that Hospice involvement is often relegated to imminent patients; those near to or about to take their final

breaths. This detracts from the potential benefit Hospice can provide. It represents a disconnect between what Hospice offers and when their involvement is requested in the larger illness and aging paradigm. The reason for this apparent disconnect is complex, multifactorial and is felt to be partly due to an unfamiliarity for the pivotal role Hospice can provide.

To better define this issue at the WPBVAMC, as part of a larger QI initiative, we studied the number of Hospice consults for Veterans 80 years or older requested by the critical care unit over a 5-year period.

METHODS:

Data was collected for all hospice/palliative care consults requested by the Critical care unit from January 2017 to October 2022. We collected age, diagnoses, average time from ICU admission to Hospice/palliative care consult, and the outcomes following the ICU admission and Hospice consults.

RESULTS:

There were 101 consults for Veterans 80 to 101 years of age between January 2017 and October 2022. Of these 101 Veterans, the average age was 87.5 years old, and the four most common primary diagnoses were Heart Disease, Dementia with Pneumonia, Cancer, and End Stage Renal Disease. Hospice was consulted an average of 7 days after ICU admission. Of these patients, 88% died within 1 month of Hospice being consulted, 67% died within 7 days, and 47.5% died within 3 days. Of the 101 patients 2 lived for greater than 1 year, 11 lived for greater than 1 month.

CONCLUSIONS:

This QI study shows that Hospice consultation was delayed in older Veterans admitted to the ICU and demonstrates the need and opportunity for a more timely consultation of the Hospice Team.

A199

Unconscious gender bias in the assessment of older adults with trauma: women are less likely than men to be admitted to a specialist trauma unit.

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Introduction

In a tertiary hospital with a Level 1 trauma centre, not all older patients admitted with trauma are admitted to a trauma unit, some are admitted under Internal Medicine (IM) or other. This study examines whether gender bias may influence admitting unit.

Methods

In this prospective cohort study, all patients aged 65 and older admitted with trauma between February and November 2022 were included. Baseline characteristics measured were sex, age, baseline function, modified early warning score (MEWS) and low fall vs other mechanism of injury. The outcome was admitting unit (trauma, IM, orthopaedics and other). Descriptive statistics were used for baseline characteristics and multivariate analysis was used to measure association with the primary outcome.

Results

Of the 1241 patients admitted with a diagnosis of trauma 656 were women and 585 were men. Women had a higher average age than men (81.1 range 65-103) vs 77.9 (65-101). When orthogeriatrics and other units were excluded, 233/389 (58.5%) women with trauma were admitted to trauma, compared to 335/420 (79.8%) of men, with the rest admitted to IM. In a multivariate analysis that accounted for mechanism of injury, MEWS, age and baseline function, women were still less likely to be admitted to a trauma unit than men ($p<0.01$).

Conclusions

Compared to men, women with trauma were less likely to be admitted under a specialist trauma unit, which is concerning for unconscious gender bias in the assessment of trauma and has resulted in a review of trauma admission criteria.

A200

Improving Utilization Rates of the Medicare Annual Wellness Visit

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Background

The Annual Wellness Visit (AWV) is a Medicare benefit that encourages clinicians to develop personalized preventative health plans. The inclusion of multiple elements such as functional status, mental health, and advance care planning helps to create a more comprehensive geriatric-focused history than the usual obtained in a routine visit. It also provides an opportunity for physicians to improve the quality of care, assist in patient engagement, and optimize reimbursement opportunities for clinics. Although the benefits of this visit are well-appreciated, the AWV is underutilized nationwide.

Methods

The study includes two urban hospital-based academic ambulatory geriatric practices. EPIC was the primary electronic medical record system utilized. The system was interrogated to generate a report of Medicare beneficiaries with and without an AWV within the past twelve months. Rates of AWV completion were calculated per provider. Providers with top completion rates were interviewed to brainstorm strategies to encourage AWV completion across the two clinics.

Results

The report yielded a range of 0% to 47% completion across all providers with a clinic average of 19.7%. Most notably, geriatric fellows in the clinic had lower rates of completion overall, with an average of 6.3% (10 completed out of 159 potential visits), when compared to the attendings' average of 20.4% (639 out of 3132). Three attending physicians with top completion rates were interviewed on their routine workflows during an AWV. Recommendations most commonly agreed upon included 1) optimizing EMR interface to reflect patients eligible for an AWV, 2) pre-visit charting, and 3) involving nurses, medical assistants, and/or medical students in initiating visits.

Conclusions

The Annual Wellness Visit is an underutilized tool in patient assessment and care planning. It has the potential to give providers an all-encompassing visit to allow for appropriate prevention, screening, and counseling. Through our proposed intervention of provider-directed education and interdisciplinary participation, we aspire to increase the average AWV completion across the two clinics by 10% in 6 months.

A201

Supporting Advance Care Planning in the Nursing Home with the Electronic Health Record

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Background: Twenty five percent of hospitalized Medicare beneficiaries are discharged to a nursing home and 10% of post-acute nursing home stays transition to long-term care, with many remaining until the end of life. Without dedicated discussion of a person's goals of care on admission to the nursing home, they are at risk for unplanned health care utilization which may not align with their values. Our objective was to develop and implement an electronic health record (EHR)-based intervention to standardize and increase documentation of Advance Care Planning (ACP) among people in the nursing home.

Methods: We reviewed EHRs of people admitted to or already residing in a 100 bed for-profit nursing home for ACP documentation which included code status, advance directives (AD), and health care decision-maker (HCDM). We implemented Plan-Do-Study-Act (PDSA) cycles including development of a note template to

standardize documentation of code status and HCDM using a standardized work-flow, auto-population of data, just-in-time cueing, and point-of-care process instruction. The template alerted providers to missing ACP documentation. The number of people for whom the template was used was monitored as a process measure. Outcome measures included the presence and type of code status order, HCDM, and ACP notes. These were evaluated at the time of admission, discharge, and monthly during nursing home stay.

Results: One-hundred sixty-one people (63% white, 59% female, mean age 80) received care at the facility during the study period. Prior to the study period 78% had a code status order, 23% had an AD, and 48% had a HCDM in the EHR. After successive PDSAs 85% had a code status order, 30% had an AD, 67% had a HCDM recorded in the EHR. Use of the quality improvement intervention was documented in clinical encounters for 36% of people who received care in the nursing home.

Conclusions: Clear, consistent, and accessible documentation of ACP is a necessary foundation for supporting care that aligns with a patient's values in the nursing home. Properties of the EHR can be leveraged to improve documentation and communication of ACP for people receiving care in the nursing home.

A202

Screen before you fall: Expanding osteoporosis screening in Reno HBPC

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Background: Osteoporosis is a common bone condition that is often overlooked until a fragility fracture occurs. Screening for bone loss with dual-energy X-ray absorptiometry (DXA) scan is underutilized in the VA Home Based Primary Care (HBPC) setting which is a predominately male based population.

Methods: Chart review of 148 veterans enrolled in VA HBPC in Reno, NV, was conducted to evaluate screening rates and applying 11 different medical society guidelines with categories of gender, age and risk factors. 4 guidelines, including United States Preventive Services Task Force (USPSTF), recommended screening women based on age or risks, whereas 7 guidelines, including the National Osteoporosis Foundation (NOF) included screening for men based on age or men with risk factors. An Osteoporosis Self-assessment Tool (OST) = [weight (kg) - age (years)] 0.2 was used to assess risk. Veterans who scored ≥2 were considered low risk for osteoporosis, and those who scored <2 were identified as high risk.

Results: A total of 45 veterans out of 148 had DXA scans on file, representing 30% of all HBPC veterans. Using 2 of the medical societies' guidelines which do not endorse screening men, identified 9.5% (14/148) of HBPC veterans as eligible for osteoporosis screening based on the female gender, age, and risk factors. 6 other guidelines identified 88% (133 of 148) of HBPC veterans as eligible for screening based on age alone. After applying the OST, we found that 74% of eligible veterans (93% of women and 71% of men) were considered high risk. Overall only 34% of eligible veterans using gender or age had prior DXA scans on file, representing less than 21% of women and 35% of men.

Conclusions: HBPC veterans represent a vulnerable subset of the VA population and are at high risk for fragility fractures, yet screening for osteoporosis appears drastically underutilized. By applying guidelines that exclude screening of men, such as the USPSTF, over 90% of HBPC veterans could potentially be missed for screening and subsequent opportunity for timely treatment. When other guidelines, such as the National Osteoporosis Foundation (NOF), which includes men based on age or risk, were applied, we found that 61% of high-risk men were missed for screening. Implementing different osteoporosis screening guidelines as well as risk tools could improve breadth of screening and outcomes in those at risk for osteoporosis.

A203

Development of the Surgical Acute Care of Elderly (ACE) strategy at Mount Sinai Hospital

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Background: Older adults comprise an increasing proportion of patients on the general surgery unit. When compared to their younger counterparts, older adults have worse outcomes including higher rates of postoperative complications and irreversible functional decline.

To mitigate these negative outcomes, we developed a multicomponent shared care model. The first phase incorporated proactive consultation by the Geriatric Medicine service for all patients over the age of 75 admitted for urgent or emergent surgical and non-surgical indications.

Methods: We conducted a retrospective chart review of an initial cohort of patients who met these criteria from 07/04/2022 to 09/12/2022. We collected data on patient demographics, comorbidities and medications. Outcomes of interest included deliriogenic medications prescribed, complications and disposition. Fidelity data were acquired comparing the recommendations made by the Geriatric Medicine service and resulting actions.

Results: We identified 15 patients who met our criteria. The mean age was 84.9 (6.67). The majority of patients were female (86.6%), English speaking (60%), from independent residence (100%) and had a RCF of < 3 (60%). 3 patients had cognitive impairment.

11 out of the 15 patients received a Geriatric Medicine consultation. All patients had opioids prescribed, while 12 had diphenhydramine and 3 had benzodiazepine prescribed. 4 patients received surgical intervention. 16 out of the 18 encounters resulted in discharge to original disposition, while 1 required rehabilitation. There were 2 patients who were diagnosed with delirium and one death in hospital.

A total of 72 actionable recommendations were made by the Geriatric Medicine service, of which 47 (65%) were enacted upon. The most followed recommendation was for blood work (84%) followed by medication modifications (67%) and consultation requests (47%).

Conclusions: This initial cohort identified that that most general surgery patients were community-dwelling, had low-moderate rates of frailty and were typically managed without surgical interventions. Deliriogenic medications were commonly prescribed, but rates of delirium were low. The geriatric medicine service provided a broad range of recommendations which were largely enacted upon.

This pilot cohort will be used to further develop the Surgical ACE model, with introduction of further aspects of the intervention and ongoing evaluation of performance and outcomes.

A204

Benefits of Geriatric Consult for Trauma Patients

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Background

Many Academic Institutions have adapted the Geriatric-Trauma collaborative care model for Geriatric trauma patients. However, there are few studies that have looked at the outcomes of this model. Through this study we intend to measure the impact of a Geriatric-Trauma collaborative care model for Geriatric trauma patients.

Methods

In this retrospective data review study at Hackensack University Medical Center, we looked at 436 randomly selected patients. Patients were separated into groups as: Trauma patients with Geriatric consult (Intervention group, IG) versus Trauma patients with no Geriatric consult (control group, CG) from 2017-2021. 218 patients were included in the CG and 218 patients in the IG. The primary outcome was rate of delirium between the groups measured using ICD code R41.82, use of psychotropic medications and restraints use. The secondary outcomes were length of stay(LOS) and readmission

rate (RR). Data was also collected for demographics (age, race, and gender). All study data was summarized with descriptive statistics. Continuous variables were summarized with means, standard deviations, medians and ranges. Categorical variables were summarized with counts and percentages.

Results

Patients in IG had a higher rate of having Physical restraints (21.6% vs. 6.4%, P<0.001), psychotropic medication use (46.8% vs. 36.7%, P=0.041), as compared to those patients in CG. Those who were in IG also were older (Median [Interquartile range]: 84 [76.3 - 89] vs. 79 [72 - 87] years, P<0.001), and had a longer LOS (163 [118 - 269.5] vs. 96 [69.3 - 151] hours, P<0.001). There were no statistically significant differences between groups in the following variables: gender (P=0.285), race (P=0.209). There was no significant difference for rate of delirium (P=0.499), or 30-day readmission (P=0.061).

Conclusions

Given the above results, this study did not successfully demonstrate the positive impact of Geriatric-Trauma collaborative care model for these metrics. This is likely because Geriatric consults were placed for much older adults with multiple comorbidities and increased risk of delirium. Hence, we saw an increased use of restraints, psychotropic medications, and increased length of stay in the IG. There is a need for further investigation with a larger age matched and comorbidity matched sample size to assess benefits of geriatric co-management for older adults admitted to acute care settings for trauma.

A205

Feasibility of Frailty Screening in Older Hospitalized Adults with Advanced Heart Failure

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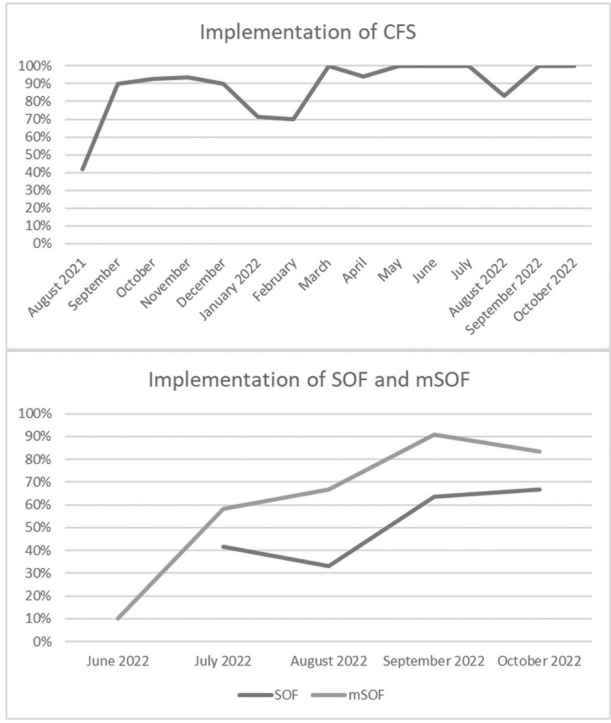
Background: Up to 80% of heart failure (HF) patients are frail, with associated increased mortality risk and lower quality of life. The primary aim of this study was to assess feasibility of frailty screening for patients hospitalized with advanced HF.

Methods: Patients over 50 years, referred for palliative care consultation from August 2021 - October 2022 were enrolled in this quality improvement initiative. Frailty assessments were performed iteratively first using the Clinical Frailty Scale (CFS) then the Study of Osteoporotic Index (SOF) or modified SOF (mSOF) tool which includes an assessment of function.

Results: Of 212 consecutive patients, 69% (n= 147) were male, 95% (n= 202) non-Hispanic and 60% (n=127) had NYHA III-IV disease. In total, 86% (n= 183) had CFS assessments and 77% (n= 27) of had an SOF or mSOF completed. Feasibility thresholds of 80% were achieved for CFS and mSOF, but not for SOF (Figure). SOF score was adapted to mSOF in 32.4% (n=12) of patients. 44.8% (n=95) of the population screened frail by use of CFS and 35.1% (n=13) screened frail by modified SOF.

Conclusion: Frailty screening for hospitalized with advanced HF is feasible, but tools using physical measurements were more challenging to implement.



A206

Primary Care Providers' Perceptions on a Geriatric Outpatient Consult Service.

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Background: Although, geriatric outpatient consult models can support Primary Care Providers (PCP), there is little data on PCPs' perception of an outpatient geriatrician's role. We sought to assess PCPs' comfort with geriatric care and perceptions of a geriatric outpatient consult service.

Methods: PCPs at a single academic medical center were surveyed via REDcap from 10/22-11/22 using a cross-sectional survey addressing 7 geriatric care domains (goals of care, polypharmacy, delirium, falls, cognitive impairment, recurrent falls, osteoporosis). We assessed PCP comfort in managing each domain (1=very uncomfortable, 5=very comfortable). Case-based vignettes using multiple choice questions were used to assess referral preferences for each domain (options=not refer, refer, shared decision-making with patient, refer elsewhere). Preference for consult management model was assessed for each domain (options=one time geriatric consult, ongoing geriatric consult with PCP to implement plan, geriatrician to follow and implement plan, or would not refer). PCP interest in outpatient geriatric consult service was also assessed (yes/no).

Results: Nineteen physicians and 4 nurse practitioners completed the survey [23/92 (25%)]. PCPs were least comfortable (Likert=very uncomfortable, uncomfortable or neutral) in managing delirium [6 (26.09%)], cognitive declined [9 (39.13%)], falls [8 (34.7%)] and multimorbidity [4 (17.39%)]. Lack of time (74%) and resources (61%) were the most commonly reported reasons for difficulty in completing care for older adults. Geriatric referrals were most commonly placed for recurrent falls/gait instability (13-22%), frailty (13-17%) and decline in functional status (13%). One-time geriatric consults were desired for increased health care usage (43.8%) and polypharmacy (39.13%). PCPs preferred an ongoing geriatric consult with PCP implementation for cognitive decline (39.13%) but preferred geriatricians to follow and implement plan for frailty (26.09%). The majority of respondents (78.3%) agree that an outpatient geriatric consult would be helpful.

Conclusion: PCPs reported high interest in an outpatient geriatric consult service. Desire for specialty consultation and level of ongoing involvement varied by geriatric domain. Next steps should compare perspectives of PCPs who have and have not used an existing outpatient geriatric consult service.

A207

High-Risk Medication and Delirium among Geriatric Patients

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Background

Delirium is a known complication during acute hospitalization of older adults that is associated with increased mortality, functional decline, higher healthcare costs and loss of independence. Current literature suggests there are multiple reversible causes for delirium including higher risk medications such as opioids, anticholinergics, benzodiazepines, dihydropyridines and antihistamines. The aim of this quality improvement project is to assess the association between inpatient high-risk medication use on delirium and length of stay (LOS) to inform future education.

Methods

We extracted data from the electronic health records of 18,185 encounters of 9,890 patients aged 65 and older from 2019 to 2021. We calculated the odds ratio for association between high risk medication and positive CAM score. We used linear models with a log transformation on LOS to assess positive CAM score and high risk medication on LOS.

Results

Out of 18,185 encounters, 11,440 (63%) had a high risk medication. Patients with a high risk medication did have statistical difference in odds of a positive CAM score (after the medication was prescribed) compared to patients not on a high risk medication (9.5% vs. 5.0%; OR=2.01 95% CI: 1.77, 2.28). Encounters with a high risk medication had an average LOS was 7.4 compared to an average of 3.2 days for encounters without a high risk medication. Patients who were prescribed a high risk medication during their encounter had a 103% longer LOS compared to patients without a high risk medication (log OR: 0.71 95% CI: 0.68, 0.73 ; p-value:<.001). Encounters with a positive CAM score had an average LOS was 13 days compared to an average of 5.2 days for encounters without a positive CAM score. Patients who had a positive CAM score during their encounter had a 174% longer LOS compared to patients without a positive CAM score (log OR: 1.01 95% CI: 0.96, 1.05 ; p-value: <.001).

Conclusions

The results of this study support existing literature that high risk medication prescribing increases risk of delirium in geriatric patients. Patients who were prescribed high risk medications and/or experienced delirium have a longer LOS. The next steps include planning education based interventions at the nursing and physician levels to help prevent delirium and mitigate the prescribing of high risk medications in a geriatric population.

A208 Encore Presentation

Integrating Evidence-Based Communication Skills About Serious Illness into Healthcare Practice

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Background: Empathic, honest communication between physicians and patients/families is the foundation of shared decision making and patient centered care; however, few physicians have received formal communication training. In this quality improvement project, we assessed whether training using simulated patients with the VitalTalk program improved geriatricians' confidence and competence in communicating with patients and families about serious illness.

Methods: All geriatricians (N=22) at the Queen's University Medical Group and University of Hawaii received a 4-hour VitalTalk training via Zoom or a web-based program. After training, evaluations and a retrospective pre-post survey were completed and additional resources from VitalTalk were provided. Data from baseline and 1-month follow-up were analyzed using descriptive statistics and paired t-tests, comparing differences between pre and post scores.

Results: Baseline mean scores on quality of training were high (range 4.45 to 4.95 on a 5-point Likert scale with 1=poor and 5=excellent). Using a retrospective pre-post questionnaire, there were significant improvements after training in skills in discussing clinical status (3.68 to 4.14, p=0.0004), goals of care (3.73 to 4.18, p=0.0018) and advance care planning (3.82 to 4.23, p=0.0038). Results were similar in comfort levels in discussing these subjects. There were also significant improvements in self-assessment of communication skills across eight domains: assessing patient knowledge (p=0.0004), giving a headline (p< 0.0001), responding to patient's emotions (p=0.0002), aligning with patient's hopes and sharing concerns (p=0.0002), managing uncertainty and conflict (p< 0.0001), promoting prognostic awareness (p=0.0018), eliciting patient's goals and values (p=0.0038), and recommending treatment to support values (p=0.0106). At 1-month follow-up, 18/22 (82%) had used skills gained from training and continued to rate the training highly.

Conclusions: Communication skills are crucial for clinicians to provide patient centered care. Early results suggest that formal evidence-based training improves skills and comfort levels in communicating about serious illness with patients and families. We plan additional PDSA cycles to increase long-term use of these skills.

A209

Striving to THRIVE in a Safety Net Geriatrics Clinic

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Background: Social determinants of health (SDOH) have been shown to affect the morbidity and mortality of older adults, yet few tools exist for clinicians to screen patients and connect them with much needed resources. The aim of our quality improvement project was to increase use of the THRIVE screen, a validated EHR based SDOH screening and referral model, in a geriatric primary care clinic affiliated with a safety net hospital where 74% of patients are underrepresented minorities.

Methods: Geriatric clinic providers were surveyed to identify barriers to using the THRIVE screen. Based on the results, we implemented an in-person team training intervention among clinic staff and providers with emphasis on geriatric fellows, and compared pre/post rates of screening completion. Descriptive statistics were generated to compare patient responses. Eligible patients included those who were seen in the geriatric fellows' clinic who had not had a THRIVE screening in the past 6 months.

Results: Although all clinic providers (n = 10) strongly agreed that all patients should be screened for SDOH, the most cited barriers were lack of time to complete the screening (21%) and lack of knowledge about both the screening tool (18%) and the resources available for patients (28%). Across the entire study (pre and post intervention), 27 out of 62 eligible patients (44%) completed the THRIVE screen (mean age of 77, 78% female, 48% English-speaking, 26% Haitian Creole, 7% Spanish, 19% other). Prior to the intervention, only three out of 17 eligible patients (18%) were screened and no SDOH related needs were identified. Over the course of five weeks after the intervention, 24 out of 45 eligible patients (53%) were screened and 29%

of respondents identified a SDOH related need. The most cited needs were related to transportation (57%), paying for utilities (43%), and food insecurity (29%).

Conclusions: The team training intervention implemented in this study increased THRIVE screening rates and identified patients' unmet social needs. Future studies should explore the drivers behind the low screening rates among non-English speaking patients and explore the barriers of patient reception of resources based on identified SDOH related needs.

A210

Patterns for ED Transfer and Re-admission Rates of a VA Community Living Center

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Background:

The Veterans Administration (VA) provides complex patients with post-acute care at the Community Living Centers (CLC) after hospital discharge. These patients are at high risk for acute changes in health; however, ED transfer can be costly and disruptive to patient recovery. In this study, we examine patterns surrounding ED transfers and hospital readmissions at the Philadelphia VA CLC to identify strategies to limit avoidable transfers.

Methods:

This prospective, observational study included all veterans transferred to an ED from the VA CLC from September to November of 2022. We conducted chart review to identify veteran characteristics, including patient medical comorbidities, timing of transfer and reason for transfer. A hospitalist team conducted a second, independent chart review to evaluate if the decision for ED transfer was medically appropriate.

Results:

There were 35 transfers from the VA CLC to an ED during this period. Of these, 60% were from the long-term unit and 51.4% were transferred during weekday day shift. 71.5 % of patients who underwent ED evaluation were admitted to the hospital and the average length of stay for admitted patients was 8.0 days. The most common reasons for transfer were SIRS, hypoxia, and wound infection. Of note, 38.2% of patients were undergoing active chemotherapy or radiation at the time of transfer. Hospitalist chart review found 20% of transfers were avoidable and could possibly have been safely handled in the CLC.

Conclusions

ED and hospital readmission rates make up four of the quality indicators for Medicare and Medicaid CMS Star rating using the cost based measure indicators. Potentially avoidable transfer should be prevented both for cost and patient comfort, while not sacrificing safety. Our preliminary data seem to show that the vast majority of our transfers were unavoidable and patients were put in their correct level of care.

A211

Improving Vaccination Rates at a Veteran's Affairs Community Living Center: A Quality Improvement Initiative

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Obtaining routine vaccinations is important for the health of individuals and populations. Older adults with comorbidities are especially at risk for poor outcomes from vaccine-preventable diseases. At the Philadelphia VA Community Living Center (CLC), providers noted low rates of vaccinations, especially those not in the minimum data set. We assessed baseline rates for all age-appropriate immunizations at our CLC, then designed and implemented an intervention to improve vaccination rates using a quality improvement approach.

Our population included sub-acute rehab (SAR) and long-term care (LTC) residents at the Philadelphia VA CLC (SAR n=17, LTC n = 67; 98% men, 40% white, 57% black). We assessed baseline vaccination rates by manual review of resident charts at a single timepoint. Using an A3 template, we created a process map, conducted stakeholder interviews, performed a root cause analysis, and developed an action plan. Subsequent vaccination rates were tracked by manual chart review.

Baseline rates of incomplete vaccine series for combined SAR and LTC were pneumococcal 30%, shingles 82%, tetanus 23%, flu 21%, COVID 31%. Our pre-implementation analyses identified multiple barriers, including provider knowledge gaps about vaccine recommendations and suboptimal use of the electronic medical record (EMR). Our action plan included an educational session for providers about vaccinations, a hands-on targeted EMR tutorial, and a vaccine checklist template. We encouraged providers to discuss vaccinations during multiple points of care and supplied a handout with suggested workflow. Preliminary data one month after implementation showed improving rates of every vaccination (rates of incomplete series: pneumococcal 24%, shingles 62%, tetanus 17%, flu 2%, COVID 27%). We plan to collect data at additional time points for further analysis.

Rates for recommended vaccines were low at our CLC, despite these vaccines being part of routine preventative care. Many of the barriers we identified are likely similar at other institutions. Preliminary data shows that our action plan is increasing vaccination rates, which will contribute to overall improved health of the veterans who reside in our CLC.

A212

Optimizing Osteoporosis Intervention Post Fragility Fracture in Subacute Rehab

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Background: Fragility fractures or fractures sustained from low impact injury (e.g., falls from standing height or less) serve as strong predictors of underlying osteoporosis, a disease that is often underdiagnosed & untreated in hospital discharged fracture patients. Although 20% of admissions to subacute rehabilitation (SAR) from hospitals are fall related, addressing osteoporosis after fragility fractures is a frequent missed opportunity to educate and intervene with patients regarding recurrent fractures and osteoporosis. We aimed to improve osteoporosis identification and treatment for patients admitted post fragility fracture to a 150 bed SAR facility through staff and patient education and a structured protocol.

Methods: We identified via chart review of the electronic medical record all patients with a primary admission diagnosis of fracture to a single SAR facility from 7/1/2021- 10/31/2021 (baseline group) and 7/1/2022 – 11/4/2022 (intervention group). Interventions included education of patients, families, and providers (via brochures, creating a standard admission protocol). Also, initiation of at least calcium-vitamin D, bisphosphonate therapy or DEXA were tracked as an intervention, & appropriate referral on rehab discharge. Rates of interventions were calculated in both groups and chi-square analysis was utilized to compare post vs pre-interventional groups.

Results: The study included 92 total patients, aged 68 –101 years (mean 85.6). The most common fractures were femur fractures (45%), vertebral (23%), pubic rami (13%), humerus (11%), tibial (5%), and others (3%). Of the 47 patients in the pre-intervention, 21 received any intervention for osteoporosis. The post-intervention group included 44 patients, of which 43 had any intervention for osteoporosis. Chi-square analysis performed with age and gender showed significant increase in osteoporosis intervention ($P<0.0001$) in the post-intervention group for all ages and genders.

Conclusion: This study highlights benefits of a structured admission protocol and education program to successfully increase identification and intervention in patients post fragility fractures in the SAR setting. Future studies to evaluate rates of guideline directed therapy at SAR discharge and over time post-discharge can explore long-term benefits of these interventions.

A213

Gabapentinoid Prescribing in Veterans Administration Emergency Departments Implementing EQUiPPED

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Background

Prescriptions for gabapentinoids have increased in recent years prompting FDA's warning of respiratory depression with concomitant use of opioids.

EQUIPPED is a quality improvement program that focuses on medication safety in older adults discharged from the ED. We evaluated trends in gabapentinoid prescribing at VA EDs where the EQUIPPED medication safety program got implemented.

Methods

We report results of a secondary analysis of VA's EQUIPPED implementation trial dataset. Eight VA facility EDs were randomized to implement EQUIPPED with either automated electronic audit and feedback (Dashboard site) or monthly in-person (1:1) audit and feedback with academic detailing to prescribers by a local EQUIPPED champion with access to overall prescribing data. All sites receive didactic education involving the AGS Beers Criteria, EMR order sets with options for preferred medications in older adults, and monthly provider prescribing audit and feedback for 12 months. Prescribing recommendations for gabapentinoids were not part of the order sets or feedback reports. Gabapentin prescriptions written upon ED discharge within and across groups were compared using Poisson regression, accounting for differing volumes of prescriptions between sites as well as potentially over time.

Results: In the post implementation phase of EQUIPPED, the number of gabapentinoid discharge prescriptions remained unchanged in the 1:1 feedback group while there was an increase in the dashboard group.

Conclusion

These results suggest that EQUIPPED with in-person feedback may influence prescribing behaviors beyond medications specified in the audit and feedback report alone. Additional studies of potential spillover effects of the EQUIPPED program to improve prescribing safety toward older adults may be warranted.

Results

	Rx written	Baseline (%)	Post implement (%)	p-value	Within Groups Odds Ratio	Across Groups Odds Ratio
1:1 Feedback Group	Total Rx	17,744	23,648			
	Gabapentinoid Rx (%)	130 (0.73)	179 (0.75)	0.7771	1.03 (0.8- 1.3)	
Dashboard Feedback group	Total Rx	26,936	36,795			1.35 (1.13- 1.6)
	Gabapentinoid Rx (%)	161 (0.59)	376 (1.02)	<.0001	1.7 (1.4- 2.1)	

§ Poisson regression was utilized to determine statistical significance, comparing # of Rx baseline and post implementation.

A214

Mayo Clinic Dementia and Multimorbidity Neighborhood: a Pilot Quality Improvement Project.

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Background: Nearly 33% of older adults struggle with cognitive impairment, and 20% are frail. These syndromes lead to care fragmentation, high utilization of acute care services, and patient and care partner distress. Older adults experience challenges navigating medical treatment and functional restoration. We initiated a quality improvement practice redesign based on the outpatient collaborative care Geriatric Clinic Model to help older adults navigate and utilize available resources. This model was based on the learning from the Care Ecosystem Model.

Methods: This project was aimed at arming older adults with cognitive impairment and/or frailty with support needed to meet their personal goals. A needs assessment revealed care barriers. Based on available resources, our group designed a multipronged, multidisciplinary intervention including pre-consult telephonic interview, in-clinic standardized assessment and post-visit partnership with a trained, non-licensed patient navigator. The patient navigator connects telephonically with the patients and their partners to work on individualized goals identified during the clinical encounter. The patient navigator mitigates barriers and serves as a liaison to the clinical team. The team evaluated patient needs, including immediate care needs, medication reconciliation/review, behavioral symptom management, safety recommendations, care partner assessment, and decision-making capacity/advance care planning. Our quality improvement process involved initial implementation metrics, qualitative reflections on implementation, and demographic characteristics of our initial pilot.

Results: From 10/4/22 to 11/15/22, we evaluated sixteen patients with a fill rate of 76%. We found that 19% were male, and 94% had mild cognitive impairment or dementia. In the cohort, 6/16 patients had both frailty and dementia, with frailty defined as 3 of 5 phenotypic findings. Qualitatively, the team found the pre-visit consultation with the caregiver useful for the upcoming consultation.

Conclusions: We found that over 90% of patients using a geriatric clinic model had dementia, with 40% having frailty and dementia. The patient navigator helped to address multiple common issues, including living situations and caregiver support. The use of the navigator and dedicated interdisciplinary team consultation can provide additional support for patients with cognitive or physical impairment.

A215

Employing Nursing Students to Implement the AGS CoCare: HELP Model

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Given population trends, a nursing workforce trained to provide high-quality geriatric evidence-based care is critical. However, student nurses receive limited formal geriatric education in undergraduate programs and many report negative perceptions of working with older adults. Hospitals must implement innovative models to address these gaps. Via continuous quality improvement methodology, we leveraged the AGS CoCare: HELP model to ensure a pipeline of gero-competent nurses with an emphasis on recruiting students from diverse backgrounds. Junior and senior level student nurses are employed by our organization as Student Geriatric Associates (SGA). SGAs are trained to implement the HELP protocols, undergo competency validation, and are overseen in the clinical environment by Master's prepared geriatric nurses. SGAs are deployed following a comprehensive geriatric assessment, document interventions in the medical record, and communicate with interprofessional team members. SGAs receive career coaching for transition to nursing practice. Since 2016,

demonstration of feasibility and acceptability allowed us to expand the AGS CoCare: HELP model with SGAs from a pilot in hospital medicine to a sustainable program in cardiology, oncology, neurology, and emergency medicine. To date, we have employed 119 SGAs from 15 local nursing schools. 41% (N=49) of SGAs were from diverse backgrounds. SGAs work an average of 8 hours per week and spend 6-24 months in the role. In 2021, SGAs performed HELP interventions with over 1,400 patients with an average age of 77, of whom 38% identified as non-White, non-Hispanic. Following graduation, 52% (N=62) of SGAs were hired into nursing positions in our organization and to our knowledge, another 17% were employed in other settings that include older adults. Our innovative approach to implementation of the AGS CoCare: HELP model with nursing students has allowed us to provide evidence-based geriatric care for hospitalized older adults while developing a diverse and geriatric practice-ready nursing workforce. Future study will include quantitative assessments of students' geriatric knowledge and attitudes toward working with older adults and qualitative evaluations of their satisfaction and experience as SGAs.

A216

Relational Coordination Tool Informs Interdisciplinary Team Dynamics in a Hospital Mobility Program

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Background The theory of relational coordination (RC) is a framework to understand the coordination of work through interrelationships on the following domains: shared goals, shared knowledge, mutual respect, and quality of communication. The RC measurement tool has been used in previous studies to identify areas of strength and opportunity in a team setting. We aim to understand if this tool can be adapted and used to understand team dynamics in an interdisciplinary hospital mobility program.

Methods The RC survey questions were adapted to assess mobility team interactivity. Survey was administered to a pool of physicians, advanced practice providers (APP), nurses, patient care assistants (PCA), physical and occupational therapists (PT and OT), case managers (CM), safe patient handlers (SPH), and mobility technicians from 09/28/2022 to 11/01/2022 from one surgical and one medical hospital unit at a large academic medical center. The survey uses a five-point Likert Scale (1-5; 5 is higher relational coordination) except for the problem-solving question (1-2, 2 is higher relational coordination). A multi-layer mean analysis was used to assess dynamics by role function. Asymmetrical matrix diagrams were built from the data identifying the strong and weak ties among the mobility program stakeholders.

Results There were 122 responses from two hospital units to the survey. We found significant differences in role dynamics between a surgical and medical unit. For the surgical unit, the strongest intra-team dyad was PTs relating to OTs (RC 4.48) and the weakest was SPH relating to physicians, APP, and CM (RC 1.00). On the medical unit, the strongest intra-team dyad was OTs relating to PTs (RC 4.57) and the weakest relationship was APPs relating to SPH (RC 1.00). In addition, nurses on the surgical unit had lower RC scores across all domains than the nurses on the medical unit (average RC 3.72 vs 3.91 in the RC domains).

Conclusions The RC measurement tool can be used to assess communication and relational dynamics in an interdisciplinary mobility program and differences between team dynamics on surgical and medical hospital units may exist. More research is needed to understand how improving these team dynamics may work to bolster patient activity and mobility outcomes for hospitalized patients.

A217

Implementing the 4 Ms in a Geriatric Oncology Clinic to Create Age Friendly Cancer Care

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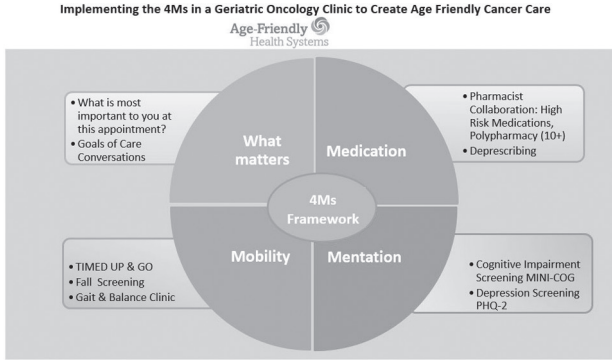
Over 50% of cancers occur in people ≥70 years, and 60% of all cancer deaths occur in this population. Cancer care for the older adult is complex related to comorbidities, age related changes and various social needs. Patients may experience cognitive and physical limitations during their cancer journey. As an IHI AFHS first cohort, the 4M model was adapted in a geriatric oncology clinic. Purpose of this project was to operationalize 4Ms by systematic screening with Senior Adult Oncology Program 3rd version (SAOP-3). Over 27 months, new patients were screened and recommended consults were proposed to the provider. **Mentation:** 1538 screened with Mini-Cog and the PHQ-2 with 280 missing results. Mini-Cog was abnormal in nearly 20% (n=246) and PHQ2 positive at 7% (n=91). **Mobility:** 1116 patients screened with TUG scores ranged 9.25 – 20.37 seconds and 14% (n=152) of these patients reported a fall in the last month. A fall or functional decline resulted in referral to Gait & Balance Clinic, outpatient physical therapy or home visit environmental safety check. **Medication:** Histories obtained and screened in 1044 patients and 80% (n=836) prompted a pharmacy consult for high risk medications and deprescribing opportunities (proton pump inhibitors or potentially inappropriate medications). **What Matters Most:** All clinic patients asked to share what was most importtant for visit with documentation in the record for provider review. "Test results" and "plan of care" discussions accounted for 46% of the patients' highest priorties; "wellness/prevention" in 16.5% and "symptom management '' in 12%. Review of these categories enabled the provider team to address in real time individual needs of patients and families. Integrating the 4Ms in workflows and process, allows outcomes to be measured for this population in the future.



A218

Development of Age-Friendly Primary Care in an Academic Center

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Background: The University of Oklahoma became an Age-Friendly Health System (AFHS) in June 2020. We describe initial implementation of 4Ms care in 3 primary care clinics.

Methods: Internal Medicine (IM) and Geriatrics were recognized at Level I in December 2020, Level II in October 2021, and Family Medicine (FM) at Level I in February 2022. Data from 3rd quarter 2022 was compared to baseline. Modified EHR templates captured 6 QI measures:

- What matters most to you today? What is most important to you about managing your health in the long run?

- Advance care planning (ACP) documents and healthcare proxy

- Cognitive screen with Medicare Annual Wellness Visit (AWV)
- Caregiver of patients with dementia referral to Alzheimer's Association
- Fall-risk screen per visit
- Co-prescribed opioid and benzodiazepine (O+B)

Positive screens were sent to providers for clinical decision-making with educational tools. Fall-risk triggered addition to the problem list and education was printed at checkout. Caregivers referred to Alzheimer's Association received 1:1 care consult by local chapter. Providers received their QI data quarterly.

Results: Positive trends were noted for all measures in Geriatrics; IM and FM in ACP, cognitive assessment, with nascent growth in what matters. Least improved was co-prescribed O+B, needing further intervention. Workflow barriers include COVID-19, staffing loss, delays in hiring, retraining, and limited AWV due to virtual visits and workflow inefficiencies.

Conclusions: An academic primary care system successfully implemented 4Ms care, with opportunities for improvement, informing inter-clinic discussion and workflow change. Future interventions will focus on AFHS training, nurse and provider engagement, high-risk medication tapering, documentation and receipt of goal-concordant care.

OU Health Age Friendly Quality Metrics

Measure	GERI '19	GERI '22	% change	IM '19	IM '22	% change	FM '20	FM '22	% change
What Matters	0%	33%	+ 33%	0%	4%	+ 4%	0%	3%	+ 3%
ACP	6%	60%	+ 54%	6%	30%	+ 24%	9%	20%	+ 11%
Cog Screen	3%	62%	+ 59%	43%	63%	+ 20%	27%	36%	+ 9%
Falls Screen	76%	97%	+ 19%	95%	92%	- 3%	83%	87%	+ 4%
Opiod+Benzo	11%	6%	- 5%	24%	32%	+ 8%	20%	23%	+ 3%
CG Support	0%	24%	+ 24%	0%	4%	+ 4%	2%	0%	- 2%

A219

Racial and ethnic disparity in 4M-based telehealth primary care and healthcare utilization in a provider shortage area

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Backgrounds: Age-Friendly Health System 4M framework was applied to train geriatrics workforce serving primary care via telehealth in a provider shortage area. To evaluate the impact of telehealth primary care, we evaluated the racial and ethnic disparity of 4M-based telehealth primary care and its impact on healthcare utilization.

Methods: In an urban safety-net primary care health system, we analyzed 4,318 community-dwelling aged 65 and older from July 2019 to June 2022. Primary outcomes were the numbers of telehealth primary care visit per year by race and ethnicty. Secondary outcomes were the numbers of hospitalization per year by race and ethnicity. Race and ethnicity was divided by White, non-White Hispanic, Black, Asian, and others (more than two races, other races, no report). We used multi-level multi-variate regression models with controlling covariates of age, gender, education attainment level, Katz ADL index, diabetes (yes/no), cognitive impairment status (yes/no), home health or support status (yes/no). Odds ratios with cooresponding p-values were analyzed.

Results: Study particpants's race and ethnicity profile was White (48%), non-White Hispanic (18%), Asian (15%), Black (13%), other (6%). Non-Hispanic White (odds ratio = 0.28), Asian (odds ratio = 0.27), and Black (odds ratio = 0.34) were associated with fewer telehealth visits per year compared to the counterpart White ($p < .001$, respectively). Non-White Hispanic with telehealth visit (odd ratio = 0.76) was associated with fewer hospitalizations compared to the counterpart White ($p < .01$). Asian or Black with telehealth visit were not associated with hospitalizations compared to the counterpart White ($p = .71$, 44, respectively).

Conclusions: Racial and ethnic dispairy in 4M-based primary care telehealth was observed. In non-White Hispanic older adults, telehealth primary care is a promising health disparity closer by reducing hospitlization in a clinical interpretation of more effective care coordination and plans in this group. More representative study is planned to examine above findings' reproducibility in a provider shortage area.

PRESIDENTIAL POSTER SESSION B

Thursday, May 4
5:00 pm – 6:00 pm

B1

Not Always Weakness Due To Physical Conditioning: A Curious Case of Copper Deficiency

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Background:

Copper is one of the essential trace elements required by the human body. Overall, copper deficiency is rare in older adults because it is readily consumed and has a low daily requirement. Symptoms of copper deficiency typically includes hematologic or neurologic manifestations, but due to the non-specific quality of symptoms, copper deficiency is often not considered as a potential etiology. This case illustrates a patient presentation of generalized weakness due to copper deficiency.

Case Presentation:

An 86 year old male presented to a tertiary care center for generalized weakness. The patient had vague memories of the events leading to hospital presentation. Family reported the patient could not get out of bed, move arms or legs, or sit himself forward. Initial bloodwork evaluation was significant for anemia.

After admission, inpatient geriatric medicine consultation was obtained for weakness. On medication review, the patient was found to be taking zinc supplements. Initial recommendations included evaluation for potential copper deficiency. Bloodwork revealed low ceruloplasmin, and undetectable copper level. The patient was started on copper supplementation. Additional recommendations included to hold the patient's proton pump inhibitor and to consider stopping the patient's allopurinol.

Discussion:

Normal total copper blood levels range from 62 to 140 mcg/dL. Common etiologies of copper deficiency include: malabsorption, prior gastric surgery, enteropathies, excessive copper chelators usage, chronic utilization of total parenteral nutrition, and low dietary intake. Excessive zinc intake can inhibit copper absorption, leading to reduced copper levels. From a medication standpoint, proton pump inhibitors and allopurinol usage can also lead to low copper levels. Copper deficiency can cause anemia and myeloneuropathy, which can manifest as gait disturbances or generalized weakness. Low copper levels have also been suggested to be associated with cognitive decline in older adults.

Conclusions:

Myeloneuropathy is a potential neurological manifestation of copper deficiency. In this patient, generalized weakness resulting in an inpatient evaluation uncovered a symptomatic copper deficiency. This case illustrates the need to maintain an appropriately broad differential when evaluating generalized weakness, as well as to identify potential contributors to low copper levels.

B2

COVID- 19 induced Myasthenic Crisis in an Older Adult

M. Annabi-Rabadi, R. Ahmed, H. Guzik, P. Solomon. *Division of Geriatrics and Palliative Medicine, Department of Medicine, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Hempstead, NY.*

Background: Myasthenia Gravis is an autoimmune musculoskeletal disorder involving an antibody mediated attack at the postsynaptic membrane of the neuromuscular junction. It is well known that viral infections precipitate myasthenia gravis, and there has been some cases of COVID-19[1] causing new onset myasthenia gravis and myasthenic crisis. The case described below demonstrates an episode of myasthenic crisis developing following COVID-19 infection in an older adult.

Case Presentation: A 90 year old female with a past medical history of depression and hypertension presented to the hospital with symptoms of lethargy and dyspnea one week after testing positive for COVID-19, and was found in hypoxemic respiratory failure. It was presumed that the symptoms and respiratory failure was likely due to COVID-19. While hospitalized, a CT-scan ordered to further evaluate the respiratory failure noted a mediastinal mass. Follow-up labs revealed an elevated acetylcholine receptor antibody level. At the time of discharge, the patient's cognitive status was significantly impaired, with dysphagia, dysarthria, neck weakness, and difficulty ambulating. The patient was treated with efgartigimod infusions and had notable symptom improvement.

Discussion: Myasthenia gravis typically involves the acetylcholinesterase inhibitor antibody, but can also involve anti-MUSK antibodies. As a result, this causes fatigable muscle weakness and can manifest as isolated ptosis and diplopia. Some propose that these symptoms may be caused by the viral infection of the nerve cells themselves or from autoimmune mechanisms. Treatment of myasthenia gravis includes anticholinesterase agents, immunosuppressive and immunomodulators, and thymectomy. The patient described was treated with Efgartigimod infusions, an IgG antibody molecule designed to promote degradation of IgG autoantibodies.

Conclusion: Viruses such as COVID-19 may increase the risk of myasthenic crisis and respiratory failure. Although uncommon, it can lead to a poor prognosis. This case demonstrates a rare sequalae of COVID-19 precipitating myasthenia crisis in an older adult. Urgent evaluation and treatment of COVID-19 and myasthenia gravis may improve symptoms but requires further studies.

B3

Sometimes You Cannot Trust Your Gut: A Case of Malabsorption-Induced Delirium

A. J. Armstrong, E. M. Jeffries, K. J. Cummings. *Geriatrics, Weill Cornell Medicine, New York, NY.*

Case: A 65-year-old woman with history of hypertension, type 2 diabetes, Roux-en-Y gastric bypass performed nine years prior, frequent falls, depression and osteoporosis presented with weakness and altered mental status. She was admitted to the surgical service for upper endoscopy, initiation of total parenteral nutrition, and evaluation for gastric bypass revision. She presented to our geriatrics consult service after developing delirium during her hospitalization. Our service noted persistent cytopenias that we suspected were due to secondary nutritional deficits, and we therefore recommended obtaining vitamin and micronutrient levels. The patient was found to be markedly deficient in Vitamin A, Vitamin C, Zinc, and Copper. With additional supplementation of listed micronutrients to her total parenteral nutrition, delirium resolved.

Discussion: Delirium is among the most common mental disorders encountered in patients with medical illness, particularly among geriatric patients. The cascade set off by delirium can result in loss of independence, institutionalization, increased morbidity and mortality. For trainees in geriatrics, the multi-factorial nature of delirium and the myriad contributors to delirium development is a core learning topic. This case of delirium, which stemmed from severe micronutrient deficiencies and quickly resolved with parenteral nutrition and vitamin supplementation, highlights the potentially underrecognized role of malabsorption as a chief cause of delirium.

Conclusion: As America ages and our patient demographics shift, the number of patients with history of prior gastric bypass will also expand. This case of a geriatric patient with a nearly-decade-old gastric bypass presenting with sequelae from malabsorption complicated by delirium illustrates the importance of evaluating for malabsorption as a potential cause of delirium. Moreover, the metabolic changes associated with the aging gastrointestinal system, plus already existing constellation of malabsorptive conditions, create an even broader list of causes of malabsorption in elderly patients. With malabsorption culminating in micronutrient and vitamin deficiencies, which in turn can affect cognition, it will be increasingly important to recognize malabsorption as a possible mechanism for delirium and include it within our standard framework for delirium evaluation.

B4

Acute Chest Pain as a Presenting Symptom of Anemia Associated with Metastatic Melanoma

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Background: Melanoma is diagnosed at the local stage in 81.6% of the cases per the NIH National Cancer Institute. Stage IV Melanoma makes up 4% of the diagnosed cases. Furthermore, the average 5-year survival rate for melanoma of all stages has risen to 93.7% in the US, however the survival for stage IV disease remains only 31.9%. This case describes an instance of acute chest pain work up that yielded an eventual diagnosis of jejunal, prostatic and bony metastasis of melanoma (Stage IV Melanoma) without a primary skin lesion or any other presenting signs or symptoms.

Case: A 68-year-old male with history of essential hypertension, poorly controlled Type 2 diabetes, coronary artery disease with stents placed in 2017 and posterior cerebral artery infarct presented with frequent falls. He was referred to physical therapy for balance and physical deconditioning. At his physical therapy session, he developed severe acute chest pain and shortness of breath. The emergency department obtained labs significant for hemoglobin of 6, MCV of 73 and iron saturation of 3.6, consistent with iron deficiency anemia. High sensitivity troponin peaked at 88. He was admitted to the hospital for 5 days, during which time the patient was found have a fungating mass in his small bowel (Jejunum) on CT abd/pelvis with associated clots on colonoscopy. Pathology results from the mass were significant for PRAME (PReferentially expressed Antigen in MElanoma), which is highly sensitive and specific for malignant melanoma.

The patient reported no melena or blood in stools prior to his presentation. Further work-up, with PET scan and prostate and bone biopsies, supported melanoma with metastases to prostate, thoracic spine and right scapula. He was later referred to Dermatology and Ophthalmology where no primary lesion of melanoma was identified. Subsequent evaluation and discussion with Hematology Oncology and Palliative Care led to a shift in goals of care towards comfort, considering extensive metastatic disease.

Discussion: This patient's case highlights the importance of a complete work-up of chest pain including both CBC and troponins followed by other studies such as imaging. It also emphasis the importance of yearly skin exams and regular eye exams in geriatric patients, to diagnose melanoma at earlier stages, for those individuals who do have primary skin or ocular lesions, to yield better prognosis.

B5

A new form of elder abuse: Gaslighting with a diagnosis of dementia

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Background: Elder abuse, including domestic violence grown old, is a complex form of family violence. We have now seen several cases of domestic violence in which the abuser uses the diagnosis of dementia, actual or solely reported, to maintain control of a victim.

Case: A 72 yo female presented to our hospital after being dropped off by her husband. She reports to ED staff that her husband has been physically and emotionally abusive toward her for years. Each time she has tried to leave her husband he has called the police and told them she wandered away and has dementia convincing them to bring her back to the home. She had not seen a physician in several years and had no formal diagnosis of dementia. Her husband had restricted her access to her phone and prevented their children from visiting for one year.

On our examination there was evidence of cognitive impairment and significant trauma but the patient was able to consistently report the same story of abuse. When collateral from the children was obtained a long history of reported domestic violence and child abuse was described and they confirmed the isolating and controlling behaviors that the patient had reported.

Discussion: Gaslighting, as defined by Mirriam-Webster, is "*the act or practice of grossly misleading someone especially for one's own advantage*." It is a core component of many violent relationships and is an effective tool to keep victims in a relationship. To our knowledge, using a diagnosis of dementia to gaslight older victims of domestic violence and other service providers, as happened in this case, has not been described in the literature.

Conclusion: In order to identify this type of abuse we encourage any provider facing an older adult who is reporting violence to reach out to other family members, providers, and if necessary to observe the patient in the hospital to obtain an objective assessment.

B6

Musical Ear Syndrome in a 96-year-old Veteran

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Background: Musical hallucinations (MH), also called Musical Ear Syndrome, are sensory experiences of tunes or melodies unrelated to external stimuli. They are an infrequent but likely underreported type of auditory hallucination. Etiologies include focal cerebral lesions, epilepsy, psychiatric disorders, drugs, toxic metabolic conditions and hearing loss. There is a lack of awareness of the association between sensory loss and hallucinations.

Case Description: A 96-year-old Black Veteran with severe bilateral sensorineural hearing loss presented to geriatric clinic complaining of MH. For the past year, he experienced episodes of hearing musical sounds such as choir singing that he recognized as not real. His hearing had declined over 30 years, and recently hearing aids provided little help. He had previously declined cochlear implants. His wife also noted mild memory loss but no functional decline. He did not have preexisting psychiatric or neurologic disorders. There were no visual hallucinations or parkinsonian features to suggest early dementia with Lewy bodies. His diagnostic workup was notable for a Montreal Cognitive Assessment score of 21/30 with deficits in delayed recall. A brain MRI showed chronic microvascular ischemia but no major structural lesions. He was referred to neurology and a video monitored EEG did not show seizure activity during reported hallucinations. He was diagnosed with mild cognitive impairment and musical ear syndrome. He was educated on the syndrome and encouraged to listen to music with a head set.

Discussion: Studies have demonstrated a link between sensory deprivation and hallucinations. The prevalence of hallucinations is higher in conditions like social isolation, vision loss (Charles Bonnet syndrome) and hearing loss. In a cross-sectional study there was a linear correlation between severity of hearing loss and hallucinations, with a prevalence of 24% in severe hearing loss. A proposed mechanism involves sensory deafferentation: diminished sensory input leads to abnormal excitation and disinhibition of cortical auditory networks. In older patients, it is important to recognize MH as a potential consequence of hearing impairment. They can be diminished by improving hearing or by increasing sensory input with music. These patients can be reassured that the hallucinations are not due to dementia or psychosis and sometimes even improve spontaneously.

B7

Bullous pemphigoid: A paraneoplastic syndrome in the setting of lung adenocarcinoma

L. Buda, L. Kerzner, K. Sheets. *Geriatric Medicine, Hennepin Healthcare, Minneapolis, MN.*

Background: Bullous pemphigoid is the most common autoimmune blistering disease. Incidence is highest in older adults and is increasing, possibly due to an aging population as well as the rise in use of disease-triggering drugs and accurate disease identification. It is often associated with underlying disorders including neurologic diseases such as Parkinson's disease, dementia and strokes, hematologic and non-hematologic malignancies, and medications.

Methods: A case is presented, relevant literature is reviewed and implications for older adults are assessed.

Results: A 77-year-old woman with past medical history of hypertension, pulmonary nodules and tobacco use disorder in sustained remission presented with new-onset pruritic rash on her trunk and extremities one month after an increase in the dose of amlodipine. Prodromal bullous pemphigoid was considered, though findings of dense dermal hypersensitivity reaction with eosinophils on skin biopsy favored drug reaction. Amlodipine was discontinued. Concomitant non-contrast lung CT for pulmonary nodule surveillance showed progression of a semisolid nodule, characterized on biopsy as primary lung adenocarcinoma. Her rash progressed to bullae with diffuse mucocutaneous involvement. Repeat skin biopsy showed diffuse linear IgG and C3 along the dermal-epidermal junction, consistent with bullous pemphigoid. She was started on high-dose prednisone and doxycycline with interval improvement in the rash. High dose prednisone was tapered to minimize immunosuppression during lobectomy. After resection of the cancer her bullous pemphigoid was remarkably well-controlled despite lower than usual dose of prednisone, prompting suspicion that the pemphigoid was a paraneoplastic syndrome. Her bullous pemphigoid remained well-controlled after discontinuation of steroids.

Conclusions: Case reports have described bullous pemphigoid as a paraneoplastic syndrome in the setting of small cell and squamous cell lung cancer, but there is no identified documentation of relation to lung adenocarcinoma. This case adds to the small but growing body of literature connecting bullous pemphigoid to neoplasms. It also reminds clinicians to include prodromal bullous pemphigoid as a diagnostic consideration for pruritic rashes in older adults. Age-appropriate cancer screening is highly recommended in older adults with new diagnoses of bullous pemphigoid.

B8

Diagnostic Clues in the Fridge: A Case Study of Gastroenteritis

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Background: The elderly (>85 years of age) are more susceptible to morbidity and mortality from foodborne-illness compared to younger individuals. A 2022 USPSTF review found that the evidence was inconclusive to support routine vision screening among older adults; however, authors confirmed that impaired visual acuity is associated with reduced ability to perform activities of daily living.

Methods: An 89-year-old female residing in the independent section of a CCRC with progressive vision loss (20/100 or worse despite correction) and recurrent bouts of diarrhea attributed to "IBS" called the healthcare team with complaints of sudden onset severe abdominal pain, vomiting, and diarrhea. Due to the severity of the illness, the patient was unable to ambulate to the physician onsite clinic for an evaluation – a home visit was selected. The patient was clinically diagnosed with acute gastroenteritis. The home environment was notably cluttered – overflowing trash, soiled dishware on countertops, and multiple expired items in the refrigerator covered with mold. The patient reported that she believed food in the refrigerator was satisfactory for consumption and did not have an altered taste quality. It was evident that the patient's visual impairment contributed to her ability to perform self-care and needed to accept additional help with IADLs (i.e. able to read expiration dates). The healthcare team immediately removed expired or questionable items from the apartment.

Results: The patient was informed that the recurrent gastrointestinal complaints are due to foodborne illness. She gave permission to disclose her condition to her primary caregiver who subsequently accepted responsibility for inspecting the refrigerator each week after delivering groceries. The patient scheduled cataract surgery to optimize vision.

Conclusion: Valuable insights are gained from evaluating a patient in their home environment which are out of reach during an office encounter. Vision assessment should be included in the workup for older adults presenting with acute illness and especially recurrent gastrointestinal complaints.

B9 Resident Presentation

Altered Mental Status: Catatonic or Delirious?

A. Chen, K. Fung. *Rutgers New Jersey Medical School, Newark, NJ.*

Background:

Catatonia and delirium are different diagnostic concepts but some clinical features overlap. The DSM-5 requires three or more of the following to diagnose catatonia: stupor, waxy flexibility (mild rigidity), cataplexy, mutism, posturing, negativism, stereotypies, mannerisms, grimacing, agitation, echopraxia, echolalia[1]. It further divides catatonia into two underlying causes: due to a medical condition or due to a psychiatric disorder. This case highlights the intersection between catatonia and hypoactive delirium which poses a challenge in clinical workup and diagnostication[2].

Case:

A 55-year-old female with schizophrenia and hypertension was admitted to the ICU for altered mental status, fever, tachycardia with refractory hypotension. The patient was taking lithium, haloperidol, clonazepam, and amlodipine but had stopped all medications two weeks prior. She was found to have urosepsis and obstructive shock from a pulmonary embolism. Once on the wards, the patient continued to exhibit stupor, mutism, and rigidity. Neuroleptic malignant syndrome was ruled out due to a lack of both high-grade fevers and recent antipsychotic use. As such, a preliminary diagnosis of catatonia was made. Psychiatry started the patient on intravenous lorazepam with steady increases in daily dosage with little effect. Hence, the diagnosis of hypoactive delirium was considered. Once benzodiazepines were tapered and medical treatment continued, the patient became more responsive to verbal and tactile stimuli. She was later discharged to a rehabilitation facility.

Discussion:

This patient has hypoactive delirium with catatonic features. Catatonia due to a medical condition and hypoactive delirium can both present with acute disturbances in attention and awareness and diffuse background slowing on EEG, as evidenced in this patient. Research shows that more catatonic patients have an underlying medical cause than a psychiatric one[1], and 13% of patients with delirium meet the diagnostic criteria for catatonia[3]. Differentiating between the two is crucial due to the wide array of treatment strategies. Collaboration with psychiatry along with frequent reassessments are key to treatment success. The overlapping features of catatonia and hypoactive delirium pose a clinical challenge—further research is needed to better elucidate the mechanisms associated with both.

[1]Edinoff et al. Neurol Int. 2021;13:570-86.
[2]Tachibana et al. Front Psychiatry. 2022;13:876727.
[3]Grover et al. Psychiatry Clin Neurosci. 2014;68:644-51.

B10

'Tongue on Fire': The Curious Case of Burning Mouth Syndrome

U. Choksey, M. Choksey, X. Zuo. *Geriatric Medicine, Yale New Haven Health System, New Haven, CT.*

Introduction: Burning Mouth Syndrome (BMS) is an uncommon disorder that poses a significant diagnostic and therapeutic challenge. It is characterized by burning oral pain in the absence of an identifiable oral lesion. We herein present a case of a geriatric female with persistent glossodynia.

Clinical Case: A 65 y/o hispanic female with past history of hyperlipidemia on atorvastatin and hypothyroidism on levothyroxine, presented to the clinic with uncontrolled oral pain x 3 months. She had been treated for oral candidiasis 2 weeks after symptoms began, then viscous lidocaine, with no improvement. She had been experiencing a daily burning and tingling sensation over the tip and lateral borders of her tongue, with no known aggravating factors. On examination, no oral lesions were seen and the rest of her physcial exam was normal. Blood tests including CBC, CMP, TSH, vitamins B1, B2, B6, B12, D3, iron, folate and zinc were within normal limits. Her GDS score was 4 and GAD-7 score, 3. We diagnosed the patient with BMS and started her on gabapentin 300mg BID. There was a mild improvement in symptoms at her 1 month follow up. We increased the gabapentin dose and added topical alpha lipoic acid with significant improvement noted at her 2 month follow up.

Summary: Burning mouth syndrome is reported in 0.1 to 3.9% of the population. It is seen more commonly in post-menopausal women. Diagnostic criteria of BMS include intraoral burning for>2 hours/day, for >3 months. The oral mucosa has a normal appearance and the symptoms of burning oral pain cannot be explained by another diagnosis. The etiology is unclear, but evidence suggests a neuropathic basis. Mood disorders should be ruled out, especially in older patients. Treatment for BMS includes gabapentin, SSRIs, alpha-lipoic acid, topical capsaicin, vitamin/mineral replacement, and cognitive behavioral therapy. Low dose Clonazepam retained orally has been shown to improve BMS pain, however this should be the last line of treatment in geriatric patients, due to risk of adverse drug effects with systemic absorption.

Conclusion: Burning Mouth Syndrome is often mis- or undiagnosed. This case illustrates the diagnosis and management of BMS in geriatric patients.

B11

Plasma Norepinephrine Levels in Managing of Orthostatic Hypotension

U. Choksi, P. Mendiratta, C. Korrapati, G. Azhar, J. Wei. *Geriatrics, University of Arkansas System, Little Rock, AR.*

Background: The prevalence of orthostasis ranges from 5% in patients less than 50 years of age to a prevalence of 30% in those greater than 70 years old. Managing orthostasis can have a positive impact on falls in the elderly. A plasma norepinephrine level may be a useful tool in helping determine appropriate treatment modalities when treating orthostasis.

Method: A 76 year old African American Male with a history of a myocardial infarction, CKD Stage 3B, Hypertension, pituitary adenoma, & type II diabetes presented with lightheadedness upon standing for the past year. The episodes were associated with syncope. Most recently, he had fallen to the ground with no head injury. He had worsened to where he could not stand without falling. Home medications included bromocriptine 2.5mg daily, prozac 20mg daily, and vitamin D3 5000 IU daily.

On the day of admission, he had positive orthostatic vitals. EKG showed sinus rhythm, echocardiogram showed an EF of 55%, & EEG was negative. He was given IV fluids, & was placed on an abdominal binder with compression stockings. Fludrocortisone 100mcg twice a day was started.

As he didn't respond, midodrine was ordered. Additionally, Geriatrics recommended switching from bromocriptine to cabergoline, weaning off Prozac, obtaining a plasma norepinephrine level, increasing salt intake, & physical therapy. Despite this, his symptoms didn't greatly improve. He was discharged to rehab for continued PT.

While in rehab, his norepinephrine level resulted at 908pg/mL & atomoxetine, a NET inhibitor, was started. Unfortunately, he was lost to follow-up for additional orthostatic vitals. However, over the phone, the patient & his family expressed that his symptoms significantly improved on his new regimen.

Results:

Serum norepinephrine level: 908 (Normal: 80 - 520 pg/mL)

Labs upon presentation to the hospital:

serum Creatinine 1.4, electrolytes, glucose normal

complete blood count normal

Conclusion: A serum norepinephrine level can be a useful tool in determining whether a Norepinephrine transporter inhibitor should be attempted in the management of orthostatic hypotension.

B12

Iatrogenic disease from a retained pacemaker wire

S. Coban,[1] L. Dahl,[1] C. Dyke,[2] D. Jurivich.[1] *1. Geriatrics, University of North Dakota, Grand Forks, ND; 2. Cardiothoracic Surgery, Sanford Health, Fargo, ND.*

Background: We present an unusual case of iatrogenesis caused by a chronic unhealed fistula secondary to a retained temporary external pacing wire (TEPW) in a patient with a history of aortic valve replacement (AVR) and mitral valve repair (MVR).

Case: An 80-year-old female presented for a health maintenance visit. The physical exam demonstrated 1 x 2 cm tissue maceration in the xiphoid sternal area and a right flank wound at the inferior costal margin. Aortic and Mitral valve replacement occurred 32 years ago with multiple pacemaker procedures thereafter, including an internal pacemaker with defibrillator device in the right anterior chest superiorly. The non healing sternal wound was addressed with multiple flap procedures, but they failed. Subsequently, the patient noticed right flank fullness and this area spontaneously drained purulent material. CT scanning showed an external pacing wire that apparently migrated to the flank area. Recommended thoracic surgery included a partial sternotomy and drainage from her right side via thoracostomy. The patient declined surgery.

Discussion: The retained TEPW caused a foreign body reaction resulting in chronic drainage at two sites of a fistula. In addition to the cosmetic issue created by the fistula, the patient's fatigue and frailty was attributed to chronic inflammation, suggesting *Iatrogenic Frailty*.

B13

Acute persistent vision loss: "Looking through a curtain of water"

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Background

Acute vision changes warrant prompt evaluation due to the risk of permanent vision loss. The differential diagnosis includes infection, trauma, inflammation, migraine, ischemia, and toxic etiologies. Important questions include laterality, presence of pain, erythema, trauma, associated neurologic symptoms, and medications.

Case Study

Mrs. I is an 85-year-old woman with history of COPD, MAC, fibronodular bronchiectasis, and ocular migraine. MAC was diagnosed January 2021 and patient was started on azithromycin / rifampin / ethambutol 3 times weekly in March 2021. This was increased to daily dosing December 2021. She had normal visual acuity (VA) on 5/4/22, yet she first noted vision changes 5/23/22 with worsening VA 5/26. Patient described this as "looking through a curtain of water." She also noted losing her color vision and had difficulty reading due to central visual field changes. She reported that it was unlike previous ocular migraines and denied headaches or jaw pain. MRI brain ruled out retinal vessel occlusion, ischemic optic neuropathy, or embolic stroke. ESR was elevated and she was started on steroids prior to undergoing a temporal artery biopsy, which was negative for arteritis. Neuro-ophthalmology ultimately evaluated her and felt presentation was most consistent with a toxic optic neuropathy (TON) from ethambutol. Ethambutol was discontinued and she had progressive improvement of her VA.

Conclusions

TONs often present in the absence of pain and with a gradual reduction of bilateral VA, central scotomas, color vision deficits, and optic atrophy on exam. TONs are often dose- and duration-dependent reactions. Treatment is discontinuation of medication, which frequently leads to improvement in vision. Most common culprit medications include ethambutol, isoniazid, linezolid, disulfiram, methotrexate, cisplatin, and amiodarone. Baseline ophthalmology evaluation for VA and color vision testing is recommended. Patients should be advised to notify their physician of any changes to their vision to prompt urgent reevaluation.

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B14

Think Outside the Lungs: The Need for a Structured Approach to Dyspnea

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Introduction

Dyspnea is a nonspecific and common symptom with a wide range of etiologies. While clinicians are appropriately attuned to cardiopulmonary causes, neuromuscular, mechanical, hematologic, or metabolic etiologies should also be considered in the appropriate context. Less common causes of dyspnea can present a diagnostic

challenge unless a structured, conceptual approach is implemented. The following case demonstrates a structured approach to dyspnea that revealed a less common etiology.

Case Presentation

The patient is an 81-year-old female with history of PE on apixaban, severe multilevel cervical stenosis, and hypertension. She presented to the hospital with subacute dyspnea on exertion, chest pressure and diplopia. She was tachycardic, tachypneic, hypoxic, with decreased breath sounds and grossly normal extraocular movements. Labs showed elevated hematocrit, normal BNP, and negative troponin. CTA chest was negative for recurrent PE but did show bilateral lower lobe atelectasis. TTE showed preserved heart structure and function, and stress test was negative for inducible ischemia. PFTs from earlier in the year were normal. Pulmonary attributed her symptoms to a viral illness and recommended repeat PFTs. When she failed to improve, Neurology was consulted and confirmed her diplopia alongside a family history of myasthenia gravis (MG). Electromyography testing and negative inspiratory force measurements revealed a pattern consistent with generalized MG. She received IVIG with improvement in her respiratory status and discharged on steroids with plans to start mycophenolate.

Discussion

This case demonstrates how a structured, clinical reasoning-based approach to dyspnea ultimately led to the correct diagnosis and treatment course for this patient with an uncommon etiology of her symptom. One common diagnostic schema for dyspnea is "heart, lung, other." While most causes of dyspnea are cardiopulmonary, once these are eliminated, the "other" category should be explored. Other causes included anemia, metabolic acidosis, and neuromuscular conditions such as MG, ALS, and Guillain Barre. In retrospect, the patient's strong family history of MG and diplopia were important clues to the etiology of her symptoms. Astute clinicians are wise to avoid premature closure and "think outside the heart and lungs" in a structured way when patients present with dyspnea.

B15

A unique presentation of memantine overdose: echolalia and hypertension

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BACKGROUND:

Since 2003 when memantine was first approved for use in moderate-severe Alzheimer's dementia, its use has become more widespread and is being explored in other diseases like neuropathic pain, epilepsy, and mood disorders.[1] This makes it important for providers to recognize its potential adverse effects. Our case uniquely highlights two important adverse effects in a patient who overdosed on memantine. One is hypertension, which is commonly managed and easy to overlook as a medication side effect.[2] The other is echolalia, a sign that is usually seen in behavioral disorders or strokes, not medication overdose. Echolalia has not previously been reported as an adverse effect of this medication.

CASE:

Our patient is an 86-year-old man who was brought to the emergency department (ED) with abrupt onset of echolalia, agitation, and auditory hallucinations. His systolic blood pressure in the ED was almost 200. No laboratory or EKG abnormalities were present. He continued to display catatonia with repetitive speech, and intermittent episodes of agitation in the ED. His Mini-Mental Status Exam (MMSE) score was 13/25. His daughter noted 60 missing pills from his memantine bottle. The provider contacted poison control who confirmed that his elevated systolic pressure and behavioral changes could be attributed to memantine. With supportive care, the patient's symptoms resolved in less than 100 hours, consistent with the half-life of memantine. His MMSE score improved to 21/28. His daughter reported that memantine was started one month prior to this presentation, linking the medication to the symptoms.

CONCLUSION:

As we continue to use memantine in our most vulnerable populations, it is worth noting the common and rare side effects it may have. Increased awareness of these effects may help providers and caregivers recognize early signs of overdose. This could decrease prolonged hospitalizations and unnecessary interventions that may be taken to combat these issues. Being informed about adverse effects also helps improve conversations about when it may be best to discontinue memantine.

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2. Ganos C, Ogrzal T, Schnitzler A, Münchau A. The pathophysiology of echopraxia/echolalia: Relevance to Gilles De La Tourette syndrome. Movement Disorders. 2012;27(10):1222-1229.

B16

Vitamin Deficiency: An Easily Overlooked Geriatric Syndrome

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Older adults are at risk for developing vitamin deficiencies, particularly in vitamins D, C, E, and B, which are associated with multiple symptoms that lead to functional impairment.

A 74-year-old male with a history of heavy alcohol use, small fiber neuropathy, and penile squamous cell carcinoma treated with cemiplimab followed by total penectomy with perineal urethrostomy, was hospitalized with weakness, depressive symptoms, lower extremity neuropathic pain and loss of ADL function. Exam revealed hypertrophic, scaly, erythematous to violaceous papules and plaques on his lower extremities. Pathology showed psoriasiform and focally vacuolar interface dermatitis with eosinophils, suggestive of a nutritional dermatosis. Labs notable for multiple vitamin deficiencies including vitamin A (retinol): 0.11 mg/L, vitamin C: 8 umol/L, and vitamin B6: 14.2 nmol/L. Vitamin D, B12, folate, and zinc levels were normal. Hospital course was complicated by orthostatic hypotension and secondary adrenal insufficiency attributed to hypophysitis from prior immunotherapy. He was treated with steroids, thiamine, vitamin A, vitamin C, and B complex vitamin supplementation. Neuropathy was managed with gabapentin; depressive symptoms treated with mirtazapine and duloxetine. Within a few weeks his rash, neuropathy, and depressive symptoms resolved.

Often multifactorial in etiology, vitamin deficiencies are easily missed in older adults. Contributing factors can include dysphagia, sensory impairment, acute illness, dementia, alcohol use, food insecurity, and social isolation, among others. This patient's history of heavy alcohol use, nausea and decreased appetite due to adrenal insufficiency, and food insecurity likely contributed to his vitamin deficiencies. Multiple forms of dermatitis are seen with vitamins A, C, and B6 deficiencies, including phrynoderma in vitamin A deficiency, hyperkeratosis with corkscrew hair and perifollicular hemorrhage in vitamin C deficiency, and pellagrous lesions, eczema, and seborrheic dermatitis in vitamin B6 deficiency. Neuropathy and depression have been associated with deficiencies in B vitamins and vitamin C. While we are unable to prove that the deficiencies were directly linked to this patient's clinical presentation, the rapid improvement in symptoms after vitamin supplementation supports this idea. This case highlights the importance of screening for and treating nutritional deficiencies among older adults presenting with global decline in functional status.

B17 Encore Presentation

Topical Menthol as Adjunct to Treatment of Dyspnea in Older Adults with End-stage COPD

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Background: Refractory dyspnea is a common and disabling symptom of patients with advanced chronic obstructive pulmonary disease (COPD). Pharmacologic (low-dose opioid) and non-pharmacologic interventions (supplemental oxygen and pulmonary rehabilitation) are recommended. Herein, we describe use of inhalational topical menthol to improve breathlessness in two palliative care outpatients.

Method: Case study

Results: Ms. A, a 65-year-old female with end-stage COPD on continuous home oxygen, reports chronic dyspnea despite use of bronchodilators, buspirone and morphine. She completed pulmonary rehabilitation and uses an electric fan for air hunger. Topical menthol to the face and chest improved some of her symptoms.

Mr. R, an 84-year-old male with heart failure with reduced ejection fraction of 30% and end-stage COPD on home oxygen is on scheduled bronchodilators, hydrocodone and thrice-weekly azithromycin. Topical menthol provided some relief of dyspnea. He noted less "gasping".

Conclusion: Transient receptor potential melastatin-8 (TRPM8) channels are present in trigeminal and vagal afferent neurons in the upper airway. Inhalation of olfactory and facial cooling agents, like menthol lead to decreased breathlessness during loaded breathing. Trigeminal nerve stimulation provides an inspiratory flow perception due to menthol's cooling sensation. Side effects of topical menthol are minimal with less than 10% experiencing a burning sensation if applied to broken skin. A study in guinea pigs showed L-menthol inhibited neurokinin-A leading to relaxation of pre-constricted bronchi. In adults with COPD, a randomized cross-over trial by Kanezaki et al. showed increase in participants' ratings of perceived inspiratory flow which was associated with favorable reductions in breathlessness sensations in the menthol arm. Conclusions: Topical menthol is a promising non-opioid palliative intervention for dyspnea. While further studies are warranted, the ease of use, low cost, ready availability and excellent safety profile make it a worthwhile option for older adults with advanced COPD.

Reference:

Kanezaki, M., et al. (2021). "l-Menthol - a new treatment for breathlessness?" Current Opinion in Supportive & Palliative Care 15(4): 233-238. PMID: 34762073.

B18 Resident Presentation

There is a "WHAT" in My Belly – A Rare Presentation of Abdominal Pain

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Introduction:

We present a case of Lithopedion, or stone child in ancient Greek. It is a rare medical condition in which the dead fetus from extrauterine pregnancy becomes calcified and retained in the abdominal cavity.

Case Presentation:

A 67-year-old woman presented to the emergency room with 2 days of abdominal pain in the middle and right lower quadrant associated with nausea and vomiting. Pain was moderate in intensity and non-radiating. She reported decreased urine output, and denied any fever, chills, or diarrhea. She was nulliparous and denied ever being pregnant. Physical exam was only notable for pain in the abdomen of middle and right upper quadrant on palpation but no rebound tenderness or guarding. Labs were significant for elevated WBC of 28.8 (ref. 4.5-11.0), and urinalysis positive for trace leukocyte esterase and nitrite. A CT abdomen and pelvis showed an irregular uterus with mass which was compressing on the bladder. Mass was identified to be a calcified fetus with a visible head, trunk and limbs and a diagnosis of lithopedion was made. She received IV normal saline, Ondansetron for nausea and vomiting, and ciprofloxacin for urinary tract infection. Patient was discharged home with antibiotics and outpatient follow-up with Obstetrics and Gynecology for further management.

Discussion:

Lithopedion is very rare. There are only 18 cases on Pubmed where the patients are over the age of 65 at the time of diagnosis, and the majority of women have been able to have children or carried subsequent pregnancies without issues. Lithopedion could be asymptomatic, thus many do not find out until decades later, often on incidental X-ray or CT imaging. Most cases are benign, but there are reported complications such as bowel obstruction, abscess, uterine rupture, infertility, fistula formation, etc. Given the rarity of this condition, no definitive treatment is established, but most have opted for surgical management.

Conclusion:

Most cases of lithopedion are benign and incidental, but some can lead to serious complications. As access to prenatal care and imaging use increase, more cases of lithopedion will be reported, studied, and hopefully prevented. It is also a possible albeit rare differential diagnosis in elderly women presenting with abdominal pain.

B19

Diagnostic Challenge of Murine Typhus with Rare Neurological Manifestations

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Introduction

Murine typhus is caused by Rickettsia typhi, a small, intracellular bacterium, and it is rarely associated with psychiatric and neurological symptoms. There have been very few reports of memory and behavioral changes associated with murine typhus, and there are no reports that describe the occurrence of delirium and the complex presentation and management of Murine typhus.

Methods

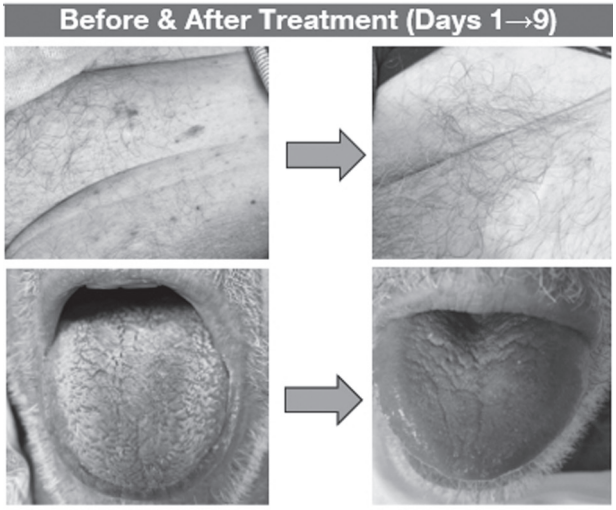
We report an inpatient case of Murine typhus and normal pressure hydrocephalus in a 75-year-old male with mixed Alzheimer's/vascular dementia, who presented with acute onset of altered mental status, behavioral changes, Parkinsonism symptoms, and abnormal physical exam findings. Throughout his hospitalization, he demonstrated visual and auditory hallucinations, rigidity, mouth grimacing, myoclonus, aphasia, word salad, thought blocking, and mixed hyper/hypoactive delirium.

Results

Typhus IgG and IgM were elevated. Lumbar puncture revealed normal pressure hydrocephalus. He was treated with Doxycycline, and his physical, behavioral, cognitive symptoms improved during his hospitalization.

Conclusions

We report a case of Murine typhus and coincidental normal pressure hydrocephalus in a 75-year-old male with a prior diagnosis of mixed dementia. His physical symptoms, altered mental status, and other neurological manifestations demonstrated a unique case with delirium in the setting of multifactorial dementia provided a diagnostic challenge until Typhus antibodies results came back positive.



B20 Resident Presentation
Consequences of COVID: severe malnutrition due to post-COVID-19 dysgeusia
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Background: Malnutrition is a deficiency of energy, protein, and micronutrients causing adverse effects on patient function and clinical outcome. Cachexia is a severe form. Associated with underlying illness, it is a loss of muscle due to an inflammatory state1. In older adults, this can be caused by diseases such as COPD, malignancy, depression, cognitive impairment, dysphagia, or changes in dentition. Another cause is dysgeusia, or change in or loss of taste. This can be seen with COVID-19, lasting days to over a year. This case describes an older patient presenting with weight loss after COVID-19.

Case: An 88-year-old male with a recent hip fracture presented to the Emergency Department (ED) with weight loss. Since he had COVID-19 six weeks prior, he lost 22% of his body weight and his body mass index went from 19.3 to 15 kg/m2. At his facility, nutrition shakes, mirtazapine, and fluid boluses did not help, prompting an ED visit to evaluate for tube feeding. He said he wasn't eating because "nothing tastes good since COVID." Labs showed a potassium of 3.0, sodium of 147, bicarbonate of 33, magnesium of 1.9, phosphorous of 2.5, and albumin of 3.0. He was admitted for malnutrition, electrolyte abnormalities, and risk for refeeding syndrome. He declined tube feeding and was discharged after few days of electrolyte replacement.

Discussion: Malnutrition due to COVID-19 occurs in older adults but it is rare to lose over 20% of one's body weight. Mechanisms for this include dysgeusia and inflammation causing metabolic imbalance. Treatment includes providing appealing food, frequent small meals, medication review, and psychosocial support. Appetite stimulants are not useful as they affect appetite, not taste. Nutritional supplements aid in weight gain but do not improve quality of life. Risk of refeeding syndrome is underrecognized in hospitalized older adults with malnutrition.

Conclusion: Severe malnutrition is a known complication of COVID-19 in older adults, leading to risk for refeeding syndrome, and must be considered at time of diagnosis.

References:

Agarwal E, Miller M, Yaxley A, Isenring E. Malnutrition in the elderly: a narrative review. Maturitas. 2013 Dec;76(4):296-302. doi: 10.1016/j.maturitas.2013.07.013. Epub 2013 Aug 2. PMID: 23958435.

B21
Advance directives for LGBTQ+ Older Adults with Serious Illness: A Case
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In recent years, Geriatric Medicine and Hospice and Palliative Medicine professional associations have paid increasing attention to the needs of lesbian, gay, bisexual, transgender, and queer (LGBTQ+) older adults, including those with serious illness.[1-2] LGBTQ+ older adults face numerous inequities in medicine including provider discrimination and lack of knowledge that can affect ability to age successfully.[3] Those at end of life also experience unique challenges that make advance care planning more important: they are more likely to rely on "families of choice" and may be estranged from biological families. This makes them vulnerable to issues such as disregard for wishes, mis-gendering, and mis-naming during the illness process and after death.[4-5] This case highlights some practical issues in the hospital setting and serves as a reminder to providers working with LGBTQ+ older adults to stress the importance of naming surrogate decision-makers.

The patient is a 79 year old gay cismale with atrial flutter, congestive heart failure, obstructive sleep apnea, and chronic kidney disease who presented to a quaternary trauma center after a fall, found to have subarachnoid hemorrhage and vertebral fractures. He was admitted to the surgical ICU and was intubated due to poor mental status. His partner of 40 years was present early in the hospitalization and reported knowing him and his wishes best. Based on state surrogate decision-making laws, in the absence of healthcare power of attorney (POA) paperwork, decision-making would fall to the patient's older brother, who lived out of state and had not had as close contact with the patient recently. Over the course of days, the patient's partner experienced significant distress while attempting to locate the POA documents. After 10 days, he was able to locate paperwork dating back nearly 25 years and assume his role as healthcare power of attorney.

Provider education around the unique needs of LGBTQ+ older adults with serious illness can help ensure that end of life wishes are followed. Appropriate advance care planning may help avoid situations of uncertainty and stress at end of life, as shown in this case.

B22
Rhythm is gonna get you: a case study
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Case: A 75-year-old woman with atrial fibrillation and atrial flutter, coronary artery disease, chronic kidney disease, and history of stroke presented with progressive weight gain, bilateral lower extremity edema, and fatigue despite escalating doses of diuretics. Echocardiogram showed a preserved left ventricular ejection fraction of 68%, severely dilated right ventricle with moderately reduced right ventricular function, severe tricuspid regurgitation and bi-atrial enlargement. Importantly, her tricuspid valve was noted to be tethered, consistent with a dilated tricuspid annulus.

Discussion: Atrial fibrillation is a common geriatric problem that is growing in scale. Rate control has been shown to be non-inferior to rhythm control in managing atrial fibrillation. Given this evidence and the extensive side effect profile of rhythm control agents, most geriatric patients are managed with rate control. However, patients with longstanding atrial fibrillation are at risk for developing functional mitral and tricuspid regurgitation through annular and atrial enlargement and remodeling. This functional valvular pathology can be hemodynamically significant and can ultimately contribute to the

development of heart failure. Risk factors for functional tricuspid regurgitation related to chronic atrial fibrillation include increasing age, female sex, and greater right atrial than left atrial enlargement.

Conclusion: As the prevalence of atrial fibrillation increases, the number of patients with functional tricuspid regurgitation will rise, as will the number of patients with resultant heart failure with preserved ejection fraction. This case demonstrates the long-term consequences of rate control in atrial fibrillation (with high atrial fibrillation burden) with the development of functional valvular pathology, and ultimately, heart failure. The case emphasizes the need to monitor valvular function in patients with longstanding atrial fibrillation who develop edema or fatigue. In these patients, ablation therapy for atrial fibrillation has been shown to improve severity of tricuspid regurgitation. For patients with significant valvular dysfunction, such as the patient described in this case, ablation therapy or pharmacologic strategies for rhythm control should be strongly considered as these treatments decrease the burden of atrial fibrillation, thus lessening atrial remodeling and preventing development of heart failure.

B23 Resident Presentation

Serotonin Toxicity, An Underrecognized Spectrum of Disease

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Case: An 81-year-old female with a history of hypertension, depression, osteoarthritis, CKD, and NAFLD presented with acute onset altered mental status that rapidly progressed to global aphasia. At baseline she was independent in all ADLs and IADLs. On exam, she was hypertensive to 180/90, non-verbal, and agitated. Neurological exam was non focal with 1+ reflexes. Neuroimaging was normal and infectious workup was negative. The next day, she developed progressively worsening choreiform movements, diaphoresis, tremor, and profound hyperreflexia meeting Hunter Criteria for serotonin toxicity.

Discussion: Serotonin toxicity is a spectrum of clinical features that results from increases in the intrasynaptic concentration of 5-HT. Features include autonomic signs, neuromuscular changes, and CNS symptoms. Risk of serotonin toxicity increases with age, increasing doses and combinations of serotonergic agents, and hepatic or renal disease. Mild serotonin toxicity can be chronic and is underdiagnosed. This is an important consideration for clinicians as patients with mild toxicity are at risk for developing life-threatening toxicity. Although the latter typically occurs with dose increases or addition of new serotonergic drugs, many cases of fatal toxicity occur without any dosage change after an insidious onset of symptoms. The most common presenting symptoms includes generalized pain, insomnia, restlessness, and tremor. These non-specific complaints are common in geriatric patients and can paradoxically lead to dose escalations of serotonergic agents. It is important to be aware of chronic serotonergic toxicity and perform a thorough history and physical prior to increasing doses of these drugs.

Case Conclusion: Serotonergic medications including escitalopram, tramadol, and mirtazapine were held and she was given a short course of IV lorazepam. The next day she was conversational, normotensive, and at her cognitive baseline. A thorough history was obtained and revealed two weeks prior to hospitalization she had worsening diffuse body pain and leg stiffness. This was attributed to osteoarthritis, and tramadol was started. This sub-acute toxicity was not recognized and addition of Tramadol led to rapidly progressive disease. Fortunately, she responded well to empiric treatment and was discharged home the following day with no recurrence of her symptoms to date.

B24

Elderly Onset Rheumatoid Arthritis (EORA) Needs Recognition

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Background

Rheumatoid arthritis (RA) in an older adult may escape recognition due to its atypical presentation.

Case

84-year-old white male with hypertension, coronary artery disease, hyperlipemia, frozen shoulder and deafness was evaluated in geriatric clinic. Was a mechanic by profession for 50 years, and used several tools; he was still actively gardening. Although in our clinic for about a year, this was the first time he reported pain in all joints of his hands with morning stiffness, resolving in an hour; acetaminophen relieved the pain. On examination, he had flexion deformity of metacarpophalangeal joints of bilateral ring and little fingers. No visible swelling of joints noted but had tenderness of wrists joints. First impression was Dupuytren's contractures, but tendons were not palpable and morning stiffness resolved with activity. Carpal tunnel syndrome was also a consideration. Other joints were free of pain. The new complaint was perplexing. Rheumatoid factor was now ordered: was positive, titers >1000 IU/ml.

Discussion

Elderly Onset rheumatoid arthritis (EORA) refers to rheumatoid arthritis manifesting after age 60 years, the incidence increasing with higher life expectancy. Initially it was considered a benign form of rheumatoid arthritis (RA) but recent data suggests the prognosis of EORA is similar when directly comparing older and younger RA patients. Presentation of RA is different in older people; most common is involvement of big joints, with symptoms similar to young onset rheumatoid arthritis (YORA). Differential diagnosis of EORA includes polymyalgia rheumatica, gout, pseudogout and osteoarthritis, all prevalent in this population; this may not be easy since signs and symptoms may be similar. A timely diagnosis of true RA is important because early treatment prevents damage to the joints. There are no specific contraindications for disease-modifying antirheumatic drugs and biological therapies in older adults; but comorbidities and drug toxicity profiles are major considerations when choosing most suitable therapy for EORA patients. Close follow up is required in view of increased risk of adverse events in the old. Management strategy is tailored to disease activity and comorbidities.

Key Points

- Elderly Onset RA may evade diagnosis as presentation is seldom typical and other disorders appear prioritized.

- Including EORA in the differentials, enables a prompt diagnosis and tailor therapy that defers long term complications.

B25 Resident Presentation

Fatigued and Falling - Symptoms of Underlying Disease

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Background: Falls and nonspecific symptoms are common presenting complaints for older adults. Over half with nonspecific symptoms are found to have a serious medical condition within the following 30 days. This raises the notion that falls in conjunction with vague symptomatology should not be looked at as isolated traumatic events.

Case: A 73 y.o. male with a history of aortic valve replacement presented to the Emergency Department (ED) with chief complaint of fall 3 weeks ago. His vital signs were normal, however since the fall, he had been experiencing fatigue, and feeling unwell. He reported that while he previously was walking several miles a day, he was now not leaving the house due to weakness and described weight loss and "black floaters" in his vision. CT head showed a small acute subarachnoid hemorrhage (SAH) and labs were notable for leukocytosis,

elevated troponin, and hematuria. Further imaging revealed splenic and renal infarcts. After admission, transesophageal echocardiogram was concerning for aortic valve endocarditis. Patient underwent redo of aortic valve replacement with cardiothoracic surgery and intraoperative findings showed vegetations on all three leaflets of the aortic valve. Blood cultures grew Streptococcus mutans. Ultimately, the patient was discharged to a rehabilitation facility on antibiotics.

Discussion: Falls in older adults are common presentations to the ED. A thorough physical exam and evaluation is necessary in order to diagnose traumatic injuries that arise. However, this case highlights the importance of thorough review of potential causes of fall as well as serious attention to atypical symptoms such as malaise. Red flags in this case included an acute SAH several weeks after the initial fall, weakness, and floaters. After diagnosing the SAH, the patient could have been admitted directly to the trauma surgery service; however careful consideration and additional work-up led to earlier diagnosis and treatment of subacute endocarditis and more appropriately triaged as a medical admission.

Conclusion: In older patients, a fall should be considered a symptom rather than an isolated event. In doing so, Emergency Medicine clinicians can better identify occult infection or alternate underlying pathology. This case illustrates how geriatric principles can guide ED evaluation of older adults and lead to improved and expedited care.

B26

MS Hug as Uncommon Cause of Abdominal Pain: A Case of Multiple Sclerosis

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Introduction: Multiple sclerosis (MS) is a chronic immune-mediated inflammatory demyelinating disease of the central nervous system. Previous studies showed that pain affects around 63% of patients with MS and has frequently been related to impaired quality of life and disability. In addition, previous studies revealed that older age was also significantly associated with pain among patients with MS. The "MS hug" is a dysesthetic phenomenon that manifests with gripping, squeezing, or pressure-like sensations in the thoracic and abdominal regions. The etiology is variably attributed to neuropathic pain from spinal cord involvement. However, these symptoms can be hard to explain, and can be mistaken for other conditions such as angina or gastrointestinal problems. Our case highlights the importance to identify abdominal pain of older adults with MS.

Case Description: This is a 65 year-old man with a history of MS since when he was 40s, bipolar disorder, hyperlipidemia, and sleep apnea. He is dependent on a power wheelchair due to bilateral lower leg weakness since he was 60. He has been off disease-modifying therapy for about 10 years. He has had abnormal pressure-like sensations and bloating in his abdomen since a year ago. He was suspected gastrointestinal issues. However, upper endoscopy and abdominal ultrasound showed no significant findings. Physical exam showed that he has sings of reduced fine touch sense in lower thoracic region. MRI showed scattered foci of abnormal signal within the thoracic spinal cord without abnormal enhancement to suggest active demyelination.

Discussion: Our case identified the importance of keeping in mind MS hug in the differential diagnosis of abdominal pain in older adults with MS. For MS hug due to neuropathic pain, treatment options include amitriptyline, gabapentin, pregabalin, or topical compounded creams containing a neuropathic pain medication, a nonsteroidal anti-inflammatory drug, and a local anesthetic.

Reference:

Foley PL, Vesterinen HM, et al. Prevalence and natural history of pain in adults with multiple sclerosis: systematic review and meta-analysis. Pain. 2013 May;154(5):632-642.

Drulovic J, Basic-Kes V, et al. The Prevalence of Pain in Adults with Multiple Sclerosis: A Multicenter Cross-Sectional Survey. Pain Med. 2015 Aug;16(8):1597-602.

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B27 Resident Presentation

"Lower Body" Parkinsonism and the Differential of Dementia and Movement Disorders

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Background: Vascular Parkinsonism is a phenomenon in which ischemic cerebrovascular disease causes secondary Parkinsonism. Because symptoms of vascular Parkinsonism manifest predominantly as gait and lower extremity dysfunction, it is sometimes called "lower body" Parkinsonism. Vascular Parkinsonism responds less or not at all to typical Parkinson's disease treatments. No formal diagnostic criteria for this condition exist.

Case Description: A male veteran in his 70's presented to a Memory Clinic for evaluation of cognitive impairment. Neuropsychological testing showed a major neurocognitive disorder, attributed to vascular versus Alzheimer's dementia. Reversible causes of dementia, including thyroid and B12, were excluded. MRI brain showed chronic microvascular white matter disease, consistent with suspected vascular dementia. Unexpectedly, this veteran later exhibited a gait disturbance characterized by "magnetic" steps and truncal instability. His wife reported that he had been having similar episodes of gait disturbance for years, previously attributed to peripheral neuropathy secondary to diabetes. A broad differential was considered, including idiopathic Parkinson's disease with incidental microvascular disease, vascular Parkinsonism, atypical Parkinsonian disease, normal pressure hydrocephalus (NPH), stroke, and Lewey body dementia. Repeat MRI of the brain was negative for acute stroke or NPH. Neurological testing demonstrated bradykinesia in rapid movements more profound in the lower body and greater on the left than the right. The combination of lower body predominant Parkinsonian findings and known microvascular disease suggested a diagnosis of vascular Parkinson. The veteran was offered Carbidopa-Levodopa with the caveat that vascular Parkinsonism may not respond to dopamine agonist therapy. He will continue risk factor modification for microvascular disease. Future interventions will include fall risk reduction.

Conclusion: This case illustrates the overlap of risk factors, cognitive symptoms, and neurological findings in the differential of dementia and movement disorders, which makes diagnosis challenging. Although no established diagnostic criteria for vascular Parkinsonism exist and the diagnosis remains controversial, this case also demonstrates that consideration of "lower body" Parkinsonism in the differential is important to offering appropriate treatment and counseling for patients.

B28 Resident Presentation

Not all multifocal brain hemorrhages in a patient with a history of lung adenocarcinoma are caused by metastasis.

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Introduction

Amyloid angiopathy is often less recognized as the cause of multifocal brain hemorrhage, even though it is one of the leading causes.

Case Description

A 78-year-old female with a past medical history(PMH) of Alzheimer's disease and lung adenocarcinoma in remission was brought to an emergency room due to multiple vomiting for one day.

One month prior, the patient was diagnosed with unprovoked pulmonary embolism and type 2 non-ST elevated myocardial infarction. She was started on apixaban, aspirin, and atorvastatin. The patient's most recent Montreal Cognitive Assessment score was 18/30 a month ago. She was independent with ADLs but needed assistance with some IADLs, including driving. She was diagnosed with lung adenocarcinoma in 2013 and had a right lower lung lobectomy. Head computed tomography showed right cerebellar intraparenchymal hemorrhage measuring up to 4cm with adjacent vasogenic edema and partial effacement of the fourth ventricle and left thalamocapsular and left parietal subcortical intraparenchymal hemorrhage(ICH). Due to her PMH, metastatic cancer was one of the possible leading causes of this spontaneous(ICH). However, further imaging tests, including chest, abdomen, and pelvis CT scan with contrast, did not show malignancy. Her brain MRI showed no underlying enhancing mass lesions or large vascular malformation. A CT angiogram did not show significant stenosis or signs of dissection of vessels. Her brain MRI scan one year ago showed multiple(>3) cerebral amyloid antipathy(CAA) lesions in the area, which match the locations of her ICH. The patient was diagnosed with probable CAA based on the Boston criteria. Aspirin and apixaban were discontinued. The patient was started on amlodipine for blood pressure control and dexamethasone taper for intracranial swelling. She was discharged from the hospital on Day 5.

Discussion

CAA is a common risk factor for spontaneous ICH in Alzheimer's patients. CAA causes multiple micro bleedings in the brain, but it is often overlooked in patients with a history of malignancy and metastasis. Furthermore, due to insufficient research regarding the use of anticoagulation in a patient with known CAA, clinicians often do not consider CAA a bleeding risk factor in patients with Alzheimer's disease. Further research will be needed to determine the benefit and risks of anticoagulation in patients with CAA.

B29

Home Telehealth Monitoring as a Tool for Managing Complex Geriatric Patients

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Introduction: Home telehealth monitoring (HTM) has many benefits for the management of complex geriatric patients. In contrast to in-office monitoring, HTM provides an accurate picture of patient condition over time, enabling providers to direct appropriate medication changes and facilitate patient-centered management and counseling. The following case studies present examples of how HTM has been utilized with geriatric patients and the results.

Case Description: Patient 1, an 86 yo male, was enrolled for monitoring of HTN and HF. The patient had excellent medication compliance, but BP and weight remained above goal. The patient agreed to implement lifestyle modifications and participate in daily monitoring. After 6 months, metrics had greatly improved with BP averaging 120/80mmHg and daily weight fluctuations of less than 1lb. The patient noted that HTM "really kept me accountable with staying healthy".

Patient 2, a 76 yo male, was enrolled for monitoring of refractory HTN and T2DM. Antihypertensives were adjusted using HTM to carefully monitor the patient's BP, and he ultimately achieved good control with a quadruple regimen. However, blood glucose readings continued to be elevated. The patient's caregiver revealed that he was often up late at night, eating high-sugar foods while she was asleep. She noted feeling increasingly overwhelmed with patient's care and concerned about his eating habits. Consults for nutrition and social work were placed to provide additional support.

Patient 3, a 98 yo male, was enrolled for monitoring of HTN and HF. After an initial period of careful medication titration, the patient achieved acceptable BP control. However, data began to show an upward trend in the patient's daily weights. Cardiology was alerted; they advised conservative management with diuretics and scheduled additional follow up. In this case, the team was able to quickly identify and prevent further heart failure exacerbation using data from HTM.

Discussion: HTM can empower geriatric patients to better understand their health, make connections between behaviors and outcomes, and maintain engagement in care. For providers, HTM gives insight into patient pathophysiology, response to medication, and can facilitate shared decision-making. Importantly, HTM can provide benefits even for patients who do not meet their target goals. These include the ability to conservatively manage medication changes, avoidance of polypharmacy, and early detection of warning signs.

B30

'Geriatric' Patient with Fever, Desaturation, Altered Mental Status and Stiffness: Is it Pneumonia?

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Background:

Fever in older adults is stereotypically attributed to urinary tract infection (UTI) or pneumonia. However, co-morbidities can confound the clinical picture and result in atypical and/ or delayed presentations - hence the importance of having a wide differential diagnosis.

Methods:

An 80-year-old nursing home resident with a background of schizophrenia and stroke presented with a 1-day history of confusion, fever, and desaturation. She was assisted for her daily activities and chairbound. On examination, she was diaphoretic, drowsy with respiratory rate of 24/minute, temperature 40.1 degree Celsius, pulse rate 114 beats/ minute, blood pressure 146/83 mmHg, and oxygen saturation 83% on room air. Rest tremors and rigidity of bilateral arms with knee/ ankle contractures were assumed to be her baseline. Her medications included olanzapine 15mg ON, benzhexol 2mg daily PRN, mirtazapine 7.5mg ON and sodium valproate 200mg TDS.

Results:

Laboratory investigations revealed: normal leukocyte count, C-reactive protein 43mg/L (normal <10). creatinine 171 umol/L (normal 60-107) and aspartate aminotransferase 104 U/L (normal 8-33). Chest radiograph revealed bi-basal atelectasis. Urinalysis showed leukocyte count 481 cells /HPF and urine culture grew Escherichia coli and Proteus mirabilis. Blood culture had no bacterial growth. Initial diagnoses were UTI and pneumonia, and she was treated with levofloxacin/ meropenem. A contrasted computed tomography scan of the thorax, abdomen, and pelvis done in view of persistent fever was negative for infection.

In view of long-term use of anti-psychotics and unremitting high fevers and tachycardia, serum creatine kinase (CK) was sent which was 7583 U/L (normal 30-350). Along with rigidity, confusion and autonomic instability, our patient fulfilled diagnostic criteria for Neuroleptic Malignant Syndrome (NMS).

Olanzapine and benzhexol were withheld, bromocriptine and alprazolam initiated with improvement in fever, confusion, and rigidity. She completely recovered with CK down-trending to 611 U/L.

Conclusion:

NMS is a rare, potentially life-threatening side effect of antipsychotics. Delay in diagnosis can lead to complications including rhabdomyolysis, renal failure, and death. This case has highlighted the importance of having a high index of suspicion for NMS and avoiding anchoring bias, especially in patients with risk factors and/or unresolving symptoms.

B31

Losing More than Weight: Proximal Muscle Weakness Due to post-Roux-en-Y Copper Deficiency

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Introduction: Falls can be devastating, with significant morbidity and mortality[1]. One contributor to falls is muscle weakness. This case study illustrates copper deficiency, which should be in the differential when evaluating an individual with proximal muscle weakness and falls.

Case: A 65-year-old male with history of morbid obesity s/p gastric bypass two years prior, HTN, CAD s/p PCI, T2DM c/b neuropathy (most recent A1c 5.8%), OSA, and anxiety presents with concern for progressive lower extremity weakness and recurrent falls. Following a severely restricted diet for a GJ anastomosis stricture and cratered ulcer on EGD, he experienced a series of falls resulting in a humeral fracture and lower extremity DVT. Despite extensive post-hospitalization rehab, he required a wheelchair for mobility and had difficulty with transfers. On exam, symmetric proximal > distal and lower > upper extremity weakness was noted. An EMG indicated both sensory changes and proximal myopathy. Subsequent work up revealed severe copper deficiency, and Neurology concurred that the changes noted were likely due to nutritional deficiency.

Discussion: Bariatric surgery can improve obesity-related comorbidities and may reduce obesity-related death by 30-50%[2]. As such, more individuals are pursuing bariatric surgery. Nutritional deficiencies should be considered in older adults with history of bariatric surgery and falls. Myeloneuropathy, ataxic myelopathy, and myopathy[3],[4] can all be associated with copper deficiency, and early diagnosis and repletion may prevent further neurologic deterioration. We present this case to highlight the importance of thorough assessment and treatment of a modifiable fall contributor in older adults with history of bariatric surgery.

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B32

Hard to Swallow: A Case of Posttransplant Lymphoproliferative Disorder

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Introduction: Over 40,000 organ transplants were performed last year in the US[1]. Posttransplant Lymphoproliferative Disorder (PTLD) is a serious complication of solid organ transplantation. Immunosuppressant use can lead to lymphoproliferation resulting in symptoms ranging from fever and malaise to extranodal masses[2]. This case study illustrates the presentation and treatment of an individual found to Epstein-Barr virus (EBV) negative PTLD.

Case: A 79-year-old female with history of NASH cirrhosis s/p liver transplant 8 years prior and on tacrolimus, HTN, HLD, T2DM, TIA, and CKD stage 3b presented with complaints of dysarthria and dysphagia. She denied any dyspnea. CT indicated a soft tissue mass from tongue base to larynx measuring 4 x 2.8 x 3.6 cm, and this finding was confirmed by laryngoscopy. PET scan was notable for cervical lymphadenopathy and pulmonary nodules, concerning for malignancy. Biopsy and planned tracheostomy revealed diagnosis of PTLD, EBV negative. As a result, the patient had her tacrolimus dose reduced and began therapy including rituximab and radiation therapy.

Discussion: Lymphoproliferative disease is a rare complication of immunosuppression after transplant, with an estimated incidence of 1% of the transplant population[2], and lower association rates with liver transplant than other solid organ transplants. Treatment requires balancing the preservation of the organ with management of the abnormal lymphoproliferative tissue. We share this case to review the presentation and treatment of PTLD. While this individual's presentation is unique in that it occurred in an EBV negative individual many years after liver transplant, we believe it is important to expand the knowledge of this pathology amongst the Geriatric healthcare community, as 13.4% of transplants occur in the ≥65-year-old population[3].

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B33

From Heart to Toe: Acute Limb Ischemia as An Atypical Presentation of Acute Coronary Syndrome

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Background. Acute Coronary syndrome (ACS) presenting as acute limb ischemia (ALI) is rarely seen.

Case. We describe the atypical case of a 94-year-old female with medical history of hypertension, atrial fibrillation, heart failure, strokes complicated by intra-ventricular hemorrhage, thrombectomy and carotid artery stent who came to the Emergency Department for acute onset of left thigh and left knee pain. She had a fall two weeks prior in an assisted living facility, and X-rays showed no fractures. She ambulated with her walker when the pain started and was not relieved by acetaminophen. Upon presentation, vital signs were unremarkable. ECG showed T wave abnormalities suspicious for septal wall myocardial infarction, with progressive increase in markers of myocardial ischemia. She was admitted to the general medicine service for musculoskeletal leg pain and demand ischemia. Transthoracic echocardiogram revealed a newly reduced ejection fraction of 49% and akinesis of the mid to distal anterior septal wall, consistent with ECG findings. Cardiology was consulted, and conservative management of ACS was decided. The left lower extremity pain was not controlled and was out of proportion to physical exam. The patient subsequently developed acute onset of pallor, poikilothermia, pulselessness, and paresthesia, concerning for acute limb ischemia. Urgent ankle-Brachial Index and arterial duplex demonstrated diminished blood flow to left foot with left common iliac stenosis of >70% and occluded left superficial femoral artery. Vascular surgery was consulted. Goals of care were discussed with the patient and family. They decided to defer systemic anticoagulation and surgical reperfusion therapy, opting to focus on patient comfort, and transitioned to hospice care.

Conclusions. Chest pain as a presenting symptom of ACS occurs in only 40% of patients 85 years and older. Moreover, concomitant presentation of ALI and ACS is rarely reported. Physicians must remain vigilant to atypical presentations of ACS in geriatric patients to avoid potentially delaying a life-threatening diagnosis.

B34 Resident Presentation
Sleuthing for Subclinical Seizures
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Background: Medication reconciliation errors (MRE) occur in around 50% of admitted elderly patients, according to the literature. We present a case of a patient with delirium associated with nonconvulsive status epilepticus (NCSE) in the setting of incorrect medication dosage.

Case: An 83-year-old female with moderate mixed (Alzheimer's/Vascular) dementia and multiple comorbidities presented to the hospital after a fall at her ALF and subsequent emesis. CT head showed a small left temporal subdural hematoma (SDH). Geriatrics was consulted for delirium. During the first encounter, she gave minimal and inappropriate responses to questions. Labs showed worsening hyponatremia, for which nephrology was consulted. Despite improvement in sodium, she was alert but stared at one side blankly, did not make eye contact or respond verbally to questioning. A careful medication review revealed that the patient's home phenytoin dose was inadvertently halved. The patient's home neurologist confirmed a previously undocumented longstanding seizure disorder. Neurology was consulted in-house. A VEEG showed frequent triphasic morphology waves, concerning for NCSE. Phenytoin level was subtherapeutic, so she was loaded with and resumed on home dose of phenytoin. Delirium improved, she became conversant, and was discharged to a SNF.

Discussion: Our patient had mixed delirium superimposed on dementia. A workup conducted to identify the cause of her delirium included confirming her medical history as well as obtaining thorough medication history from multiple sources. NCSE is most often associated with hypoactive delirium, but psychosis can also be a manifestation. The presentation of NCSE can be subtle and overlooked. Features could include subtle jerking, staring, and aphasia. When delirium persists after managing multiple risk factors, a high suspicion for NCSE should be maintained, and can be confirmed with an EEG. Our patient's staring, interrupted speech, seizure history, structural brain abnormalities (dementia, SDH), and MRE involving her AED, all raised suspicion for NCSE causing her delirium.

Conclusion: NCSE should remain on the differential for etiology of persistent delirium. Delirium is often multifactorial, but an accurate medication reconciliation could have reduced our patient's risk of delirium and length of stay. To minimize adverse events from MRE, a reconciliation should occur during all transitions of care and each provider encounter.

B35
Clozapine-Induced Hypersalivation in a Geriatric Patient with Schizophrenia
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INTRODUCTION: Clozapine is an atypical antipsychotic agent used in the treatment of schizophrenia. While not a first line agent, clozapine is effective in 30% of patients who have been diagnosed with treatment resistant schizophrenia. While the most feared side effect of clozapine is agranulocytosis, 30-80% of patients experience hypersalivation. Hypersalivation can notably impact a patient's quality of life and cause aspiration pneumonia. This can particularly be problematic in our geriatric, nursing home patients.

CASE: Our patient is a 70-year-old male, long term care resident with a past medical history of schizophrenia. He was started on clozapine during an inpatient psychiatric admission for psychosis after being diagnosed with treatment resistant schizophrenia. A week following initiation of clozapine, patient experienced hypersalivation. He was initially started on ipratropium nasal spray to manage secretions with minimal effect. A month later, he was hospitalized for hypotension, dizziness, cough and shortness of breath. CT of chest showed numerous right upper and lower lobe ground glass nodules concerning for infectious etiology. Given concern for aspiration from hypersalivation, clozapine was tapered off and oral haloperidol was up titrated. Since discontinuation of clozapine, hypersalivation and respiratory issues have resolved. However, our patient then experienced nausea, vomiting, anorexia, and unintentional weight loss. Gastrointestinal symptoms were consistent with clozapine withdrawal and self-resolved in 8 weeks.

DISCUSSION: Although early mortality exists among patients with schizophrenia, those that reach advanced age experience considerable multimorbidity resulting in nursing home admission. Clozapine represents a last line for many patients with treatment-resistant schizophrenia. Hypersalivation is a prevalent but often underreported side effect of clozapine that can limit compliance and negatively impact quality of life. When combined with the sedating effect of clozapine, hypersalivation may result in aspiration pneumonia. While treatments for clozapine-induced-hypersalivation exist, studies regarding their effectiveness are mixed. Furthermore, upon discontinuation of clozapine, patients may experience withdrawal symptoms. Our case represents the need for heightened awareness of clozapine-induced-hypersalivation in the geriatric nursing home population.

B36
Problem Representation: A Cornerstone for Teaching Clinical Reasoning in Geriatric Patients
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Background: Geriatricians are expert in management of patients with complex, overlapping medical conditions. To do this effectively, we must mitigate cognitive biases (anchoring, availability bias) during the clinical reasoning process. Geriatrician-led, structured teaching in clinical reasoning is increasingly important, given the aging US population with escalating medical complexity. One such pedagogical technique, the "problem representation," is a brief yet structured summary statement inclusive of high yield clinical data from a patient case. Problem representations typically include patient demographics, time course and evolution of symptoms, and summarized clinical syndrome. The following case details an older adult patient whose diagnosis was made through use of problem representation on a service that teaches this technique to trainees.

Case: An 83 yo woman was admitted to a teaching hospital for subacute cognitive decline in the setting of progressive and chronic cognitive impairment, recent pelvic fracture, anemia, CKD, progressive weight loss. Admission labs showed acute on chronic anemia and kidney dysfunction with hypercalcemia. These abnormalities had been present in the past but had been addressed individually and attributed to age related changes with informally diagnosed dementia. The hospital medical team formed the following problem representation: Demographics: 83, female; Time Course: Chronic, progressive with subacute, dramatic worsening; Clinical syndrome: acute on chronic anemia, hypercalcemia, CKD, acute/subacute cognitive worsening. Such a framework helped the team see the salient features of the case together, culminating in a diagnosis of multiple myeloma which was confirmed with bone marrow biopsy.

Discussion: Utilizing a structured approach to clinical reasoning, like a problem representation, can reveal critical but elusive diagnoses like multiple myeloma in older, multimorbid patients and shield clinicians from cognitive biases. This patient's problems had been previously diagnosed as separate, age-related phenomena; this was a ripe situation for anchoring bias on behalf of the hospital team (over relying on first information available). Standardized clinical problem solving with problem representation is a skill that should be taught to all clinical trainees. Geriatricians, through our specialty training and as advocates for older, complex patients, are poised to lead the charge.

B37

Hospital at Home for Acute Flare of Neuromyelitis Optica Spectrum Disorder (NMOSD) in an Older Adult

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Background

Hospital at Home (HAH) programs allow health systems to provide high acuity care to selected older adults in the home setting. NMOSD is a rare inflammatory disorder of the central nervous system characterized by immune related demyelination predominantly affecting optic nerves and spinal cord. We describe a case of an older adult with a flare of NMOSD cared for in our HAH program.

Case

A 68-year-old Albanian woman living at home presented to the ED with worsening right-sided spasticity. She is paraplegic and dependent in most activities of daily living. Her symptoms initially started seven years prior, with sudden onset of numbness and weakness from the waist down. MRI showed longitudinally extensive transverse myelitis. Six years prior, she presented with lower extremity weakness and was misdiagnosed with multiple sclerosis (MS). Two years prior, she presented with severe lower extremity paraparesis and urinary incontinence. Her Aquaporin-4 (AQP4) antibody was positive for NMOSD with titer >1:100,000.

On presentation to the ED during current admission, her initial evaluation suggested NMOSD flare. She met the criteria for transfer to the HAH program. She received nursing care for intravenous steroids, medications, fluids, and labs, along with 24-hour telehealth monitoring in the comfort of her own home. With improvement in her symptoms, she did not require plasma exchange.

Discussion

NMOSD is often misdiagnosed as MS; in fact, they were previously thought to be one entity until the discovery of the specific AQP4-antibody. Early recognition and treatment are critical to prevention of disability. The median age of onset is 32 to 41 years, but cases are seen in older adults as well. The female to male ratio is 10:1. Clinical features include optic neuritis with visual loss, or transverse myelitis with limb weakness, sensory loss, and bladder dysfunction. The HAH care model is an innovative way for older adults to receive hospital level care in the familiarity of their own home. The program enables clinicians to treat selected patients holistically and respond to social determinants of health that may be more difficult to identify in a brick-and-mortar hospital.

Conclusion

NMOSD is a rare, rapidly debilitating disease and a diagnostic challenge. This case demonstrates that HAH programs can provide care for even the most acute and complex medical conditions.

B38 Student Presentation

Determining Decisional Capacity for Sexual Consent in Patients with Dementia

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Introduction: For older adults who have dementia and are living in care facilities, the topic of physical intimacy posits a clinical and ethical dilemma. Long-term care workers must respect their patients' autonomy, but also protect them from harm. A principal component of this topic is the assessment of the capacity to consent. In this case, a clinical interview tool was applied in a novel way to assess the decisional capacity to consent to physical intimacy between two patients with dementia living in a long-term care facility (LTC).

Case Description: A male and female, both with a history of dementia, were showing signs of an intimate bond. One afternoon, they were found alone in the male patient's room with their pants off, initiating a physical relationship. Neither of the patients could recall the preceding events or state their intentions. The staff proceeded to help them get dressed. The facility did not have a policy related to patient sexual activity. The medical director identified that assessing the patients' capacity to consent to sex through the U-CARE clinical interview tool was necessary. Understanding (U) of the interaction was assessed by asking what their intentions were and if they were aware of the mechanics of physical intimacy. Consistency (C) in responses was assessed throughout the interview. Appreciation (A) for potential consequences was assessed by asking whether they understood their medical diagnosis and associated limitations. Reasoning (R) was assessed by asking the patients to develop a plan for a scenario where they needed help. Expression (E) of the desire to engage in a physical relationship was assessed. The male met the U-CARE criteria for decisional capacity to consent to sex, but the female did not.

Discussion: This case showed a prompt and effective response toward two patients with dementia expressing the desire for a physical relationship. It is critical to assess how healthcare structures support a high quality of life in advanced age, which still includes sexual expression. Since dementia does not equate to global incapacity, assessment of domain-specific competence is necessary. The U-CARE model provides a framework to determine the capacity to consent to sexual activity; allowing those with dementia to have their autonomy and well-being promoted while still being protected from harm.

B39

Improving Pain and Function in Older Adults with Substance Use Disorders with a Special Focus on Buprenorphine

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A 75 year-old male patient with melanoma and bony metastases presented to our clinic with stable disease and prognosis in years, with his pain being treated with oxycodone 30 mg four times per day. He intermittently uses non-prescribed opioids and other substances and often runs out early of oxycodone. In the past year, he has had several falls and admissions for altered mental status attributed his opioid use. Adverse drug events (ADE) result in four times as many hospitalizations in older adults when compared to their younger counterparts. When medical comorbidities, drug-drug interactions, serious illness, and/or cognitive deficits are involved, ADE are particularly challenging to prevent, especially in older adults with substance misuse or substance use disorder (SUD). Opioid misuse has been reported in some studies as high as 20-40%, with abnormal drug screens being noted in 30-50%, and 53% of clinicians spending over 30 minutes a day managing opioid misuse. Additionally, there is a false dichotomy that is often ignored as patients may have pain but patients may also have a separate opioid use disorder (OUD), as studies have shown that up to 42% of patients with OUD report chronic pain and 10-30% of patients on long-term opioids develop an OUD. Many patients on long term opioid therapy often report poor pain and function, with an increased risk associated with either continuing or stopping opioids, and tapering opioids can often lead to worsening psychiatric or medical stability. Buprenorphine, plays a potential role in helping treat patients who may be older adults with co-existing pain and an OUD. Buprenorphine's unique mechanism of action as a partial agonist has been shown to be a good analgesic with sustained effects, utility in patients with liver and kidney disease given no active metabolites, having decreased respiratory depression, decreased risk of hyperalgesia, and limited dependency. With shared decision making with our patient, we were able to titrate him off of his opioid use utilizing a novel approach of slowly starting buprenorphine while slowly titrating off his opioid to avoid withdrawal symptoms. Within a week, we were able to titrate off his oxycodone, and continue him on buprenorphine. For the past six months, he has now reported better pain control, no falls, and no admissions for altered mental status. Buprenorphine can therefore be a potential option in treatment of older adults with

chronic pain with opioid misuse or OUD that can lead to better pain control and avoid the ADE and side effects commonly associated with opioids.

B40

Unmasking Functional Decline After Hip Fracture

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Case: An 83-year-old man with a history of atrial fibrillation sustained a hip fracture after a fall. Six months prior, he was evaluated for subjective unsteadiness and slowing gait. Physical exam, including a comprehensive neurological exam, was reassuring. Before the fracture, he lived independently and accomplished all basic and instrumental ADLs. After the fall, he underwent right hip hemiarthroplasty and discharged to a skilled nursing facility on postoperative day 8. During the rehabilitation period, he made minimal progress. He was noted to be profoundly bradykinetic, initially attributed to slow recovery from his traumatic injury, but with persistence even months after surgery. No resting tremor or significant rigidity were noted but he did have postural instability, masked facies, slow speech initiation, hypophonia, and apathy. Vertical gaze and cognitive function were intact. MRI brain showed diffuse cerebral volume loss; other medical workup was unrevealing. This constellation of clinical findings raised suspicion for an atypical parkinsonian syndrome.

Discussion: Morbidity associated with hip fractures is multifaceted, and ambulatory ability after surgery is challenging to predict. In patients with poor functional recovery, distinguishing between morbidity from fracture and a secondary process driving functional decline can be difficult. Evidence on functional trajectories after hip fracture for patients with Parkinson's disease is mixed, but generally suggestive of greater decline in independence in ADLs for patients with Parkinson's. Atypical parkinsonian syndromes are often more rapidly progressive than Parkinson's disease, but little is understood about their impact on hip fracture rehabilitation.

Conclusion: The differential for this patient included progressive supranuclear palsy, gait akinesia with gait freezing, or multiple system atrophy. He was started on carbidopa-levodopa but did not have significant clinical improvement. Six months after surgery, the patient moved to a nursing home due to progressive decline in physical function. This case illustrates how an underlying neurodegenerative disorder may affect rehabilitation after a hip fracture and should be considered when functional recovery after a hip fracture is slower than expected.

B41

An unusual presentation of Neurosyphilis in an elderly immunocompetent patient. A case report.

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Background: Neurosyphilis is a rare central nervous system (CNS) complication of syphilis. Depending on the time since primary infection and the area of the brain involved, a broad spectrum of neurological symptoms is seen. Common presentations include meningeal signs in early CNS involvement and tabes dorsalis in late involvement. Non specific symptoms such as dizziness and memory loss are rarely reported. **Case report:** A 75 year old female with a past medical history of right upper torso herpes zoster infection, hypertension, and thalassemia was referred to our geriatrics clinic with three years history of slowly progressive memory loss with impairment of IADLs, paying bills primarily, and dizziness exacerbated by exertion and associated with falls. No other neurological or non-neurological symptoms were present. Her vitals and physical examination were unremarkable. Otolaryngological, cardiac and radiological workup was inconclusive for the cause of her symptoms.

The patient has been sexually active and monogamous for the last ten years. She had no previous history of any sexually transmitted disease. Considering the screening for STDs, a rapid plasma reagin (RPR) test was ordered, which showed reactive results followed by mandatory cerebrospinal fluid analysis (CSF) analysis, also positive VDRL (Venereal disease research laboratory) screening result. The patient was referred to ID and treated successfully with two weeks of IV penicillin and showed remarkable improvement in her dizziness and memory loss. **Conclusions:** This case demonstrates an unusual presentation of neurosyphilis, providing insight into diagnostic evaluation when approaching patients with memory loss and dizziness of unknown etiology, even with low clinical suspicion for syphilis. It also raises the question of offering syphilis screening for patients with dementia and dizziness of unknown etiology that can be answered through further research studies and clinical trials.

B42 Resident Presentation

Rare Case of Amantadine Withdrawal in a Patient with Spinocerebellar Ataxia

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Spinocerebellar ataxia (SCA) is an autosomal dominant disease that typically presents in middle age with progressive cerebellar degeneration, upper motor neuron dysfunction, and multisystem atrophy.[1] Medications are primarily supportive.[2] We report a case of a patient with SCA who developed rigidity, encephalopathy and persistent fevers during an admission for dysphagia.

A 60 year-old man with SCA on high dose amantadine and riluzole presented with acute dysphonia, shortness of breath, and odynophagia after swallowing his pills and was admitted for close airway monitoring. Home medications were initially held due to concerns for aspiration. While pending evaluation for gastrostomy tube placement, he became acutely encephalopathic by hospital day (HD) 4, awake but not answering questions. On HD 5, he developed fever, rigidity, and became unresponsive. Broad-spectrum antibiotics were started; CT imaging showed right lung consolidation suspicious for aspiration pneumonia. Despite antibiotics, his fever and encephalopathy persisted. He was transferred to the ICU on HD 12 due to worsening hypoxia, tachycardia and tachypnea and was intubated. EEG, MRI brain and LP were unrevealing. Amantadine was resumed on HD 13; within 48 hours he defervesced and was extubated on HD 16. He was following simple commands and answering yes/no questions by discharge on HD 30.

Amantadine toxicity causing neuroleptic malignant syndrome (NMS) has been well-documented, but amantadine withdrawal syndrome (AWS) have been rarely reported. AWS manifests similarly to NMS with fever, extrapyramidal symptoms, delirium, and hallucinations.[3] Dopaminergic medications should be slowly tapered to avoid adverse consequences of acute discontinuation. To our knowledge, this is among the first reports of AWS in a patient without Parkinson's disease or dementia. Our case reinforces the importance of careful medication review at admission and consideration of pharmacologic side effects with not only medication initiation but also discontinuation.

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B43

Recurrent post-hemodialysis acute cognitive changes in a frail older adult

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Introduction

Frail older adults on hemodialysis (HD) form a special cohort, that tend to have more intolerance to hemodynamic and biochemical shifts during dialysis, as compared to younger cohorts. Consequently, it is not uncommon to reduce ultrafiltrate (UF) goals, cut down frequency and duration of HD or use gentler forms of renal replacement therapy. Many such older frail adults end up with inappropriate "fit for all" dialysis prescriptions leading to acute and progressive cognitive changes.

Case

60 year old nursing home resident with ESRD on thrice weekly HD, IVC thrombus on apixaban, history of epilepsy on levetiracetam, history of intradialytic hypotension on midodrine, was brought to hospital for altered mental status immediately after HD. Patient was lethargic, drowsy and unable to respond to questions coherently. Except for HR 110, vitals were normal. Lab work revealed stable electrolytes, BUN 19mg/dl, creatinine 5mg/dl, lactic acid 3.3mmol/l with normal glucose and ammonia. Hemogram revealed elevated hematocrit. Echocardiography - normal ejection fraction, CT head revealed vascular calcifications and volume loss. EEG was normal. Chart review revealed a total of seven ED visits with similar issues with one instance of intubation for airway protection. On a prior visit she also underwent CT angiography which revealed stenosis of right ICA with hypoplastic left vertebral artery. Much like previous encounters she regained full sensorium in 1-2 days and was discharged.

Discussion

Hemodynamic and biochemical shifts during dialysis have been known to cause cognitive changes. Rapid fluctuations in BP, removal of large amounts of fluid and hemoconcentration due to HD are known to decrease cerebral perfusion. Our patient had compromised cerebral perfusion, weighed 60 kg, had intradialytic hypotension, with UF goal of 2 to 2.5 L and was getting dialyzed thrice a week for 3.5 hours. These factors likely predisposed her to develop acute mental changes after HD by compromising cerebral perfusion. Her UF and duration of HD were decreased and higher dry weight advised. Over past two months, patient has not visited ED. This case highlights the importance of recognizing acute cognitive changes after HD by health care providers, specially in older frail adults and a multifaceted multidisciplinary approach with open channels of communication between care providers for dialysis dose and dry weight review for such patients.

B44 Resident Presentation

Bupropion induced status epilepticus in an older adult with kidney disease

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Background

Bupropion is commonly used in patients with depression. Reported ADE of seizures has an incidence of 0.1%-0.4 %. Older adults, patients with advanced kidney disease, on drugs or with conditions that decrease seizure threshold are predisposed to seizures at higher frequency on lower dosages. While seizures as an ADE is well documented, status epilepticus is an unusual presentation.

Case

72M with CKD stage IV, hypertension, diabetes and depression, with no prior seizure disorder, was admitted with multiple seizures. His medications-bupropion, trazodone, insulin and lasix. Patient had convulsions despite maximimum doses of levetiracetam and valproate. He was thus intubated, started on propofol and managed in ICU. Urine drug screen, glucose and ammonia levels were non contributory. MRI brain revealed gyriform hyperintensity on diffusion sequence without loss of signal and corresponding T2 Flair hyperintensity involving medial left anterior frontal lobe compatible with seizure related sequelae. EEG revealed signs of encephalopathy with evidence of cortical irritability /epileptogenic potential that was on ictal/interictal continuum at left anterior quadrant and later progressed to focal clinical status epilepticus originating from left posterior quadrant. Patient was weaned off propofol with no breakthrough seizures, extubated on day 3 and oral antiepileptics continued.

Discussion

Bupropion is highly lipophilic and metabolized to hydroxybupropion, erythrohydrobupropion and threohydrobupropion. These metabolites have potency of up to 50% of parent drug. Up to 87% of metabolized drug is eliminated in urine. Drug and its metabolites are known to be epileptogenic and accumulate due to decreased elimination. Advancing age causes many changes in physiology that affect drug metabolism and excretion. Hepatic blood flow and enzyme activity declines, phase 1 metabolism decreases and total body water decreases with increase in body fat, which impacts volume of distribution, specifically for lipophilic drugs. Published data also suggests association between this ADE and diabetes, insulin and trazodone use. Our patient was taking bupropion 150 mg QD. We believe the above factors with his clinical profile predisposed him to status epilepticus.

Learning points

Neurotoxicity due to bupropion can present as status epilepticus
Bupropion should be avoided in older adults with CKD

B45

Copper deficiency due to Zinc toxicity as a cause of pancytopenia: A case report and review of literature

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Introduction: Copper deficiency is a rare cause of pancytopenia. We report a case of pancytopenia due to copper deficiency caused by zinc toxicity.

Case presentation: 66-year-old Caucasian female with a history of gastric bypass surgery was evaluated for low blood counts. History was positive for zinc supplementation for two years since the onset of the COVID pandemic. Vital signs were unremarkable. She was slightly pale, but the rest of the systemic examinations were normal. Labs showed White blood cell (WBC) count of 1,000/uL, Hemoglobin was 10.3 g/dL, and platelet count was 122 K/uL. Vitamin B12 and folate were not low. HIV and hepatitis C were negative. Serum copper was <500mcg/L (normal range 810-1990mcg/L). Serum zinc was 185mcg/dl (Normal range 60-120). Bone marrow aspiration and biopsy showed scattered myeloid precursors with small vacuolization suggestive of copper deficiency.

Her pancytopenia was thought to be due to copper deficiency, likely from zinc toxicity, and she was started on parenteral copper supplementation followed by oral copper supplementation. Zinc supplementation was stopped.

Copper level and zinc level normalized. WBC, Hb, and platelets normalized. Her symptoms improved markedly after copper supplementation and the stoppage of zinc.

Discussion:

Copper deficiency is uncommon in healthy adults. Common causes of acquired copper deficiency are gastric bypass surgery and malabsorption syndromes. Copper deficiency is a known cause of anemia and neutropenia. Patients have increasingly used zinc, although there is no clear evidence of the benefit in COVID infection.

Excess zinc induces intracellular ligand metallothionein (MTO) synthesis in enterocytes. Copper has a higher affinity for MTO, so copper displaces zinc, binds with MTO, and then gets excreted in the feces, reducing decreased copper absorption. Neutropenia has been demonstrated in copper-deficient mice. Copper is crucial in several steps of hemoglobin synthesis.

Conclusion:

Zinc toxicity is an underrecognized cause of copper deficiency, causing cytopenia. Pertinent history and laboratory evaluation are crucial to identifying and treating this rare condition.

B46

A decline in Montreal Cognitive Assessment (MoCA) Leads to the Diagnosis of Epstein-Barr Virus (EBV) Induced Autoimmune Hemolytic Anemia (AIHA)

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Background: When patients with dementia present with a decline in subjective or objective testing, such as a change in MoCA score, the decline is often presumed to be due to worsening dementia. We present a case in which a patient with dementia was found to have a substantial change in MoCA score. A comprehensive assessment resulted in the diagnosis of AIHA.

HPI: A 78-year-old female living independently in the community with a history of Alzheimer's dementia (CSF positive for elevated p-tau/AB42 ratio) presented to a geriatric clinic with fatigue. Her MoCA was 23/30 one year ago and she was independent of ADL/IADL.

She complained of tiredness, which she attributed to hiking through the woods during the weekend at her lake house in upstate New York. Her partner reported that, at baseline, the patient has word-finding difficulty. This became noticeably worse since her return from the lake house after "closing it up for the winter". She was on her own at her lake house and the house uses well water.

On exam, vitals were normal. She had difficulty with word-finding, with some correct responses. Oriented to self. Her MoCA was 14/30. She was sent to ED.

Labs showed hemoglobin of 6, haptoglobin <10, LDH 869, LFTs WNL. CT head was unremarkable. Parasitic, tick-borne workup negative. Additional was 1+ DAT, EBV IgM positive (>160) with positive IgG, and EBNA-1 IgG consistent with past infection or subclinical reactivation. Responded appropriately to blood transfusion. Repeat MoCA, 4 weeks after discharge, was 18/30.

Discussion: A MoCA score of 26 or greater has 94% sensitivity and 60% specificity in diagnosing dementia and can be a helpful tool for a patient with early stages of dementia. In a study by Krishnan, 139 patients were assessed with MoCA 3.5 years apart, and the group with mild cognitive dementia (MoCA score of 18-25) saw a decline of 1.7 points. Our patient had a decline of 9 points, despite minimal clinical changes, which prompted further investigation. The underlying etiology was suspected reactivation of EBV-induced AIHA, given IgM and IgG titers, with concern for an underlying malignant process which is further being investigated.

Conclusion: Acute changes in MoCA scores should prompt an investigation of potential underlying etiology, rather than presume dementia progression.

B47

Reading the Tea Leaves—a Mysterious Cure for Hypokalemia

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Background: Hypokalemia refers to lower than normal levels of potassium in the blood (normal 3.4-5.0 mmoL/L). Most common causes are decreased PO intake, increased entry into cells, and increased GI or urinary losses. It is prudent to correct hypokalemia as critical hypokalemia can cause potentially lethal cardiac arrhythmia, and injurious falls due to muscle weakness.

Methods: 88 year old Azorean female, with chronic hypokalemia (~3.0-3.3 mmol/L) despite eating 3 bananas daily, absence of K+ wasting medications or underlying kidney or endocrine disease, and K+ repletion of 40mEq daily. Dietary review identified she was drinking 8+ cups a day of "Celestial Lemon Lovers Tea", with licorice root as one of the main ingredients. The active metabolite in licorice is glycyrrhizic acid which inhibits IIB-hydroxysteroid dehydrogenase; this inhibition leads to activation of renal mineralocorticoid receptors by cortisol resulting in mineralocorticoid excess causing hyperaldosteronism.

Results: 88 year old Azorean female with hx of HTN, aortic valve replacement, pancreatitis, kidney stones, osteoporosis, anxiety, presenting to PCP office with years of hypokalemia of unknown origin, and desire to stop her K+ supplements. Interview revealed no K+ wasting medications, good PO intake, and no GI or urinary losses. CT abdomen without adrenal gland abnormalities. She denied ingestion of licorice, which is known to have aldosterone-like action. Further questioning about herbal supplements or teas revealed daily ingestion of 8+ glasses of "Celestial Lemon Lovers" tea; and provider identified "licorice root" listed on label. With cessation of this tea, her K+ levels normalized, she stopped K+ supplementation, and she no longer had to eat 3 bananas a day! The importance of a thorough medical history and culturally appropriate dietary review allowed identification of the cause of her hypokalemia, and achievement of her desire to stop K+ repletion.

Conclusion: Often, hypokalemia is treated with supplements, without identified cause. It is prudent to obtain a thorough history, and specifically question about teas and herbal supplements. Licorice root is a common flavoring used in Europe, Asia, and the Middle East, and was specifically a desired flavor in this patient from the Azores. Patients should be educated about the effects of licorice root, and counseled on the importance to read tea and herbal supplement labels!

B48 Student Presentation

Life-Threatening Arterial Bleed in Severe Hypothyroidism

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Introduction: Despite the high prevalence of hypothyroidism, its ability to cause life-threatening coagulopathy and bleeding is rarely described, with few reports documenting severe hemorrhage in the setting of severe hypothyroidism. We present the case of a patient who developed severe arterial hemorrhage attributed to severe hypothyroidism.

Case Description: An 87-year-old female with a history of hypothyroidism post thyroidectomy for papillary cell carcinoma was admitted for pitting edema of her lower extremities and facial plethora. Vitals showed a blood pressure of 104/69, heart rate of 51. EKG showed sinus bradycardia. Labs revealed a Hgb of 6.8, TSH of 218 and undetectable T4. The patient reported noncompliance to levothyroxine for the past 6 months and was started on IV levothyroxine. On day 7 of admission, she developed acute severe left abdominal pain with a blood pressure of 80/50 and heart rate of 110. Labs revealed Hgb of 5.8 (from 8.4), PT of 13.7, PTT of 44.6, normal INR, and negative HIT antibodies. A CT abdomen and pelvis revealed a 16cm rectus sheath hematoma with active extravasation from the inferior epigastric artery and she underwent coil embolization. At discharge, her TSH was 29 and she was transitioned to PO levothyroxine.

Discussion: The etiology of this patient's arterial bleed was attributed to her severe hypothyroidism and resulting coagulopathy. Evidence suggests that excess or deficiency of thyroid hormone alters the fibrinolytic-coagulation balance, leading to coagulopathies by altering factor levels. Hypothyroidism is associated with

hypocoagulation and increased bleeding risk that is often mild but can be rarely associated with life-threatening hemorrhage. Coagulopathy improves with appropriate restoration of thyroid function. Given that uncontrolled hypothyroidism is commonly seen, providers should be aware of the relationship to severe bleeding to allow for early identification and intervention.

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B49

Rare *Moraxella nonliquefaciens* Endocarditis in a Geriatric Patient: a Case Report

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Background: *Moraxella nonliquefaciens* is a gram-negative coccobacilli commonly found in the normal microbiota of the upper respiratory tract and is especially prevalent in geriatric populations. While *M. nonliquefaciens* has low pathologic potential, this bacteria has rarely been implicated in serious and sometimes fatal infections, including meningitis, ocular infections, pneumonia, septic arthritis, bacteremia, and endocarditis.

Case: We report the case of an 89-year-old male with a history of severe mitral and tricuspid valve regurgitation with previous mitral and tricuspid clip placement who initially presented to our inpatient geriatric service with intermittent fevers and weakness for three days. Blood cultures subsequently grew *Moraxella nonliquefaciens*. Though transthoracic echocardiogram demonstrated no signs of endocarditis, transesophageal echocardiogram revealed a small mobile strand on his aortic valve, likely a vegetation. Thus, he was diagnosed with probable endocarditis and treated with piperacillin-tazobactam for five weeks. Fortunately, he remained asymptomatic after the prompt initiation of antibiotics, and following his hospitalization, he recovered without any known complications.

Discussion: In our literature review, we identified only five other published case reports of *Moraxella nonliquefaciens* endocarditis, one leading to a major embolic stroke and another resulting in death. Our case highlights not only a rare and potentially serious cause of endocarditis, but also common challenges in the management of geriatric patients. We emphasize early recognition of an atypical presentation of endocarditis to initiate treatment and avoid complications. Also, we highlight the need for goal-directed shared decision-making regarding invasive testing such as transesophageal echocardiogram, a procedure which carries an elevated risk of complications in older adults but offers increased sensitivity that can help clarify uncertain endocarditis diagnoses.

Conclusion: *Moraxella nonliquificiens* is an extremely rare case of endocarditis that can lead to serious complications and death. We hope that our report helps geriatricians efficiently identify future cases of *Moraxella spp*. endocarditis, specifically in the geriatric population who are more commonly colonized with *Moraxella spp*. and are more likely to develop complications such as endocarditis, but also need a thoughtful and patient-centered approach due to their complexity.

B50 Student Presentation

Polypharmacy and deprescribing for older patients

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Background: Polypharmacy refers to the use of multiple drugs to treat health conditions and is common in older people. Adverse drug reactions, drug-drug interactions, and potential contribution to geriatric syndromes are reasons to minimize use of multiple drugs when possible.

Case Presentation: A 78 year old with hypertension, type II diabetes, depression, ambulatory dysfunction, hypothyroidism, and history of stroke, is seen at a geriatrics outpatient practice following an extended stay in subacute rehabilitation (SAR). She was brought into the office in a wheelchair by her family and was minimally responsive. Medications included sertraline 100mg QD, quetiapine 100mg QD, buspirone 5mg PO TID, aripiprazole 5mg QD, melatonin 3mg QD, levothyroxine 88mcg QD, amlodipine 5mg BID, lisinopril 10mg QD, metoprolol 50mg QD, metformin 500mg BID, aspirin 81mg QD, fluticasone propionate 1 spray BID, montelukast 10mg QD, loratadine 10mg QD, oxybutynin 10mg QD, docusate 100mg BID, and Vitamin C.

At the first PCP visit: Fluticasone propionate, montelukast, loratadine, and Vitamin C were discontinued. Amlodipine was decreased to 5mg QD.

At 2 months: Aripiprazole, buspirone, and melatonin were deprescribed and quetiapine was decreased to 75mg by her psychiatrist. Oxybutynin was stopped and switched to trospium by her urologist.

At 4 months: HbA1c levels were 6.7-6.9 so metformin was decreased to 500mg QD by her PCP.

At 6 months: Quetiapine was dropped to 50mg QD. Polyethylene glycol 3350 was added for constipation, and fluticasone propionate was restarted for allergic rhinitis. She appeared much more alert and interactive with the PCP.

At 9 months: Her blood pressure was 104/98 and home blood glucose levels were low. Metoprolol was cut to 25mg QD and metformin was discontinued.

At 12 months: Blood pressure, home blood glucose levels, and mood were good.

Discussion: Initial deprescribing focused on highest risk medications. While montelukast is indicated for asthma and allergy, it has a boxed warning for serious neuropsychiatric effects including sleep. She was able to successfully be discontinued from melatonin and antipsychotics after the discontinuation of montelukast. Careful medication review and monitoring of patient's vital signs and blood glucose levels led to more deprescribing. She reported better overall health and mood after deprescribing of other medications.

B51 Student Presentation

Listeria monocytogenes Meningitis with Concurrent Subdural Hematoma

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Background:

Listeria monocytogenes (L. monocytogenes) infection is the 3rd most common cause of bacterial meningitis in adults over 50, with a higher prevalence in immunocompromised populations. Mortality rate in meningitic listeriosis approaches 30%, especially if diagnosis is delayed. We present a case of Listeria meningitis in an older adult with concurrent subdural hematomas (SDH).

Case:

An 85-year-old female with diabetes, CKD, obesity, and depression was brought to the hospital for altered mental status (AMS). Her family reported she had behaved oddly lately and had an unwitnessed fall at home one day prior. She was febrile upon arrival at 101.5°F.

She was lethargic, disoriented, and had coarse breath sounds. She moved all extremities passively. Initial labs included WBC 14.9 and sodium 131meQ/L. Non-contrast CT head revealed an acute 1.2cm right SDH with mild mass effect and an acute 0.7cm left parietal SDH. Chest x-ray showed diffuse interstitial opacities and left pleural effusion. Cefepime and azithromycin were initiated for suspected community acquired pneumonia. Blood cultures, urinalysis, and urine culture obtained before antibiotics were negative. Neurosurgery consult recommended conservative management for SDH. When the fever failed to resolve, a lumbar puncture (LP) was attempted unsuccessfully. The patient was started on empiric ampicillin, and a repeat bedside LP was performed. CSF showed WBC 700 with neutrophilic predominance, protein 455 mg/dL, and glucose 79 mg/dL. CSF PCR panel was positive for L. monocytogenes. Gentamicin was added for synergy with ampicillin, and other antibiotics were discontinued. Repeat CT showed no change in size of SDHs. MRI brain revealed no subdural or epidural abscess. Given debility and lack of improvement after 11 days of listeriosis therapy, the family elected to pursue palliative care and the patient was transitioned to home hospice.

Conclusion:

Diagnosis of Listeria meningitis can be complicated by atypical presentations within the elderly population. Despite a high prevalence, the typical gradual onset of L. monocytogenes complicates diagnosis. The presence of SDHs and suspected community acquired pneumonia led to premature closure and delayed diagnosis by the treating team as concurrent SDH with L. monocytogenes meningitis is rare. A high index of suspicion for meningitis should remain in elderly patients presenting with AMS and fever.

B52 Student Presentation

More Than an Ulcer? Felty Syndrome Manifesting as Failure to Thrive

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Background: Failure to thrive (FTT) is a syndrome commonly described in geriatric patients. It is characterized by declining function, frailty, and neuropsychiatric impairment due to one or more underlying etiologies. We present a unique case of an older patient who presented to the geriatric medicine service with FTT due to a rare rheumatologic cause.

Case: The patient was a 75-year-old man previously living independently, with a history of rheumatoid arthritis (RA) and prostate cancer, who was sent to the hospital by his doctor due to a potentially infected sacral ulcer. On presentation the patient was tachycardic, and the sacral ulcer was noted to be unstageable with mild surrounding erythema. He was admitted to the geriatric medicine service for evaluation and treatment. Imaging showed no osteomyelitis, and why this previously independent man had developed a sacral ulcer became the more pressing question. Geriatric assessment revealed that over the prior 3 months he had lost 25 pounds, developed dependency in most ADLs, and become wheelchair bound. He had developed profound FTT.

Notably, he had a thirty-year history of RA and had stopped all treatment around 4 years prior. On exam, he appeared cachectic, had ulnar deviation of his bilateral phalanges, and had rheumatoid nodules on his arms. Labs revealed neutropenia with an ANC of .79. Rheumatoid Factor titer was >650 and CCP antibody >340. Due to these high titers, his neutropenia, longstanding RA, and splenomegaly on MRI, the patient was diagnosed with Felty syndrome. He was initiated on a prednisone taper and methotrexate, which resulted in improved mobility, affect, and PO intake. He was discharged with close rheumatology follow-up.

Discussion: Felty syndrome is a manifestation of severe sero-positive RA that involves neutropenia and often splenomegaly. Felty syndrome affects approximately 1-3% of those diagnosed with sero-positive RA. Treatment with methotrexate can significantly improve all symptoms. This case demonstrates several important lessons. First, it shows the importance of investigating the etiology of FTT. For this patient, a reversible cause was found, and he began to show almost immediate improvement with treatment. It is also a reminder that initial presenting symptoms may be manifestations of greater underlying disease. Finally, a thorough geriatric assessment focused on functional status was crucial in revealing the severity of his decline.

B53

Serotonin Associated Restlessness Misdiagnosed as Dementia Behaviors

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Background: Early toxidromes are commonly overlooked by providers in older adults, sometimes leading to increased exposure to the offending agents causing the symptoms.

Case Presentation: A 79 yo man with Alzheimer's dementia was admitted from home for worsening behavioral disturbances. He had previously been started on trazodone and risperidone before being switched to olanzapine for persistent symptoms. Trazodone and olanzapine doses were escalated by psychiatry and eventually citalopram and carbamazepine were started. The patient's behaviors persisted prompting a Geriatrics consultation. Upon evaluation, the patient was found to be experiencing episodes of heightened irritability and anxiety, facial flushing, severe psychomotor restlessness, nausea, anorexia and worsening confusion. Presentation and correlation with medication dosing suggested possible serotonin overload (despite citalopram having been recently discontinued). While the patient did not meet Hunter's criteria for serotonin syndrome, he did exhibited a cluster of symptoms that indicated that he was on the path to serotonin syndrome. The decision was made to titrate olanzapine off which initially improved his symptoms. However, when restlessness again worsened quetiapine was added and the dose increased, again resulting in the return of flushing episodes noted above. Given this course, trazodone was stopped and the patient was continued on quetiapine alone. Over the next few days his symptoms abated and he improved.

Conclusions: Serotonin syndrome is often overlooked, serotonin medication overload can present long before a burden of serotonergic medications reaches the point of a serotonin syndrome. Even conservative psychoactive medication use can be associated with serotonin overload on an individual basis. Symptoms of akathisia in the form or restlessness can trigger added serotonergic medication use, resulting in higher serotonin syndrome risk. Careful examination along with deprescribing is often helpful in determining if medication associated effects are causing or worsening a patient's behaviors in situations such as this. When restlessness presents along with the use of serotonergic medications, especially accompanied by temperature dysregulation, tremor, or nausea, de-escalation of serotonergic medications should be attempted.

B54 Encore Presentation

Ice Cream Only Diet - A Tell Tale Sign of Pernicious Anemia

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Background

Vitamin B12 deficiency due to pernicious anemia is becoming prevalent in elderly population. Severe deficiency can lead to megaloblastic anemia or demyelinating disease such as subacute combined degeneration (SCD). This is a case of a 71-year-old who presented with progressively descending spasticity and paresthesia of extremities after consuming ice cream only diet for 6 months due to dysgeusia.

Methods

Patient presented with pancytopenia, profoundly low serum vitamin B12 (60 pg/mL) and positive anti-intrinsic factor antibody, suggestive of pernicious anemia. Magnetic resonance imaging (MRI) of brain & cervical spine showed dorsal column demyelination suggestive of SCD (Fig 1a). Patient was given blood transfusion, started on daily cyanocobalamin 1g intramuscular (IM) injections and oral multivitamin supplement.

Results

By hospital day 3, patient's limb spasticity and paresthesia significantly improved for participation in physical therapy. On hospital day 7, patient was transitioned to weekly cyanocobalamin 1g IM injections for additional 4-weeks. By hospital day 10, pancytopenia with macrocytosis resolved and patient was discharged to subacute rehabilitation. At 7 month follow up, patient was able to ambulate with a cane without any spasticity or paresthesias which was reflected on the repeat MRI of brain & cervical spine (Fig 1b).

Conclusion

A 71-year-old male presented with pancytopenia and SCD related to severe vitamin B12 deficiency. Patient initially had dysgeusia that likely was a tell-tale sign of pernicious anemia which further led to B12 deficiency on an ice cream only diet. Despite the severity of his symptoms, patient was able to reverse majority of the symptoms with aggressive cobalamin replacement therapy.

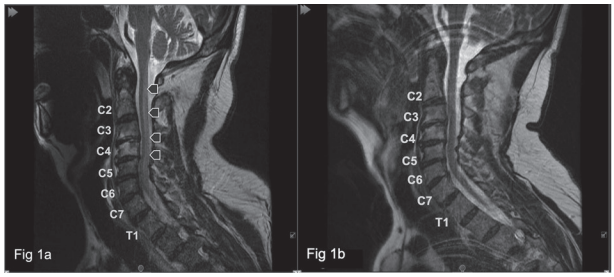

Figure 1. MRI Brain & Cervical spine with hyperintense signal suggestive of SCD in T2 weighted image at the time of diagnosis (Fig 1a) and after 7 months of cobalamin replacement therapy (Fig 1b).

B55

A case of Successful Buprenorphine Use for an Older Patient with Chronic Severe ADL Limiting Back Pain

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Background: Buprenorphine is a schedule III opioid that should be considered before typical opioids (ex., oxycodone, morphine: scheduled II opioids) to manage chronic pain in multimorbid frail older adults. Advantages include its unique activity at the opioid receptor and a better safety profile with a lower risk of respiratory depression and less impact on the sensorium. It is also safe to use in renal dysfunction and available in various formulations that are useful in older adults.

Methods: 92-year-old male with atrial fibrillation, heart failure, deep vein thrombosis of the lower extremity, and chronic kidney disease presented with low back pain secondary to degenerative disc disease of the lumbar spine. Prior to the onset of back pain during a low-weight lifting session, the patient was very independent but now required the assistance of a walker and barely left home. Rehab medicine had prescribed an epidural steroid injection and non-opioid and opioid therapy, including Tylenol, Tramadol 50mg, and Oxycodone 5mg. Despite these interventions, the patient continued to have uncontrolled pain that affected his quality of life and impaired his overall functional status. Considering the patient's comorbidities, fall risk, the constant presence of debilitating pain, and significant pill burden, a Buprenorphine patch of 10mcg/hour every seven days was added to his regimen to provide long-acting pain relief with a better safety profile and easier administration without increasing pill burden.

Results: The patient tolerated the initiation of buprenorphine with no sedation or confusion and only mild constipation, which was controlled with laxatives. The dosage was gradually increased to 20 mcg/hour over a few weeks. As he continued to need frequent breakthrough doses of oxycodone, he was rotated away from the patch to the sublingual form of buprenorphine 1mg twice daily to allow for continued up-titration. After initiation of Suboxone 1mg (1/2 of 2mg-0.5mg film), the patient's pain subsided, and he no longer needed Oxycodone 5mg for breakthrough pain. He returned to physical therapy, and his overall functional status improved with the ability to ambulate independently.

Conclusion: For managing chronic pain in multimorbid frail older adults, buprenorphine should be considered, given a variety of available formulations and a relatively safer side effect profile than traditional full agonist opioids.

B56

Combination Nivolumab and Ipilimumab therapy related Diabetic Ketoacidosis: an imperative to support glycemic monitoring during therapy.

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Introduction: Nivolumab is a monoclonal antibody used alone or in combination with other monoclonal antibodies for the treatment of several malignancies including melanoma. It is used specifically to treat advanced melanoma and to prevent recurrence. Endocrine side effects from this drug include primary or secondary adrenal insufficiency, immune-mediated hypophysitis, immune-mediated thyroid disorders, and in <1% cases type 1 diabetes mellitus. The mechanism of this side effect is related to infiltration of T cells producing an immune-activated response that destroys beta cells resulting in insulin deficiency. Nivolumab with ipilimumab can be used as alternatives to surgery for esophageal cancers. There is an increased risk for type 1 DM when these two agents are used together (of up to 2.7%). We present a case of a patient who received nivolumab and ipilimumab for treatment of esophageal melanoma and developed type 1 diabetes mellitus that presented as Diabetic ketoacidosis (DKA).

Case Presentation: An 82-year-old Asian man with a diagnosis of esophageal melanoma presented to our local ED with lethargy. Labs revealed a blood glucose of over 1000 mg/dL. ABG revealed a pH of 7.16, bicarb of 9 with anion gap of 26. He was found to be in severe DKA. Workup for infectious, cardiac, or other GI etiologies was negative. He required an intravenous insulin infusion and normal saline fluids before being transitioned to basal insulin. Patient had no prior history of diabetes or pre-diabetes. About 2 weeks prior, he had received 1 round of Nivolumab and Ipilimumab for initial treatment of his esophageal melanoma with plans for an esophagectomy about 1 month after. He began to experience severe lethargy, weakness, and change in behavior about a week after the first cycle. The patient improved clinically within the next few days and returned to his baseline and was discharged to subacute rehab on Insulin.

Discussion: As the indications for monoclonal antibodies for treatment for several malignancies including melanoma increase, the frequency of autoimmune adverse events is expected to rise. In patients receiving Nivolumab and Ipilimumab combination therapy, the likelihood of developing new onset Type 1 DM must be discussed with patients. Clinicians must consider simple interventions such as home glucose monitoring for early identification and management of this potential life-threatening side effect.

B57

Multifactorial Thiamine Deficiency Induced Cognitive Decline in the Setting of Underlying Cerebral Amyloid Angiopathy

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Background

Thiamine is an essential nutrient involved in carbohydrate metabolism and pathways needed for the generation of essential molecules in cells. Thiamine deficiency can lead to Wernicke-Korsakoff (WK) syndrome, which can result in progressive memory changes. In contrast, cerebral amyloid angiopathy (CAA) is due to amyloid buildup in the cerebral arteries. It is a type of vascular dementia, usually leading to gradual reduced speed of thinking and problem solving.

Case

A 61 year old with a history of remote stroke with no residual deficits, breast cancer status post surgery and chemo radiation, heavy alcohol use, vertical banded gastroplasty, Barrett's esophagus, and GI stricture presented with one week of confusion. Prior to hospitalization, she was living in the community and was functionally independent in all IADLs. The patient had roughly 100 lbs of weight loss in the past 2 years, was using NSAIDs frequently, and was using diphenhydramine for chronic insomnia. During the patient's hospitalization, she had extensive labwork which revealed no metabolic or infectious etiologies. Thiamine was found to be deficient; oral thiamine supplementation was initiated with no improvement. An MRI of the brain revealed CAA that had previously not been detected. The patient was evaluated by numerous specialists but no clear etiology was determined. The patient made little improvement and was admitted to long-term care (LTC). She remained confused, and suffered from frequent visual hallucinations, restlessness and anxiety. Further workup in LTC, including a second opinion through neurology, attributed acute cognitive changes to multifactorial WK due to alcohol use and malnutrition as well as to a lesser extent underlying CAA.

Conclusion

Addressing rapidly progressive cognitive changes requires an interdisciplinary team and may be the result of multifactorial processes. While CAA can lead to cognitive changes, these tend to be slowly progressive. In contrast, WK can result in more acute, progressive memory changes. It can be seen in heavy alcohol use, severe protein-calorie malnutrition, and various gastric surgeries. Treatment includes thiamine supplementation, but this does not always reverse cognitive and functional changes.

B58

The ABC's of STAR-VA: The management of a patient with dementia and behavioral disturbances in a skilled nursing facility

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Introduction: Patients with dementia and challenging behaviors can have a significant impact on the environment of care and staff morale in skilled nursing facilities (SNFs). Staff Training in Assisted Living Residences (STAR-VA) is an interprofessional approach to consistently and safely manage behaviors in this population to improve care.

Case: An 85-year-old male with dementia and dysphagia was admitted to a VA SNF in the setting of inappropriate and aggressive behavior requiring long-term care placement. The behaviors had a significant impact on the care milieu and staff morale in the SNF. As an example, the patient had oral fixations and would drink despite aspiration risks. Behaviors occurred when the staff would limit his oral intake due to time constraints of having to supervise his intake. A comprehensive review of the patient's care plan was initiated, and the patient was enrolled in the STAR-VA program. The program consisted of training staff in dementia related behaviors, development of behavior plans, creation of ABC cards focused on activators (As), behaviors (Bs), and consequences (Cs) of behaviors, identification of pleasurable events, and implementation of dedicated behavioral rounds. Upon filling out the ABC card, staff identified that one of his activators was that his oral intake was being limited and requests for additional food were dismissed. Through the STAR-VA approach, staff developed a comprehensive behavior plan and identified pleasurable events. One component of his dedicated ABC card focused on giving him more autonomy around food, and increasing access. After implementing STAR-VA interventions for this patient, his behavior changed dramatically and staff interactions and morale significantly improved. In the two months prior to initiating STAR-VA, the patient had 9 disruptive behavior reports (DBR) and in the two months post-implementation, the patient had 0 DBR.

Conclusion: The STAR-VA framework for patients with challenging behaviors can have a positive impact on the care milieu in SNFs. The impact can be on the individual patient, the community of care, and the staff. The STAR-VA framework should be considered in long-term care communities caring for this population.

B59

REMEMBER THE ZEBRA IN THE ROOM: CEFEPIME INDUCED NEUROTOXICITY (CIN)

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Background: Delirium is a common presentation in hospitalized older adults. Polypharmacy and age-related pharmacokinetic changes make them more vulnerable to medication adverse effects. In this case, diagnosis was delayed due to anchoring bias.

Case: An 86-year-old female with past medical history of paraplegia, right hip arthroplasty, and multiple decubitus ulcers was admitted with right hip periprosthetic abscess. She was alert and fully oriented on admission. Following surgical debridement, she was started on vancomycin and ceftriaxone. Tissue culture grew *Pseudomonas aeruginosa,* and antibiotics were switched to cefepime. Three days later she developed hyperactive delirium. There was no electrolyte or metabolic abnormalities. Acute stroke was ruled out by CT brain. The patient had recently received opioids perioperatively for pain. Initially, the delirium was attributed to opioid use, but discontinuation of opioids did not resolve the delirium.

New onset myoclonic jerks and a decline in mental status prompted a video EEG, which was consistent with non-convulsive status epilepticus (NCSE). Intravenous lorazepam resulted in resolution of NCSE with notable clinical improvement. Discussion with family revealed a history of seizure in the setting of stroke and treatment with levetiracetam, which was discontinued three months later due to drowsiness. After this workup, CIN was suspected, cefepime was switched to meropenem, and lacosamide was started. Her mentation returned to baseline within 24 hours.

Discussion: Delirium is a common presentation of CIN. It is easy to miss this rare but easily reversible cause for delirium in a critically ill older adult. Case reports suggest that a lack of awareness of CIN delays its diagnosis by 5 days on average. Risk factors for CIN include older age, excessive cefepime dosing, renal dysfunction, and prior neurological injury. This patient had normal renal function and the cefepime was dosed using an extended infusion strategy to maximize efficacy while minimizing exposure. In this case the patient's seizure history, prior discontinuation of antiepileptic agent, and current cefepime use were overlooked. Thus, including CIN early in the differential of delirium in older adults can reduce morbidity and mortality from NCSE through earlier diagnosis.

Conclusion: Consider CIN as a potential cause for delirium in critically ill older adults on cefepime.

B60

Never Too Old: A Case of LADA Very Late in Life

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Case:

Ms. J is a slender 90-year-old woman with a past medical history of hypertension, hypothyroidism, and type 2 diabetes mellitus (T2DM) who presented to clinic with dangerous fluctuations in her glucose. She had been diagnosed with T2DM in February 2020, when she had low energy and an A1C of 12.4. On review of family history, her mother had developed T2DM at age 86. Ms. J was started on metformin and 6 units of daily glargine. She met with a dietician and successfully changed her diet. For the next 1.5 years, her A1C was 7.5-8 with only minor adjustments to her glargine. In December 2021, she had a fall, resulting in vertebral and pelvic fractures complicated by severe hyponatremia and diabetic ketoacidosis (DKA). Kyphoplasty and sacroplasty improved her pain and DKA was treated. However, after discharge her continuous glucose monitor showed widely fluctuating glucose, with fasting levels in the 70s and post-prandial levels in the 200s-400s. Despite a decrease in glargine and the addition of sitagliptin for post-prandial control, her glucose remained highly variable. Autoimmune testing showed that GAD65 Antibody was markedly positive at >250 IU/mL (normal <5 IU/mL) and Islet Cell Antibody Titer was positive at 40 (normal <1.25). C-Peptide was low at 0.22 (normal 0.8-3.85). She was diagnosed with Latent Autoimmune Diabetes in Adults (LADA).

Discussion:

LADA is autoimmune diabetes that begins in adulthood. It has a slower progression than type 1 diabetes, and initially patients do not typically require insulin, making it easy to mistake LADA for T2DM. For Ms. J, her advanced age, family history, and lack of history of autoimmune history led to the initial assumption of T2DM. Her episode of DKA combined with the difficult to control post-prandial hyperglycemia raised suspicion for autoimmune diabetes. Given her high antibody levels and low c-peptide, her oral hypoglycemic medications were stopped. Short-acting mealtime insulin was initiated with improved glycemic control. Clarifying her type of diabetes helped change management and improve her diabetic control.

Conclusion:

Consider LADA as an etiology for an older adult with T2DM who does not achieve adequate glycemic control despite compliance to therapy, particularly if they have other autoimmune disease, if they lack features of metabolic syndrome, or if they experience DKA.

B61 Resident Presentation

Familial Cerebral Cavernous Malformations (CCMs) as a cause of early-onset dementia after initiation of anticoagulants

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Background: Cerebral cavernous malformations (CCMs) are known to occur both spontaneously and through genetic inheritance and can put patients at high risk for intracerebral hemorrhage with varying neurologic outcomes. There are 3 known genetic variants associated with familial CCMs and research to understand the role of these genes in vascular homeostasis is ongoing. Individuals with familial inheritance are more likely to have numerous CCMs on imaging with an increase in the number and size of these lesions with aging. Early research has demonstrated the loss of function variant for KRIT1 (CCM1) may cause endothelial cell dysfunction through oxidative stress.

Methods: After testing positive for KRIT1 variant, the patient, one sibling and patient's mother were identified as potential genetic carriers. Interview and chart review was used to detail the past medical history, risk factors and natural history of disease course for the 3 individuals, one deceased. Verbal and written consent was obtained to by the cognitively intact sibling.

Results: Patient #1 presented with abrupt (less than one year), early-onset dementia at age 60 with innumerable CCMs with previous hemorrhage on MRI. The patient had been placed on apixaban for incidental pulmonary emboli about 12 months prior to cognitive decline. Because of the burden of disease, and a family history of Alzheimer's Disease, genetic testing was recommended, and KRIT1 variant was found to be positive. A younger sibling, patient #2, also carried this allele and MRI revealed a large burden of non-bleeding CCMs. Cognitive testing on patient #2 was normal. Chart review for the parent with a history of Alzheimer's Disease, patient #3, revealed innumerable CCMs as early as age 76 (by imaging) though no genetic testing has been performed.

Conclusions: This case describes CCMs, with a familial inheritance pattern and KRIT1 variant mutation, as the cause of early onset dementia with classic imaging findings. Although rare (approx. 1:6,000), most clinical presentations of hemorrhage include focal neurologic deficits or seizures with hemorrhage, not cognitive impairment. Imaging findings led to genetic testing for the familial disorder as well as aggressive blood pressure management and avoidance of all anticoagulants or blood thinning medication in the asymptomatic sibling to reduce the risk of hemorrhage in the future.

B62 Resident Presentation

Mad as a Hatter: The Medications Matter!

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Background: Elderly patients, who are at increased risk of polypharmacy, often do not receive close examination of their home medications when hospitalized. We present a case of a patient who was repeatedly hospitalized for delirium solely attributed to urinary tract infections (UTIs), despite evidence of high anticholinergic burden. By fixating on a single, oversimplified diagnosis, the healthcare team failed to fully address the patient's symptoms, resulting in recurrent hospitalizations and poorer quality of life.

Case: A 77 year old male with history of benign prostatic hyperplasia, urinary incontinence, depression, insomnia, lower back pain, and recurrent UTIs presented for the 7th time in a year with increased confusion and falls. Labs were again suggestive of UTI. He also was catheterized for urinary retention. Geriatrics was consulted for polypharmacy. On initial encounter, the patient immediately complained of thirst and dry mouth. Chart review revealed he had reported this symptom before, and had been started on a saliva substitute. Medication review revealed multiple anticholinergic medications, including tramadol, oxybutynin, paroxetine, and trazodone. Geriatrics team proposed a plan to decrease the patient's anticholinergic burden, which was successfully started prior to discharge.

Discussion: Elderly patients are vulnerable to the effects of anticholinergic medications through age-related physiologic changes. This patient repeatedly presented with signs of anticholinergic adverse effects, including urinary retention, dry mouth, falls, and delirium, which were overlooked or blamed on UTIs. Oxybutynin was stopped as it was ineffective for our patient's incontinence and he was experiencing harm from clinically relevant urinary retention. Tramadol was changed to an acetaminophen and oxycodone regimen, the trazodone dose was halved, and a crosstaper of paroxetine to sertraline was initiated. Acute hospitalization represents an opportune time to carefully review medications, assess for harms, and deprescribe.

Conclusion: This case highlights how medication adverse effects can be overlooked despite multiple interactions with the healthcare system, if providers anchor onto common diagnoses like UTI. It is important to critically review medication lists of admitted elderly patients who are more vulnerable to adverse effects. Utilizing tools such as the anticholinergic burden calculator can help support deprescribing efforts.

B63 Student Presentation

A Complex Case of Ludwig Angina With an Uncommon Source of Infection

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Background: Ludwig angina is a rapidly progressive gangrenous cellulitis of the soft tissues of the neck and floor of the mouth that most commonly affects males between 20 and 60 years old.[1] Mortality rate of this potentially life-threatening disease has improved from 50% to 0.3-4.0% due to antibiotic use.[1] While this infection is odontogenic in over 90% of cases[2], this is a unique case of Ludwig angina in an older adult female caused by sialadenitis.

Case Description: A 91-year-old community-dwelling female presented to the Emergency Department with four days of gradual right facial edema and progressive involvement of the right neck and tongue. On exam, patient had submandibular region and floor of the mouth edema with no apparent caries, gum disease, or dental infection. Labs included white blood cell count 15.6 K/μL. Patient was taken to the operating room where incision and drainage was performed. Postoperative CT scan showed right submandibular sialadenitis with no evidence of residual drainable fluid collection or abscess. Patient was treated with antibiotics and discharged home.

Discussion: Many providers have limited experience diagnosing and treating Ludwig angina as it is a rare condition, especially in older adults. While this patient did not have an odontogenic infection, dental providers routinely identify and treat dental disease which is the most common etiology for Ludwig angina. Yet in 2017, only 29.2% of older adults in the United States had dental insurance with even lower rates in persons of color and low socioeconomic status.[3] This is likely a factor why many older adults do not receive routine dental care. This unique case underscores the importance of access to and need for affordable routine dental care in older adults as well as considering Ludwig angina in atypical populations with neck or floor of the mouth edema.

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B64

Cancer and Aging Interdisciplinary Team (CAIT) Clinic-Development and Implementation of an Interdisciplinary Telemedicine Clinic for Older Patients Planned for Cancer Treatment

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Background: Frailty assessment is an important marker of the older adult's fitness for cancer treatment independent of age. Pretreatment geriatric assessment (GA) is associated with improved mortality and morbidity outcomes but must occur in a time sensitive manner to be useful for cancer treatment decision making. Unfortunately, time, resources and other constraints make GA difficult to perform in busy oncology clinics. We developed the Cancer and Aging Interdisciplinary Team (CAIT) clinic model to provide timely GA and treatment recommendations independent of patient's physical location.

Methods: The interdisciplinary CAIT clinic model was developed utilizing the surge in telemedicine during the Covid-19 pandemic. The core team consists of the patient's oncologist, geriatrician, registered nurse, pharmacist, and registered dietitian. The clinic's format is flexible, and the various assessments can be asynchronous. Patients choose the service method- in person, remotely, or hybrid. Based on GA outcomes, the geriatrician provides recommendations and arrange interventions. An assessment summary including life expectancy estimates and chemotoxicity risk calculator scores is conveyed to and discussed with the treating oncologist. Physician and patient satisfaction were assessed.

Results: Between May 2021 and June 2022, 50 patients from multiple physical locations were evaluated in the CAIT clinic. 68% were 80 years of age or older (range 67-99). All the evaluations were hybrid. The median days between receiving a referral and having the appointment was 8. GA detected multiple unidentified impairments. About half of the patients (52%) went on to receive chemotherapy (24% standard dose, 28% with dose modifications). The rest received radiation (20%), immune (12%) or hormonal (4%) therapies, 2% underwent surgery, 2% chose alternative medicine, 8% were placed under observation, and 6% enrolled in hospice care. Feedback was extremely positive.

Conclusions: The successful development of the CAIT clinic model provides strong support for the potential dissemination across services and institutions.

B65 Student Presentation

Likelihood of Adoption of CareMOBI: Addressing Communication Barriers between Primary Care Providers and Adult Day Health Centers

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Background

Adult Day Health Centers (ADHC) are non-residential congregate facilities that serve 250,000 cognitively and functionally impaired adults daily. Previous research indicates that ADHCs experience challenges in communication with primary care providers (PCPs). This is because 92% of ADHCs lack interoperable EHRs and do not have the financial and technical infrastructure to implement them. CareMOBI (Mhealth for Organizations to Bolster Interconnectedness) is a mobile application in development meant to streamline the information communication between ADHC, PCP, and family caregiver populations. The purpose of this study is to understand the PCPs' likelihood of adopting CareMOBI for geriatric care based on the results of preliminary user testing.

Methods

Demographics of the study included 87.50% female and 12.5% male participants, with a median age of 38 years. Purposive sampling of primary care providers from urban, suburban, and rural practices whose patient populations include PLWD were recruited for the study through convergent parallel design. Quantitative data was collected through a 33-item Technology Acceptance Survey. Qualitative data was collected through semi-structured interviews. The qualitative and quantitative data were merged into a matrix defined by 4 major themes: perceived value in geriatric care, ease of use, fit within workflow, and likelihood of adoption.

Results

Survey results showed that a majority percentage of providers were likely to adopt the app, saw the app as valuable, and easy to use. In response to fit within a provider's workflow, survey results varied. An example of an exemplary quote from the qualitative interviews is, "Yeah this is a great social model of how we should be viewing our patients…they're just not a patient. They're a human being, and they're a person."

Conclusion

The purpose of this study was to understand the likelihood of adoption of CareMOBI by primary care providers. Through the survey

data and qualitative interviews, we were able to identify that providers found this app extremely valuable, easy to use, and a high likelihood of use when the app was available. The main apprehension with the app came with its ability to fit into a provider's workflow. Specifically, the apprehensions regarding interoperability are important factors to address through a user-centered approach and as the application is pilot-tested into adult day health centers.

B66 Student Presentation

Social Vulnerability Index: Associations in Women Treated with Chemotherapy for Early-Stage Breast Cancer

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Background: The CDC's Social Vulnerability Index (SVI) is emerging as a tool in health services research. In women scheduled for chemotherapy for early-stage breast cancer (BC), we investigated associations of SVI and its domains with (1) pre-treatment demographics, health behaviors, functional and quality of life factors, and (2) treatment toxicities and adverse events during chemotherapy.

Methods: The sample consists of women with BC who participated in a moderate exercise program during chemotherapy. SVI scores were derived from the patient's home address and zip code. Higher SVI scores signify greater vulnerability while lower SVI scores signify less vulnerability.

Results: In a sample of 288 women, mean age was 55.4 years with a range from 23 to 83 years. Lower SVI Socioeconomic Status was associated with older age (p=0.03). Higher SVI Overall status was associated with Black race (p=0.0006), lower education (p=0.04), and non-marriage status (p=0.001). Higher SVI Household Composition was associated with greater BC stage (p=0.05) and worse short physical performance battery (SPPB) scores (p=0.02). Higher SVI Overall was associated with fewer walking minutes/week (p=0.0005), history of smoking (p=0.02), and alcohol use (p=0.007). Higher SVI Overall was also associated with limitations in instrumental activities of daily living (IADL) (p=0.03), increased Mental Health Index-Depression (p=0.008), and lower emotional social support (p=0.02). Higher SVI Overall (p=0.04) and SVI Household Composition (p=0.01) were associated with pre-chemotherapy arthralgia, and higher SVI Minority Status/Language (p=0.05) with myalgia.

Conclusions: SVI scores derived from patient home address zip codes can provide insights into patient vulnerability and add to their social history. In our sample, SVI was not associated with treatment modalities or toxicity.

B67 Student Presentation

Tools to Measure Barriers to Medication Management Capacity in Older Adults: A Scoping Review

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Background:

As the ability of older adults to self-manage medications is influenced by a variety of factors, it is important to identify appropriate tools that enable clinicians to assess factors that may be driving medication mismanagement and non-adherence.

Purpose: To identify tools that measure physical, cognitive, sensory (vision, hearing, touch), motivational, and environmental barriers to medication self-management in older adults.

Methods

We used Arksey and O'Malley's scoping review framework and the PRISMA Extension for Scoping Reviews checklist to conduct the review. We searched PubMed (MEDLINE), Ovid Embase, Ovid IPA, EBSCOhost CINAHL, APA PsycINFO, and Scopus in June 2022 to identify relevant literature. In consultation with a librarian, search strategies comprising of keywords (medication, self-management, tools, functional limitation, and elderly) were used. Studies in the English language published during 2002-2022 that proposed tools designed to measure barriers to medication self-management in older adults (≥60 years) with at least two psychometric properties established were included. We excluded studies conducted with inpatients or assisted living residents and condition-specific tools. Covidence was used to perform independent title, abstract and full-text screening by three reviewers.

Result: Of the 7235 studies screened, 39 articles, four theses, one conference abstract, and two articles from the bibliography met the inclusion criteria. We identified 44 tools from the included studies: 19 measured a combination of various barriers mentioned previously, 13 assessed only cognition, five only vision, one only auditory, three only environmental (social support), and one only motivational (health literacy) factors.

Conclusion: This scoping review identified a number of validated tools to measure various challenges that older adults encounter with medication management. However, no one tool measures all five barriers (physical, cognitive, sensory, motivational, and environmental) to medication-taking at home.

B68

A Program that lowers costs and hospital use in Medicare patients with significant impairment in social drivers of health

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Background

Elderly patients in safety net health systems have significant Social Driver of Health (SDOH) challenges. These challenges, as well as their illness acuity, combine to cause heavy utilization of hospital services. We developed a program to lower utilization for this group that works in conjunction with their PCP.

Methods

Program The Red Carpet Care (RCC) program, based on the GRACE model, provides care through home visits, clinic visits, telephone and virtual visits. It is centered around a core interdisciplinary team of a CNP, SW, RN, and care coordinator, care navigator; supplemented by a pharmacist, recruiter and geriatrician. Patients are selected based on risk criteria and utilization history. Patients can be also referred by: PCP, Inpatient staff, community agencies, and SW. An initial visit is followed by IDT review to create a personalized care plan which quantifies the intensity of ongoing visits and contacts. IDT also reviews each episode of ED or inpatient.

Subset for analysis Patients with a full 12 months of data prior to enrolment in RCC and 12 months post enrollment. Currently 595 persons in RCC; 45% African American, 59% female, 56% over age 70. Subset was similar demographically to the entire RCC population. SDOH compared the entire RCC patient group to all (MH) Medicare patients and all MH patients of any age.

Results

SDOH RCC Medicare compared to MH no RCC Medicare patients and all patient at MH

SDOH Domain All n=75,164 65+ n=18,627 RCC n=598
Physical 25% at risk 29% at risk 60% at risk
Social 46% 41% 48%

Digital 9% 18% 32%
Financial 26% 17% 32%
Food 21% 14% 26%
Stress 21% 19% 26%
Transportation 10% 8% 20%

Utilization

Total cost reduction $4,218 per patient per year: ED visits declined by 17.9%, Admissions declined by 39.3%, Readmissions declined by 52.6%, Observation stays declined by 41.3%, Overall Medicare spend declined by 18.5%

Conclusions

Red Carpet succeeds at reducing Medicare inpatient & emergency utilization despite the RCC patients having substantial challenges in the social drivers of health. RCC has allowed success in achieving shared saving for our Direct Contracting Entity.

B69 Resident Presentation

Predictive mortality value of a sequential measurement of frailty from admission up to 12 months follow-up in patients hospitalized in an intermediate care facility

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Background: Frailty is dynamic and changes throughout life [1]. These transitions raise the need to measure frailty sequentially in order to rethink the objectives of every moment. We aimed to assess which determination of frailty (baseline, admission, or discharge) can predict more accurately mortality from hospitalization up to 12 months in patients admitted to an intermediate care (IC) facility.

Methods: Multicenter, observational prospective study in IC facilities. The primary outcome was frailty measured by the FRAIL-VIG index [2] at baseline, admission, and discharge. The second outcome was mortality during hospitalization, one month, six months, and one-year post-discharge. The relationship between frailty and mortality risk was assessed with a cox proportional hazards model and compared with a multimodal logistic model.

Results: 483 patients aged ≥75 years or younger with chronic complex or advanced disease were studied. Mean age 81.3 (SD 10.2). During hospitalization, the Frail-VIG at admission was the most predictable of mortality (OR 1.331, 95% CI 1.219-1454, p<0.001). At 1, 6, and 12 months the Frail-VIG at discharge predicted mortality better (OR 1.468, 95% CI 1.177-1.831, p<0.001); (OR 1.212, 95% CI 1.106-1.327, p<0.001) and (OR 1.167 95%, CI 1.078-1.264, p<0.001) respectively.

Conclusions: The measurement of frailty at discharge predicts more accurately mortality up to 12 months after hospitalization. Updating the frail index in older patients can improve health outcomes and clinical management decisions to give person-centered care.

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B70 Encore Presentation

Implementation of a Practice Improvement Pilot to Reduce Hospital Readmissions from Skilled Nursing Facilities: Lessons Learned

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Background: Patients discharged to skilled nursing facilities (SNFs) are at risk for repeated hospitalization. We discuss the implementation and impact of a quality improvement pilot involving multi-disciplinary case management in patients determined to be at high-risk (>/= 20%) of rehospitalization by the SNF readmission risk instrument. This is an artificial intelligence-based predictive instrument to calculate the probability of 30-day hospital readmission upon discharge to a SNF.

Methods: 3 SNFs were selected for the pilot starting October 2019. The multidisciplinary team included admission coordinators, registered nurse case managers, advanced practice nurses and physicians. Core domains of the planned intervention were early communication about readmission risk and weekly team meetings, early assessment by providers, prioritized medication review and advanced care planning and protocolized heart failure and dismissal management. We evaluated both process and outcome measures. The primary outcome was 30-day rehospitalization. We compared pre and post intervention readmission rates using Chi square analysis.

Results: The project concluded prematurely in March 2020 due to emergence of the COVID 19 pandemic. Of 128 SNF admissions, 38 (29.7%) were identified as high-risk. One and 6-month mortality were 14.1 and 36.7 % respectively. 75(58.6%) had physician visits within 2 days and 122(96.1%) within 14 days. 28.1% were rehospitalized within 30 days. Upon comparing outcomes 1 year prior to the intervention there was no significant change in 30-day rehospitalization rates (Chi-Square 0.96, p value 0.32)

Conclusions: We were unable to demonstrate improvement in 30-day hospital readmission rates in this pilot. However, analysis of its preliminary data revealed valuable information on its feasibility and highlighted the need to additionally consider patients' mortality risk and facility factors in future interventions.

B71

Using Whole Health Approaches to Foster Flourishing in Older Adults

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Purpose: Whole health models of care focus on addressing the needs of older adults with multiple chronic conditions (MCC) and foster health equity. The FlourishCare Model (FCM) transforms primary care sites by addressing all determinants of health and helping patients to flourish. The FlourishCare Index (FCI) was developed as a clinical measure to assess the effectiveness of the FCM to address all determinants of health.

Methods: Our team will present data on the effectiveness of the FCM serving 159 older adults with MCCs. We used a two-level longitudinal design and hierarchical linear modeling to test a multilevel growth model. We examined individual differences in FCI scores from baseline to their last measurement occasion and tested potential predictors, modeling a random intercept and slope model.

Results: The sample was mostly female (77%), White (64%), retired (54%), married (30%) and living in urban areas (64%). The mean age was 69 (SD=15). The results show that patients changed significantly over time on total FCI scores (57%-72%;ß=3.80,SE=0.63). Results show significant growth over time for individual health behaviors (58%-67%;ß=2.14,SE=0.84), health care access(71%-89%;ß=4.43,SE=1.00) and social determinants (62%-85%;ß=5.54,SE=1.02) with psychological determinants(54%-61%;ß=1.74,SE=0.95) and environmental determinants

(70%-81%;ß=2.81,SE=1.62) showing a trend to significance. Interaction effects with time show that the FCM was able to support patients with lower education attainment to improve at a higher rate than those with higher education attainment, both for the total score on the FCI (ß=-0.59,SE=0.24) and for health care access (ß=-0.94,SE=0.38). Receiving mental health counseling resulted in more improvement in psychological determinants than those who did not receive counseling (ß=3.43,SE=2.04). The FCM was able to support rural patients at a higher rate than urban patients to gain access to health care (ß=4.13,SE=2.02).

Conclusions: This study showed the importance of a systems approach to care that incorporates a whole health approach using measures that focus on what matters most to patients, especially for older adults who place importance on quality-of-life outcomes. The study showed how a whole health approach to care can address health equity by accelerating the flourishing of rural patients with lower educational attainment.

B72

Falls Assessment of Medications in the Elderly (FAME) Deprescribing Program for Older Veterans at Risk for Falls: Effects on Drug Burden and Falls

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Background:

Falls are the most common medication-related safety event in older adults. Deprescribing Fall Risk Increasing Drugs (FRIDs) (e.g. benzodiazepines, antidepressants, antipsychotics, anticholinergics) is a key step in reducing fall risk in older veterans. The purpose of this study is to assess the effects of an innovative FAME Deprescribing Program in reducing FRID drug burden and falls-related acute visits over 1 year.

Methods:

Prospective cohort evaluation of patients seen by FAME compared with a matched control cohort. The FAME Program is a pilot project designed to improve medication safety in a randomly selected population of veterans aged ≥65, screening positive for high fall risk at the Durham Veterans Affairs (VA) hospital. Electronic case reviews with deprescribing recommendations were done by a multidisciplinary team and forwarded to prescribers for approval. The FAME team implemented deprescribing plans during follow-up telephone visits with veterans. Primary outcome was change in FRID burden calculated by modified Drug Burden Index (DBI) at 1 year and an exploratory outcome was 1-year fall-related acute visits.

Results:

Overall, 472 patients (236 intervention cases, 236 controls matched on age, FRID medication category, and date of FAME review) were included in the study. Of the 236 patients receiving a FAME deprescribing plan, 147 had recommendations approved by primary care and/or mental health provider and patient. In the intention-to-treat analysis, the 1-year change in modified DBI was -0.15 (95% CI -0.23, -0.08) in the intervention cohort and -0.11 (-0.21, -0.00) in the matched control cohort ($P < 0.0001$). In the complete case analysis the changes were -0.25 (-0.36, -0.13) and -0.11 (-0.21, -0.00) respectively. The odds of increasing DBI by a clinically important threshold of 0.5 was significantly lower in the FAME cohort (OR 0.37, 0.21, 0.66). Fall-related acute events occurred in 6.3% of patients in the intervention group vs. 11% in control patients over a one-year period ($P = 0.10$).

Conclusions:

The program was associated with a modest decrease in FRIDs at 1 year compared to matched controls, and significantly lower odds of further increasing FRID burden. An electronic case review program has the potential to reduce drug-related falls in high-risk older adults.

B73 Encore Presentation

Early Discharge Home Hospital Care Achieves Similar Quality Outcomes to Skilled Nursing Facilities and Skilled Home Health While Serving a Diverse Patient Population.

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Background: The COVID-19 pandemic stressed hospital capacity. One solution was deployment of home hospital care (HHC) – a new early discharge/post-acute alternative care model leveraging remote monitoring and clinical management. The objective of this study was to assess patient characteristics and outcomes of HHC compared to: skilled nursing facility (SNF) and skilled home health (SHH).

Methods: This is a retrospective cohort study (1/2020 - 1/2022) of 32,332 patients discharged within a large integrated health system. Patient demographics, clinical characteristics, and quality outcomes were evaluated across the three groups: HHC, SNF, and SHH, further segmented by COVID-19 infection status. Primary endpoints included 30-day mortality and all-cause readmission. Analysis involved parametric and non-parametric tests.

Results: HHC patients were younger, more acutely ill, had less chronic comorbidities, and higher functional status capabilities. HHC patients were more likely to be Black, Asian, American Indian, Hispanic, use a primary language other than English, and have public insurance. HHC demonstrated similar quality outcomes irrespective of COVID-19 infection status – with the exception of higher readmissions in COVID-19 negative patients.

Conclusions: This study is one of the largest HHC studies to date, the first to compare HHC to other discharge levels of care, and demonstrates HHC should be strongly considered to support earlier discharge and as a long-term alternative to traditional discharge levels of care.

Patient Characteristics and Outcomes

	COVID -			COVID +		
	HHC	SNF	SHH	HHC	SNF	SHH
n (unique pts/hospital episodes)	954/977	12123/14044	16482/19136	1031/1031	751/751	994/994
Race: Racial Minorities (n(%))*	141 (14.8)	685(5.5)	1727(10.4)	169(16.5)	53(7)	151(15.2)
Race: White (n(%))*	799 (83.8)	11316 (93.3)	14510 (88.0)	835 (81.0)	693 (92.3)	828 (83.3)
Hispanic/Latino Ethnicity (n(%))*	46 (4.8)	153 (1.3)	373 (2.3)	71 (6.9)	46 (4.8)	153 (1.3)
English as Primary Language (n (%))*	881 (92.3)	11898 (98.1)	15805 (95.9)	942 (91.4)	727 (96.8)	907 (91.2)
Charlson Comorbidity Index (mean+sd)*	907 (91.2)	4.17 (1.71)**	3.44 (1.90)**	2.37 (1.90)	4.43 (1.80)**	3.40 (1.82)**
APR-DRG SOI (mean+sd)*	3.06 (0.90)	2.70 (0.85)**	2.56 (0.85)**	3.64 (0.48)**	3.42 (0.50)**	3.42 (0.49)**
30d readmission (%)*	209 (21.4)	2015 (14.3)**	3148 (16.5)**	98 (9.5)	139 (18.5)**	165 (16.6)**
30d mortality (%)*	30,(3.1)	753 (5.4)	509 (2.7)	15 (1.5)	56 (7.5)**	35 (3.5)**

***P value <0.001; ** P value pairwise comparison with HHC <0.001**

B74

Home Blood Pressure Monitoring Feasible Among Older Adults During the Pandemic: A Digital Health Pilot Study

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Background/Objective: The COVID-19 pandemic has propelled the use of telehealth driven by the California 'Stay-At-Home' order. During the pandemic, high-risk, medically complex older adults faced many barriers preventing them from utilizing digital health and telehealth. The pilot study sought to examine the feasibility and acceptability of remote patient monitoring (RPM) of blood pressure (BP) by older adults enrolled in a digital health program at an academic medical center. **Methods**: A phone interview and survey were conducted to determine the acceptance of the digital health program after enrollment. Trained registered nurses (RN) provided one-on-one education to patients to reduce the barriers to the adoption of telehealth and RPM, with the goal of improving digital literacy,

including the use of smart phones, EMR portals, health apps, and home self-monitoring of blood pressure and weight. The education included a) senior-friendly education materials; b) in-person, hands-on teaching session by RN; c) weekly check-in phone calls by RN to improve digital literacy. **Results**: 21 older patients with hypertension from a geriatrics clinic were recruited: mean age=81, SD=7.2, ranging 71-96; 48% females; 52% diverse ethnic Latinx or Asians, all insured with Medicare. Participants were able to overcome their physical and educational challenges that hindered their use of telehealth through personalized teaching. They were also able to successfully navigate technology with greater confidence and competence, leading to better management of their own health. Moreover, older patients reported significant benefits from the social connection and ongoing support that they received from the research team. The major themes from a qualitative analysis of the interview data are detailed below. **Conclusion**: The results from the pilot study demonstrated satisfaction with the digital health program during the pandemic and found that RPM interventions were feasible and acceptable among a significantly older adult population.

Post-digital health education intervention survey results

Category	Statement *(on a scale of 1-6, 6= strongly agree, 1= strongly disagree)*	Mean Score (Range)
Illness Management	I feel confident in understanding my condition and managing my illness while receiving care at home through the digital health program.	5.45 (5-6)
Home Monitoring	I feel confident taking my own weight and blood pressure.	5.4 (3-6)
Devices	I found the technology and devices easy to use and helpful for staying healthy and connected during this pandemic.	5.0 (2-6)
Telehealth Visits	I felt that the telehealth visits with the team were helpful and supported my health during the pandemic.	5.1 (2-6)

B75 Resident Presentation

Identifying areas for growth in the implementation of a dementia care support program in a safety net health system

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Background

The LA County Department of Health Services (DHS) implemented The Care Ecosystem[1], a phone-based dementia care support and education program utilizing Dementia Navigators (DNs) to address unmet needs of patients with dementia and their caregivers (dyads). This was the first known effort to implement this program in an marginalized, diverse, and multilingual population. DNs are community health workers who were responsible for conducting dyad intake, providing dyads with resources and support to address dementia-related needs, and engaging dyads through a series of program protocols.

Methods

This is a qualitative study that utilized focus group methodology to collect feedback from DNs that participated in the program. The focus group was recorded and transcribed. Key themes were extracted through open coding.

Results

Five DNs across 3 DHS sites participated in the focus group. Primary themes identified were: 1) Culture, language, and literacy, 2) Dyad support and rapport, and 3) DN support.

Culture, language, and literacy: Some caregivers were not forthcoming in reporting caregiver burden due to cultural norms. Higher levels of education among caregivers were associated with increased transparency about caregiver burden and understanding about dementia. Some questions and concepts in the protocols were deemed vague or broad and thereby difficult to communicate and/or translate into the dyad's native language.

Dyad support and rapport: Perceived benefit of the program increased over time and correlated with frequency of DN contact and subsequent rapport building. An in-person option to engage dyads could improve rapport and educational impact.

DN support: Group training and training refresher sessions may be helpful in supporting DNs in their role. DNs independently developed systems and secured resources to assist them in their roles, including supplemental educational presentations and visual aids.

Conclusion

Qualitative analysis of DN feedback is key in tailoring the Care Ecosystem model to serve safety net populations. Protocol content may be modified and/or translated into multiple languages to increase efficiency and efficacy of engagement with dyads from diverse backgrounds. Group DN training, training refresher sessions, and in-person engagement options may help support DNs in their role.

B76 Student Presentation

Integration of Virtual Music Performance into the HELP Toolbox

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Background: The Hospital Elder Life Program (HELP) is an established intervention model shown to reduce delirium incidence. [1]. This abstract describes the implementation of a virtual music performance program in the context of HELP at Hackensack University Medical Center (HUMC) to improve patient outcomes.

Methods: The virtual music performance program was initiated in June 2021. Remote music volunteers interacted with and performed for interested HELP patients using scheduled video calls arranged by in-hospital volunteers. Performances lasted 5-10 minutes per patient. Nine out of twelve music volunteers were medical students.

A retrospective chart analysis was conducted from January 1 through October 22, 2022. Data was collected for HELP patients who received the music performance intervention vs controls matched by age, sex, and baseline delirium risk. Outcomes analyzed were CAM score, verbal 0-10 pain score, PRN pain medication use, length of hospital stay, and discharge disposition. Data were summarized and compared between groups.

Results: Each group had 13 participants. Median age was 79 in the music group vs 82 in the control group. Both groups were 69.2% female and 30.8% male, with equal distribution of delirium risk factors.

Mean pain scores were lower in the music vs control group (0.96 vs 1.92), but this difference was not statistically significant. Percent discharged to home (46.2% vs 61.5%) was also non-significantly lower in the music group. Length of hospital stay (10 days vs 9 days) was non-significantly higher in the music group. There were no notable differences in CAM score or PRN pain medication use.

Conclusions: Music was introduced as an additional component to the existing HELP model at HUMC. This pilot study suggests it is feasible to include music performance in an acute care environment as an additional intervention for HELP. Additionally, this presents an opportunity to expose medical students to delirium education early in their training. Although not statistically significant, integration of the music program into HELP showed a trend of pain reduction. Future studies with larger sample sizes are needed to better assess the program's impact on patients' pain, delirium, and disposition outcomes.

Reference:

1. Hshieh et al. Am J Geriatr Psychiatry. 2018;26(10): 1015-1033.

B77

Rural Caregiver Experiences with a National Veterans Affairs Caregiver Support Line

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Background: Despite known physical and emotional impacts of caregiving, few caregivers access support services. This is especially true in rural areas, where caregiver supports are more limited. The Veterans Health Administration has a robust system of caregiver programs, including a national Caregiver Support Line (CSL). We aimed to understand rural caregivers' experiences using the CSL as part of a larger evaluation of access to supports among caregivers of rural, older Veterans.

Methods: We conducted a qualitative evaluation with 30 caregivers of rural, older (age ≥65) Veterans who completed a virtual geriatrics visit at one of 6 sites. Caregivers completed a semi-structured interview regarding their caregiving needs and preferences for receiving information about caregiver supports. Caregivers were informed about the CSL and asked to call the CSL if willing. Those who called the CSL (n=14) were interviewed about their experience and recommendations. Interviews were recorded, transcribed, and analyzed using rapid qualitative analysis to extract themes.

Results: Caregivers found the CSL easy to use and beneficial for current and future needs. Several noted the services offered exceeded their expectations. In addition to resources, caregivers received emotional support (e.g., felt understood, less alone, encouraged). A few reported challenges, including lack of clarity on follow-up after the call or feeling that resources offered were not applicable. Few caregivers had accessed the resources provided by the CSL at the time of the follow-up interview, but many expressed an intent to do so. They felt reassured that they had information for the future and reported they would recommend the CSL to others. Caregivers suggested simplifying the CSL for ease of use and more widely advertising for awareness.

Conclusions: Caregivers of rural Veterans found a national CSL beneficial as a source of information and emotional support. Centralized resources such as caregiver support lines may enhance access to support for rural caregivers.

B78

The Age Friendly Health System Initiative in Action: Caring for Older Veterans in Skilled Nursing Facilities

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Background: Skilled Nursing Facilities (SNFs) are an ideal place to implement The Age Friendly Health System (AFHS) approach, an initiative by the Institute for Healthcare Improvement (IHI) centered on the 4Ms: What Matters, Mentation, Medication and Mobility. Implementation of the AFHS has not been well studied in SNFs. We implemented AFHS in a Veterans Affairs (VA) SNF and conducted a review of the impact.

Methods: A 112-bed VA SNF implemented an AFHS initiative through an IHI Action Community. The initiative consisted of an interprofessional workgroup for each M, staff education, interactive AFHS Learning Series, modification of the care plan and documentation using AFHS clinical tools. A 4Ms clinical template was used to guide Age-Friendly care on admission and throughout the care episode. We evaluated AFHS implementation using clinical outcomes including falls, potentially inappropriate medications (PIMs) and behavioral disturbances, collected via the MDS survey, and frontline staff satisfaction via the VA All Employee annual survey (AES).

Results: The AFHS initiative was implemented in the SNF from 3/2021 – 7/2021. Clinical outcomes were measured from 10/2021-12/2021 and compared to the same period the year prior. 95% of patients received all 4Ms of Age Friendly Care during this period through retrospective chart review (n= 101). Clinical outcomes were notable for: 1) Reduction in mean rate of falls by 90% compared to the prior year (10 falls/month to 1 fall/month); 2) Decrease of average number of PIMs prescribed at discharge by 50% compared to the prior year (mean of 2 PIMs to 1 PIM); 3) Decrease in disruptive behavior reports by 40% compared to the prior year (n=68 to n=41). Staff AES Scores (5-point Likert scale) improved from 2021 to 2022 in multiple areas, including rating the SNF as a good place to work (3.74 to 4.08, National VA Average (NA) 3.90), personal accomplishment (3.88 to 4.08, NA 3.99), cooperation (3.70 to 4.14, NA 3.99) and decreased burnout (3.25 to 2.84, NA 2.88).

Conclusion: Implementation of the AFHS initiative in a SNF was associated with improved outcomes for falls, PIMs, disruptive behaviors, and an improvement in staff morale and satisfaction. We describe here a sustainable, interprofessional approach to implementing AFHS in a SNF to address the complex care needs of older adults in this setting.

B79 Student Presentation

Patient preferences and decisional regret among older adults with acute myeloid leukemia: A longitudinal study

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Background: Upfront treatments for older adults with acute myeloid leukemia (AML) vary and are influenced by patient preferences. We sought to understand patient preferences for treatment attributes when making upfront decisions, change in preferences over time, and decisional regret.

Methods: In a single-arm pilot study testing a communication tool for adults ≥60 years with newly diagnosed AML, we collected: 1) Patient preferences for treatment attributes (i.e., survival, treatment location) using Best-Worst Scaling (BWS) and 2) Decisional regret using Decisional Regret Scale/Was it Worth it Questionnaire. We analyzed how these measures differed by treatment choice (intensive vs. lower intensity treatment). Data was collected at baseline and month 1, 2, 3, and 6. Hierarchical Bayes model was used allocate percentages out of 100% to attributes based on patient ranking in BWS. Hypothesis testing was performed at α=0.10 (2-tailed).

Results: Mean age of patients was 76 (n=15). At baseline, the most important attribute to all patients was response to treatment (20.9%), followed by survival (19.4%) and quality of life (QoL) (17.5%). Patients who chose intensive treatment (n=6) prioritized survival (p=0.04), while patients who chose lower intensity treatment (n=9) prioritized QoL (p=0.17). Patients who chose intensive treatment prioritized daily activities less than patients who chose lower intensity treatment (p=0.03). Overtime, QoL became more important for patients on intensive treatment and less important for patients on lower intensity treatment. Decisional regret was lower for patients who chose intensive treatment (p=0.01).

Conclusion: Patient preferences differed between treatment groups and changed over time. Interventions are needed to continually re-assess patient priorities throughout treatment to ensure care aligns with patient preferences.

B80

Bridging the Gap: Using an Informatics Consult to Address the Evidence Void in Geriatrics

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Background: While ageism exists in all aspects of society, it is rampant in healthcare settings. Older adults are rarely included in randomized controlled trials (RCT) and therefore, a void exists in helping clinicians evaluate the best care practices for this group. In 2022, we transformed the Stanford Geriatric Fellowship's Journal Club to incorporate the results of an on-demand consultation service to derive evidence from real-world data (RWD) to further educate and inform geriatric treatment decisions.

Methods: In addition to presenting a peer-reviewed journal article at the journal club, we implemented obtaining an informatics consult that uses Stanford electronic medical record and medical insurance claims data to supplement unanswered journal article questions that apply to geriatrics patients. To evaluate the baseline impressions of attendees towards ageism and its effect(s) on healthcare, evidence-based practice (EBP), and ways to help address the evidence gap in geriatrics, we administered a survey using a 5-point Likert scale to 20 participants.

Results: We received 14 responses to the baseline survey (70% response rate) with (mean, +/-SD) reported. Participants identified ageism as a common problem (4.7, 0.5) resulting in the lack of geriatric RCT data (4.3, 0.7). Most felt that EBP is important to guiding their clinical practice (4.6, 0.5). They did not agree that there is sufficient body of evidence available to guide geriatric EBP (2.5, 1.2). Very few of the participants were familiar with the process of ordering an informatics consult (2.6, 1.0), but they were hopeful that using RWD to successfully guide treatment decisions is feasible (3.4, 0.7) and that it can be used to bridge the evidence gap (3.6, 0.7).

Conclusions: Our participants strongly believe that EBP is very relevant to their clinical work but are concerned about limited applicability of the current state of evidence in older patients. Our initial survey results suggest some awareness of ageism and how it might limit EBP, but that few are familiar with informatics consults. Future work will address whether participants find informatic consults helpful in guiding geriatric treatment decisions and in improving EBP.

B81

Impact of Transitioning to Virtual Falls-Prevention Evidence Based Programs in Community-dwelling Older Adults

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Background: Older adults participating in Evidence-Based Programs (EBPs) experience decreased falls, loneliness, and social isolation, but virtual implementation may alter programs' reach and effectiveness.

Methods: In-person older adult (age ≥50) participants of our falls prevention EBPs (n=382, July 2017-March 2020) were referred by Cedars-Sinai (Los Angeles, California) healthcare providers or from the community. Virtual participants (n=214, May 2021–June 2021) were similarly recruited or previously enrolled in the in-person study. Participants selected Arthritis Exercise, Tai Chi for Arthritis, or EnhanceFitness and completed surveys on falls (OMB 0985-0039), loneliness (UCLA 3-item scale) and social isolation (Duke Social Support Index (DSSI)) at baseline, 6 weeks and 6 months. Individual outcomes were modeled for a change over time using a generalized additive model with participant as a random effect with and without adjustment for covariates.

Results: Mean age and gender did not differ between in-person and virtual participants (76.6 (±9.3) years vs. 76.5 (±7.9) and 83.4% female vs. 82.5%). Virtual programs had fewer Non-Hispanic Black participants (43.5% vs. 8.2%, p<0.001), more non-Hispanic white participants (42% vs. 70.4%, p<0.001) and more participants with income >$30,000 (48.1% vs. 34.9%, p=0.012). Virtual participants reported no change in DSSI scores and loneliness at 6-months. In-person participants' DSSI scores improved at 6 weeks (Estimate 0.50 95% CI (0.19,0.82) p=0.011) and 6 months (Estimate 0.67 (95% CI 0.30, 1.05) p=0.003) as did their loneliness scores at 6-months (Estimated Ratio 0.94 (95% CI 0.90-0.97) p=0.003). At 6-months in-person participants had no change in falls per month compared to baseline; while virtual participants had a 53% reduction in falls (Estimated ratio 0.46 (95% CI 0.44-0.49) p<0.001).

Conclusions: Virtual participants reported a 53% reduction in falls, but no change in social isolation or loneliness. In-person participants reported no change in falls but improvements in loneliness and social isolation. Virtual participants were more likely to be non-Hispanic white and report higher income. Virtual programs are effective for falls prevention but should make efforts to foster connectedness and reach low-income and racially diverse communities.

B82 Student Presentation

A Novel Inter-professional Student-led Initiative to Address Health Disparities in Older Adults: The Benefits Enrollment Center Senior Support Program

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Background: Health disparities and social isolation negatively impact the health of older adults (OA). It is pivotal to engage learners early in training and provide opportunities to sustainably address social drivers of health. The Senior Support Program is a novel model of care created and sustained by health professional (HP) and pre-medical students. This program allows students to learn from community leaders and OA, while addressing health disparities through wellness calls, health fairs, food delivery, resource referral, and volunteer education. Our project focuses on the student-driven development, implementation, and sustainability of this program.

Methods: The program has three goals: 1. Partner underserved OA with student volunteers through weekly wellness calls aimed at reducing isolation; 2. Refer OA to community-based organizations and coordinate urgent food deliveries as needs are identified during wellness calls and health fairs; and 3. Educate volunteers on communication with OA and available resources. When developing the program, HP students partnered with community organizations to identify innovative ways to address existing resource gaps exacerbated by the COVID-19 pandemic. Wellness calls were initiated to improve isolation and assess basic needs. OA were selected based on residency in Durham Housing Authority senior living communities. Through a survey, we measured the self-efficacy of volunteers in making resource referrals, discussing social drivers of health, and communicating with OA.

Results: The program is led by HP students and consists of 61 HP and pre-medical student volunteers. Volunteers provide wellness calls to 177 OA. During the past 6 months, the program provided a total of 332 food deliveries and 23 resource referrals. 89% of volunteers reported increased comfort making referrals to community organizations, 76% reported increased comfort conversing about social drivers of health, and 89% reported increased comfort communicating with OA (*N*=38). Within open-ended feedback, volunteers also reported this as a meaningful experience.

Conclusions: We present a novel program that connects HP and pre-medical students with OA and provides a model for students to learn from community members, address health disparities, and reduce social isolation.

B83

Association of Inhaled Corticosteroid Use on Post-Acute Respiratory Symptoms of Covid in COPD Patients

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Background:

Chronic obstructive pulmonary disease (COPD) threatens the function of older adults. Also post-acute respiratory symptoms (PARS) of COVID-19 can have devastating consequences for persons with COPD. Inhaled corticosteroids (ICS) are a mainstay in COPD to reduce chronic airway inflammation and coincide with more severe disease. This study aims to determine the association of ICS use with incidence of PARS after SARS-CoV-2 infection in a Veteran population with COPD and residing in VA operated nursing homes called Community Living Centers (CLCs).

Methods:

For this retrospective cohort study, we included Veterans living in a VA CLC with an established diagnosis of COPD. Using the bar code medication administration database, we defined ICS exposure as recorded administration on 20 out of 30 days prior to infection. We determined PARS of COVID-19 using a defined group of ICD-10 diagnoses captured in the 2 weeks to 3 months after laboratory confirmation of SARS-CoV-2 infection. This outcome was measured only if symptoms were not present before infection occurred. We used a Poisson generalized linear model to determine relative risk, and adjusted for age, race, and sex.

Results:

A total of 483 Veterans with COPD living in the CLC, with a mean age of 73.3 with 2.3% female, had a SARS-CoV-2 infection between December of 2020 and 2021. After SARS-CoV-2 infection, In those with ICS use, 54 (44.6%) developed PARS vs 117 (32.3%) who did not. The relative risk of PARS after infection was 1.38 (95%CI 0.99-1.19) for the ICS use group vs the group without ICS exposure. After adjustment for age, sex, & race the relative risk was 1.40 (1.01-1.93).

Conclusion:

In this retrospective study, we found that risk of PARS after SARS-CoV-2 infection in residents with COPD was 40% higher with ICS exposure than without. The use of (need for) ICS may serve as an easy to measure proxy for COPD severity and risk for PARS after SARS-CoV-2 infection and may help decide who to triage to more intensive follow-up. There may have been important differences between the ICS-exposed and unexposed resident groups, a potential source of confounding bias not yet explored.

B84

Engaging the Chinese Community in Advance Care Planning

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Background: Despite the association of advance care planning (ACP) with improved patient and caregiver outcomes, Chinese American elders have low rates of ACP. We assessed ACP facilitators/barriers in the San Francisco (SF) Chinese community and co-designed, implemented, and tested community-based ACP-promoting pilot events.

Methods: A Chinese Community Committee (N=19 community-based organization leaders, health system representatives, community members) conducted focus groups in Cantonese and English with Chinese older adults (age ≥55), caregivers, and community leaders. The Committee designed and implemented pilot events in-person and online. We analyzed focus group data using thematic analysis; assessed pre-to-post-event readiness to engage in ACP (validated survey; 1-4 scale, 4=most ready); and assessed event acceptability.

Results: 34 people participated in 6 focus groups. Themes described Chinese community-specific importance of ACP (e.g., reduces family burden), barriers (e.g., younger generations lack tools to discuss ACP with elders and vice versa), and facilitators (e.g., intergenerational events, culturally/linguistically appropriate materials). Based on focus groups findings, the Committee developed a novel ACP tool and designed intergenerational events. 195 participants attended 10 events; 95% were Chinese, 90% spoke Chinese languages, 80% were women. ACP readiness increased significantly (1.66 (SD 0.84) vs 2.03 (SD 0.85); P<0.001); 94% of participants were comfortable attending and 96% would recommend events.

Conclusion: Community-developed intergenerational events that highlight the value of ACP and address barriers are acceptable and increase ACP engagement in the Chinese community.

B85

Incorporating Malnutrition as the 5th M of the Age-Friendly 4Ms framework.

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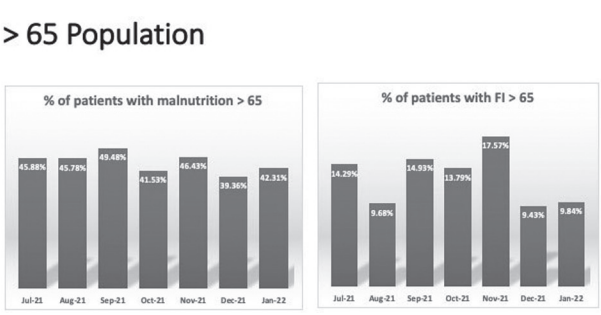
BACKGROUND: The AFHS initiative promotes use of the 4Ms Framework centered around 4 components: What Matters, Medication, Mentation and Mobility. Data shows that 20%-25% of hospitalized patients are diagnosed with malnutrition, associated with poor outcomes. We incorporated malnutrition as a 5th M of the framework among our vulnerable patients to improve outcomes.

METHODS: The project was conducted among hospitalized patients > 65 years at Grady Memorial Hospital (GMH), a 953-bed safety-net hospital. **Procedure: We implemented a 3-pronged approach to address malnutrition as our 5th M for the AFHS initiative: 1**) A nurse led screening of patients on admission for malnutrition based on ASPEN guidelines. 2) A nurse tech led daily monitoring of patients' food intake with flowsheet documentation and reporting in interdisciplinary (IDT) rounds with follow up plan discussed. 3) A dietitian - led daily screening of all patients admitted to the. Unit for malnutrition, and food insecurity with nutritional management recommendations provided to managing providers. Referral to Grady food pharmacy and Open Hands community-based organization was done for patients with food insecurity for delivery of 14 to 28 meals post discharge.

RESULTS: Of 672 patients older than 65 screened, 44% were found to be malnourished while 13% were food insecure. Up to 21% were found to be both malnourished and food insecure (Figure 1).

CONCLUSION: The prevalence of malnutrition among hospitalized vulnerable low income older adults is high. With previously documented poor outcomes associated with malnutrition, incorporating malnutrition screening in routine evaluation of hospitalized older adults will promote early identification and management. Next steps would include defining healthcare utilization outcomes among ipatients who received the intervention.



B86

Stay Home Stay Fit: Engaging Older Adults in a Home-based Exercise Program During the Pandemic

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Background: Physical inactivity is the biggest public health problem of the 21st century particularly among older adults. Older adults had a decrease of 30-50% in physical activity during COVID era compared to their pre-COVID activity levels. In order to maintain their physical and mental well-being, it is important to keep them active while also keeping them safe. Exergames are a proven way to help older Veterans stay physically active while keeping them mentally engaged. The objective of the project was to improve physical activity in older adults with use of home-based exercise program during the COVID-19 pandemic.

Methods: Sedentary older adults aged ≥ 60 years were enrolled in the 12-week exercise program (N=36). All participants were provided an Xbox 360 Kinect to exercise at home. They were asked to exercise for 30-45 min daily for 5 days of the week. Participants also exercised via a virtual group exercise class twice a week for 45 minutes. Demographic data was collected along with variables for gait and balance, and cognition and executive function. Outcomes were assessed at baseline, at 6-weeks and at 12-weeks. Homer's adjustment was used to account for the effects of multiple comparisons.

Results: The mean age was 68 (±6.7) years, 76% were male, 60% were Caucasian and 39% were African American and 66% were rural. Mean Montreal Cognitive Assessment (MoCA) at baseline was 26.3 (±1.98) There was significant improvement after adjustment for multiple comparisons in MoCA (p=0.04), Trails Making Test A (p=0.006) and Controlled Oral Word Association Test (COWAT) (p=0.04) overtime. There was no significant improvement in Trails Making Test B (p=0.93). Majority of the individuals (78%) had a Short Physical Performance Battery (SPPB) score of 10 or higher at the initial assessment causing the ceiling effect and minimal room for meaningful improvement. However, there was significant improvement in the 6-Minute Walk test (p=0.002) and 30-second chair stand test (p<0.001) overtime.

Conclusion: Exergames are effective home-based exercise alternative for maintaining or improving fitness in a predominantly rural, racially diverse older population.

B87 Student Presentation

Use and Impact of Community Paramedicine among Homebound Patients with Dementia

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Background

Community Paramedicine (CP) is a hospital diversion model designed to extend primary care provider capabilities by deploying paramedics to the home, who consult with a physician to coordinate treatment and assess disposition. While evidence suggests CP can manage many patients without escalation to the ED, few studies have explored CP's use in patients with dementia. Our research compares the use and outcomes of CP for homebound patients with and without dementia at Mount Sinai's Visiting Doctors Program (MSVD). In doing so, we aim to assess the utility of CP for this high-need population.

Methods

This retrospective cohort study examined 251 MSVD patients who utilized a physician-led CP service between March 2017-May 2022. Linked datasets from CP and MSVD included patient demographics, clinical characteristics, and encounter details. We reviewed encounters to validate dementia diagnosis and abstract outcome measures, such as rates of ED transport, hospital admission following transport, and 3-day ED utilization. Using t-tests and chi square analyses we compared CP use and outcomes for patients with and without dementia.

Results

52% of CP patients had dementia. Dementia patients were substantially older than non-dementia patients (92.2 vs 80.1,p<0.001), but were not significantly different on race, sex, medicaid, or housing status. Among dementia patients, CP was more often deployed for altered mental status (p<0.001) and less often deployed for abdominal (p=0.05) and chest pain (p<0.001). There was no significant difference in ED transport rates for dementia and non-dementia patients (25 vs 23%,p=0.56), but dementia patients were more likely to be admitted following transport (84 vs 55%,p=0.003). For patients not transported, 3-day ED utilization rates were comparable between groups (7 vs 12%,p=0.16).

Conclusions

CP is regularly deployed for homebound patients with dementia. Differences in presenting complaints suggest that dementia patients have unique needs met by CP. Comparable ED transport rates indicate that this model is equally equipped to manage dementia patients as compared to non-dementia patients. Higher rates of admission following transport for dementia patients suggests that CP can effectively assess this population's disposition.

B88

The Supportive Coordinated Transitional Care Program (C-TraC): Implementation within the Central Arkansas Veterans Healthcare System

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Background: The Supportive C-TraC program is a nurse-driven, telephone-based transitional care model designed to meet the needs of chronically and seriously ill veterans. Developed in VA Boston, we planned to successfully implement the program at the Central Arkansas Veterans Healthcare System (CAVHS).

Methods: Eligible participants were hospitalized veterans who had a life expectancy of ≤ 2 years. Two registered nurse case managers (NCMs) received training in the assessment of eligible patients and the program protocol. Once enrolled, the NCMs met with participants and their caregivers prior to discharge and conducted weekly phone assessments with them for 4-8 weeks. The NCMs did medication reconciliation, reviewed re-hospitalization "red flags," addressed goals of care, and explored "What Matters Most" with them. Descriptive analyses assessed veterans' characteristics and specific healthcare outcomes.

Results: A total of 203 veterans enrolled in the program. Their mean age was 74 years, and 97% were men. Of all participants, 65% were non-Hispanic White, 30% were non-Hispanic Black, and 53% lived in urban areas. The most common admission diagnosis was congestive heart failure (27%), and 83% had a Care Assessment Need (CAN) score of 97% or higher -- indicating a greater likelihood of having an acute care admission or death within one year. The NCMs found medication errors in 47% of participants and had goals of care discussions with 85% of them. Though 62% completed an advance directive (AD) or Life Sustaining Treatment note (LST) prior to enrollment, another 25% completed an AD or LST during the program. Of the 21% of participants who died during the program, 63% enrolled in hospice. The majority (80%) were not re-hospitalized during program enrollment, and all Veteran/caregiver participants who completed program evaluations rated the program favorably.

Conclusions: Supportive C-TraC at CAVHS proved to be feasible, and the program was well-received by participants and caregivers. The program fostered patient-centered, goal-concordant care for veterans. Additional efforts should be made to expand the program within CAVHS and other VA facilities.

B89

A Checklist to Identify Caregivers' Unmet Needs in Primary Care: Findings from a Pilot Trial

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Background: Older adults commonly attend routine medical visits with a family caregiver, but caregivers' concerns and needs for support are not systematically identified in clinical practice. This omission can have serious consequences for older adults who rely on caregiving assistance with medical decision-making and enacting the plan of care. This pilot trial evaluated the feasibility, acceptability, and preliminary efficacy of a brief pre-visit checklist designed to help caregivers efficiently identify and communicate their most salient concerns to primary care providers.

Methods: N=31 older patient-caregiver dyads from one primary care practice were randomly assigned to receive the paper-and-pencil checklist or usual care. Caregivers completed pre- and post-visit surveys to evaluate their perceptions of the checklist, as well as their perceived efficacy in primary care interactions, satisfaction with visit communication, and knowledge of community-based resources. Patients' medical visits were audio-recorded and transcribed. Time stamps were used to determine visit duration; a structured coding system was used to assess visit communication.

Results: Overall, 94% of caregivers in the intervention group reported that the checklist was easy to complete and 75% thought that it was the right length. The majority reported that the checklist was useful in preparing for the visit (88%) and helping providers to recognize their needs and concerns (80%). Compared to participants in the usual care condition, caregivers who completed the checklist reported higher self-efficacy in primary care interactions (M=4.4 vs. M=4.2), greater satisfaction with visit communication (M=4.4 vs. M=4.3), and better knowledge of community-based resources (M=3.5 vs. M=2.9), but these differences did not reach statistical significance. Visit duration was comparable across treatment groups (30 mins vs. 34 mins; p=.55).

Conclusion: Findings indicate that a caregiver-focused pre-visit checklist is a feasible and potentially effective intervention for identifying caregivers' concerns in primary care. As a pilot trial, our results merit further evaluation in a fully powered trial to examine the checklist's impact on family-centered care quality and outcomes for primary care clinics.

B90 Student Presentation, Encore Presentation

Understanding the Feasibility of Voice-assistant Systems to Improve Current Dietary Recall Assessments of Older Adults

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Background: Dietary recall assessments are important clinical tools used by Registered Dietitians (RDs) for assessing eating habits, malnutrition risk, and health status. Current methods of dietary recall assessments pose barriers to accurately assessing the nutritional intake of older adults due to age-related increases in risk for cognitive decline and more complex health histories. Voice-assistant systems (VAS) have been shown to improve the health of older adults. Our study explored whether VAS integration could improve current dietary recall methods from the perspective of RDs.

Methods: This qualitative study utilized one-time semi-structured interviews conducted over Zoom. We included participants that actively practiced as licensed RDs and were ≥ 22 years of age (n=20). Transcriptions of recordings were inductively analyzed and codified through Dedoose to generate common qualitative themes.

Results: Of the 20 RDs, ages ranged from 22-65+ years, of which 9 (45%) were 22-34, 8 (40%) were 35-64, and 3 (15%) were ≥ 65 years. A majority of the RDs identified as being female (95%), white (85%), and not of Hispanic, Latino/a/x, or Spanish origin (90%). RDs believed the implementation of VAS had the potential to improve dietary recall assessments of older adults. RDs reported challenges of current dietary recall methods among older adults, such as memory and hearing (65% of participants) and properly reporting serving sizes (45% of participants). RDs also stated that VAS dietary recall may be beneficial due to the convenience of real-time data collection (80% of participants), more efficient use of time during clinical visits (65% of participants), and ease of accurately reporting meals (85% of participants). RDs reported that low technology literacy in older adults could be a barrier (70% of participants).

Conclusions: Registered Dietitians expressed overall support regarding the implementation of VAS for dietary recall in the older adult population.

B91

Pilot Process Evaluation of the Supporting Older Adults at Risk (SOAR) Model

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Despite evidence supporting transitional care models, hospitals report challenges implementing and sustaining them given limited integration into existing roles and workflows. The Discharge to Assess (D2A) model is unique in that it unfolds within existing interprofessional roles and workflows. However, the D2A model was developed in a national healthcare system. We translated D2A for implementation in the United States (US) – Supporting Older Adults at Risk

(SOAR). SOAR unfolds in three phases; Prepare in the hospital, Transition to home, and Support ongoing care in the home. A pilot prospective cohort design was used to evaluate implementation of the SOAR model in a US-based academic health system. The RE-AIM Framework (Reach, Effectiveness, Adoption, Implementation, and Maintenance) guided program evaluation to identify barriers and facilitators to high-fidelity implementation and scalability. Key effectiveness measures included length of stay, time of discharge, emergency department visits, and readmissions, and were analyzed using t-tests and non-parametric methods. Measures of adoption and implementation focused on fidelity to the program and were analyzed using descriptive statistics. Patients included adults age 70 and over admitted to the hospital medicine service and eligible for discharge home with home health services. 40 patients completed all components of the SOAR program for an overall Reach of 21%. Average age was 80, 53% female, 64% Black/AA. 58% reported a household income less than $35,000 per year. Against a propensity matched cohort, the program was effective in reducing length of hospital stay (6.98 vs 8.29 days), ensuring morning discharge (76% vs 0%) and decreasing ED visits (6.30 vs. 18). Of the 26 measures of Implementation, 21 unfolded with 75% or greater fidelity. Of the 24 measures of Adoption, 16 unfolded with 75% or greater fidelity. Maintenance was limited due to the COVID-19 pandemic. SOAR can be implemented with high fidelity and drives intended outcomes. Given the model unfolds across settings over time requiring adoption from multiple interprofessional team members, patients and families, future work should focus on improving reach and adoption.

B92

Risk factors for feeding tube placement in hospitalized advanced dementia patients before and after implementation of a careful hand feeding program

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Background: Tube feeding is prevalent among patients with advanced dementia despite empirical data that suggest its lack of benefit. To provide an alternative to tube feeding for hospitalized patients with advanced dementia and feeding problems, a careful hand feeding program involving multidisciplinary input was implemented in a geriatric convalescent hospital in Hong Kong in February 2017. We aim to compare the feeding tube insertion rate and risk factors for feeding tube placement before and after implementation of the careful hand feeding program.

Methods: We conducted a retrospective cohort study to compare hospitalized advanced dementia patients ≥60 years with indication for tube feeding before and after careful hand feeding program implementation (January 2015-June 2019). Data was collected from the medical records on demographic and clinical variables and new feeding tube insertions. Risk factors for feeding tube placement were assessed using logistic regression models.

Results: Among 616 hospitalized advanced dementia patients with indication for tube feeding, feeding tube insertion rate declined significantly after program implementation (72% vs 51%, p<.001). Independent risk factors for feeding tube placement before and after the careful hand feeding program were presence of oropharyngeal dysphagia alone and dysphagia in combination with poor oral intake. Additional risk factors for feeding tube insertion after program implementation were complete functional dependence (AOR 2.9, 95%CI 1.11-7.66) and absence of a DNACPR order for non-hospitalized patients (AOR 6.60, 95%CI 2.33-18.75). Admission after implementation of the careful hand program was associated with a significant risk reduction in feeding tube placement (AOR 0.45, 95%CI 0.29-0.70).

Conclusions: A hospital careful hand feeding program with multidisciplinary input can be an effective strategy to reduce feeding tube placement among patients with advanced dementia. Further research is needed to examine how risk factors such as presence of of oropharyngeal dysphagia alone and in combination with poor intake, severe functional impairment, and lack of prior DNACPR documentation contribute to the decision for feeding tube placement.

B93

Optimizing Prescribing in Older Adults with Multimorbidity and Polypharmacy in Primary Care: A Cluster Randomized Clinical Trial

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Background: The objective of the "Optimising PharmacoTherapy In the multimorbid elderly in primary Care"(OPTICA) trial was to study the effects of a medication review intervention centered around an electronic clinical decision support system (eCDSS) on medication appropriateness and the number of prescribing omissions compared to usual care.

Methods: Cluster randomized clinical trial conducted in Swiss primary care settings between January 2019-February 2021. Eligible patients had to be ≥65 years of age with ≥3 chronic conditions and ≥5 long-term medications. The intervention to optimize pharmacotherapy centered around an eCDSS was compared to usual care. The two primary outcomes were the improvement in the Medication Appropriateness Index(MAI) and the Assessment of Underutilization(AOU) at 12 months. Secondary outcomes included the number of medications, number of falls and fractures and quality of life.

Results: In 43 GP clusters, 323 patients were recruited (median age:77 years (IQR:73-83), 45% female). 21 GPs with 160 patients were assigned to the intervention group and 22 GPs with 163 patients to the control group. On average, 1 recommendation to stop or start a medication were implemented per patient. At 12 months, there were no group differences in the improvement of medication appropriateness (OR:1.05; 95%CI: 0.59-1.87), in the number of prescribing omissions (OR:0.90; 95%CI: 0.41-1.96) nor in the secondary outcomes.

Conclusions: Medication reviews based on the eCDSS reduced inappropriate prescriptions but did not lead to higher appropriateness of patients' medications.

B94

An Electronic Computable Phenotype to Identify and Enroll Persons with Dementia in a Clinical Trial

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Background: Alzheimer's disease and related dementias (ADRD) is a leading cause of suffering, disability and death, yet palliative care is rarely available to people living with dementia (PLwD). We evaluated the utility of an electronic health record (EHR)

computable phenotype to facilitate enrollment in the ADRD-PC study, a multi-site randomized clinical trial of specialty palliative care for PLwD.

Methods: The ADRD-PC trial enrolls hospitalized PLwD with late-stage ADRD and their caregivers at academic medical centers in North Carolina, Massachusetts, Indiana, and Colorado. To facilitate rapid identification of potentially eligible patients, the computable phenotype searches EHR documentation for ICD-10 dementia diagnosis codes. Research assistants (RA) are notified within 24 hours of admission, and together with site-based physicians confirm eligibility using brief record review. We examined the performance of each component of the screening procedure: EHR algorithm, RA, and physician her review.

Results: The EHR algorithm identified 3,783 adults (mean age 78 yrs, 68.8% White, 21.5% Black or African American, 9.4% Other). The positive predictive value (PPV) of the algorithm alone for any ADRD was 70.3% (NC 83.0%, MA 62.6%, IN 57.4%, CO 72.8%). PPV for algorithm + RA for late-stage ADRD (confirmed by physician EHR review) was 85.8% (NC 87.2%, MA 85.3%, IN 76.3%, CO 96.1%). The screening procedure effectively facilitates enrollment: 73.7% (n=359) of those deemed eligible by site-based physicians were confirmed appropriate for enrollment by the attending physician caring for the patient. RAs approached 296 caregivers, and 51.3% of those approached agreed to participate in the ADRD-PC study.

Conclusion: An EHR-based computable phenotype with brief chart review by an RA and physician is an effective way to identify and recruit PLwD with late-stage ADRD for clinical trials. This serves as a model for overcoming barriers in recruiting this high risk and underrepresented population in clinical trials.

B95 Student Presentation
Connecting Seniors to Care

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Background: Previous research has shown that use of social technology in the older adult population improved self-rated health and well-being, decreased chronic illness, and led to fewer depressive symptoms. While older adults have positive attitudes toward technology, they report difficulties using it, citing health conditions, skeptical attitudes, and the need for assistance during initial usage. Our study attempted to bridge this gap to improve the health and well-being of cognitively impaired older adults.

Methods: Newly referred Meals on Wheels clients aged 60 and older were recruited to test their usage of a virtual assistant device (Amazon Echo Show 8 [AES]). Those enrolled participated in 3-phases of the study: 6 weeks of meals-only, then 6 weeks of meals + AES basic usage, and 6 weeks of meals + AES advanced usage, where participants interacted with the device twice a week to answer questions about their health, mood, and meal consumption. The participants underwent in-home assessments at baseline and the end of each phase to collect demographic data and questionnaires related to the feasibility of AES use, cognitive health, and measures of functional status.

Results: 52 participants enrolled in the study with 45 participants completing at least 2 visits. Participants had an average age of 74, were mostly female (71.2%), and mostly African American (73.1%). Satisfaction with AES8 was significantly higher by the end of the study as evidenced by improvements in 2 Technology Acceptance Model (TAM) questions, "I find it easy to get the AES to do what I want it to do" (p=0.008) and "I intend to use the AES"(p=0.046). Depression and memory scores also improved with AES basic usage ($p<0.005$ and $p<0.05$, respectively). Functionally, gait speeds were faster after the AES was installed (p=0.044).

Conclusions: As demonstrated by improvements in gait speed, memory, depression, and technology acceptance scores, the AES device successfully promoted participant well-being. Participants enjoyed using the AES to find and play music, utilize spiritual and religious services, and set reminders. Thus, we believe technology like AES has the potential to allow older adults to retain independence and autonomy, by improving physical and cognitive impairment.

B96
The apelin receptor agonist BGE-105 prevents muscle atrophy induced by bed rest in healthy volunteers aged ≥65 years

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Background: Apelin, the ligand of the receptor protein APJ, regulates multiple aspects of muscle growth and repair. BioAge Labs' analyses of longitudinal human aging cohorts showed that apelin pathway activity declines with age and is positively associated with longevity, mobility, and cognitive function. Because loss of muscle mass and strength drives multiple age-related morbidities, BioAge conducted a Phase 1b clinical trial to determine whether the small-molecule APJ agonist BGE-105 could prevent muscle atrophy in older people.

Methods: In a double-blind, placebo-controlled study, 21 healthy volunteers aged ≥65 years underwent strict bed rest for 10 days while receiving daily IV infusions of placebo (n=10) or a fixed dosage of BGE-105 (n=11). One day before (baseline) and 5 and 10 days after initiation of bed rest, key muscle atrophy endpoints were measured: thigh circumference; cross-sectional area (CSA) and A–P diameter of vastus lateralis (ultrasound); Goutallier grade, an index that quantifies fatty degeneration in muscle (ultrasound echo density); and muscle protein synthesis rate (biopsy).

Results: On day 10, volunteers receiving BGE-105 showed improvement in bed rest–induced atrophy relative to placebo-treated volunteers, reflected in multiple metrics (Table). BGE-105 was well tolerated in the study, with no severe adverse effects reported.

Conclusions: BGE-105 significantly prevented muscle atrophy across multiple key endpoints in healthy volunteers aged ≥ 65 years. The higher rate of muscle protein synthesis in the drug vs. placebo group provides a potential mechanistic basis for BGE-105's protective effect on muscle dimensions. The findings of the Phase 1b trial support investigation of BGE-105 as a treatment of a wide range of age-related syndromes driven by loss of muscle. These conditions include acute myopathies in hospitalized patients on mechanical ventilation, as well as chronic medical conditions that are common among millions of older people but lack approved therapeutics for prevention or treatment, representing an enormous unmet clinical need.

	Thigh circumference (%)	Vastus lateralis diameter (%)	Vastus lateralis CSA (%)	Increased Goutallier grade (n)	Cumulative protein synthesis (%)
Placebo	-6.4	-21.2	-19.5	8 of 10	15.9
BGE-105	+0.8	-5.7	-8.0	1 of 11	22.0
p-value	<0.0001	<0.01	<0.05	<0.005	<0.005

All percentages are relative to baseline values measured 1 day before initiation of dosing.

B97
A pragmatic RCT of an electronic health record (EHR) alert to reduce antipsychotic prescriptions among patients with dementia

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Background: We hypothesized that an EHR alert grounded in behavioral science could reduce new antipsychotic medication prescriptions.

Methods: We conducted a pragmatic parallel arm RCT at a large urban health system, randomizing physicians (n=146) to receive the alert or not when prescribing new antipsychotics to patients with dementia. The alert was designed with behavioral scientists and informaticists, and vetted with key stakeholders. The alert contained: 1) text stating that antipsychotics increase mortality risk (motivating physicians' intrinsic desire for non-malfeasance); 2) links to behavioral resources; 3) default to a lower dose and pill-days. Our primary analysis was a physician-level linear regression of total pill-days over 1 year, controlling for the prior year's pill-days, physician specialty and sex, using robust standard errors. We also quantified new prescriptions and frequency of cancelling an order after intervention exposure (clinicaltrials.gov NCT04851691).

Results: Between 8/3/21 and 8/2/22, 117 patients were enrolled, 52 with intervention and 65 with control arm physicians. Mean age was 83 years (SD 11); 70% were female. Self/proxy-identified race/ethnicity was Afr. American 4%, Asian 6%, Latinx 10%, White 64%. After 1 year, the mean (SD) pill-days were 126 (228) for the intervention and 225 (601) for the control group. In the adjusted model, intervention assignment was non-significantly associated with a mean difference in total pill-days of -65 (p=0.18). The number of prescriptions was 80 in the intervention and 124 in the control arm. When the alert fired, the order was cancelled in 15/61 (25%) of encounters.

Conclusions: In a real-world pragmatic trial, this EHR alert failed to decrease antipsychotic pill-days over one year. Despite this negative result, physicians exposed to the alert cancelled their orders 25% of the time. Whether tailoring the intervention to specific providers and/or patients could improve the impact of the intervention warrants further investigation.

B98

The Comparative Effectiveness of Two Nonpharmacologic Approaches to Dementia Care in Nursing Homes

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Background: Almost half of nursing home (NH) residents have Alzheimer's disease or dementia. Behavioral symptoms often emerge as the disease progresses, which are managed with off-label antipsychotic medications. However, these medications are associated with negative patient outcomes. As a result, stakeholders have prioritized use of non-pharmacological interventions for dementia care. This study compared two nonpharmacologic approaches (multidisciplinary [MD] and transdisciplinary [TD]) for patient-centered dementia care on antipsychotic medication use, behavioral symptoms, falls, weight loss, wandering, and restraint use.

Methods: A cluster randomized controlled trial compared MD and TD approaches to dementia care. The MD approach draws on the expertise of healthcare providers to target issues that arise. The TD approach provides core training for all staff members using a common language across disciplines to support continuity and sustainability. Of the 80 NHs that were randomized, the analysis included 53 NHs that completed respective trainings and had 6 months of follow-up prior to COVID-19. The impact of the two approaches on resident outcomes were compared using a differences-in-differences (DID) approach with NH fixed effects.

Results: At baseline (1/2019-6/2019), there were 2800 residents with dementia across the 53 NHs. After DID adjustment of baseline differences in resident characteristics of 6-month outcomes, the between-group difference was minimal for antipsychotic medication use, unintended weight loss, and falls. However, there were potentially meaningful differences in the percentage of residents with behavioral symptoms (3.9 percentage points [pp] higher in TD; p=0.10), wandering (3.5 pp higher in TD; p=0.02), and physical restraint use (including bed rails) (3.1 pp lower in TD; p=0.28).

Conclusions: There was no statistically significant difference in the use of antipsychotic medications between MD and TD. TD had higher behavioral symptoms and wandering and lower physical restraint use, which may suggest clinically meaningful differences between two groups.

B99

A Pragmatic Trial to Improve Advance Care Planning in Nursing Homes: The APPROACHES project

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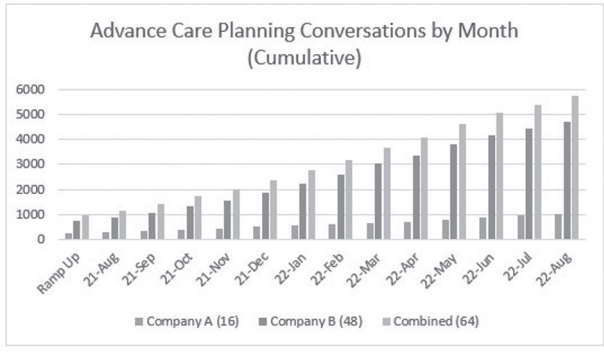
Background: Nursing homes (NHs) are an important site of care for people with dementia. Although NHs are required by regulation to provide advance care planning (ACP), there are no associated standards. Prior work suggests variability in NH ACP quality and processes.

Methods: The NIH-funded APPROACHES pragmatic clinical trial tested an ACP training program in 131 NHs (64 intervention, 67 control) between September 2021-August 2022. ACP Specialists were identified from existing NH staff and received standardized education that included best practices for working with surrogate decision-makers and ACP facilitation skills. NH corporate leads supported implementation. Study data was collected using an embedded electronic health record form and metrics tracked by the corporate leads.

Results: Seventy-seven ACP Specialists facilitated 5,699 ACP conversations. A majority of residents (60%) were able to make their own decisions; 40% lacked decisional capacity. Among documented goals of care, maintaining function was the most commonly selected goal of care (38%), followed by life-prolongation (29%), and comfort care (24%).

Conclusions: The APPROACHES pragmatic trial was implemented in real-world NH environments using existing clinical staff and data sources. The program successfully trained existing NH staff to facilitate ACP for residents to increase the potential for goal-concordant care and reduce hospital transfers. The program design and evaluation demonstrate the potential for rapid translation into NH practice.



B100 Student Presentation

The Impact of Healthcare System on Patients' Priorities to Address Fall-Risk Increasing Drugs in the STRIDE Intervention

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Introduction

STRIDE was a randomized controlled trial comparing enhanced usual care to a multifactorial intervention to reduce serious fall injuries, enrolling 5451 participants in 86 primary care practices across 10 US health systems. Bachelor's-prepared nurses served as falls care managers (FCMs) at each healthcare system, assessing patients on 7 risk factors, and facilitating implementation of intervention components based on patients' risks/priorities. Prior work showed that patients were least likely to prioritize medication changes. This analysis seeks to understand factors predicting patients' deprescribing priorities.

Methods

We included older adults who had a fall-risk increasing drug (FRID) identified by FCM assessment. The outcome of interest was participants' willingness to prioritize medication changes. Predictors included demographic and clinical characteristics, and the participant's healthcare system. We used modified Poisson regression, including age, gender, race, ethnicity, a dummy variable for healthcare system, and all other variables $p < 0.2$ in bivariate analyses.

Results

Of the 2379 patients who had medication assessments, 448 had a FRID identified at ≥ 1 FCM visit. Patients were mean age 79 (SD 6), 71% female, 89% non-Hispanic white, with mean 2 (SD 1) chronic conditions and 54% with self-perceived mobility problems. Only chronic conditions, self-perceived mobility and healthcare system had p-value < 0.2 in bivariate analyses. In multivariable analyses, only patients' assigned healthcare system remained significant. The adjusted probability of patients prioritizing medication changes was 28% (range, 4% - 49% across different healthcare systems, $p = 0.0001$ for healthcare system effect).

Conclusion

Healthcare systems where patients received care were powerfully associated with patients' prioritization of medication changes, likely due to the relationship between patients and their FCM and organizational deprescribing resources. Further work should explore drivers of healthcare system variation, and whether prioritization varied across other risk factors in STRIDE. If confirmed, future research should consider ways to standardize delivery of interventions across sites.

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B101

Diabetes drug use before and after heart failure hospitalizations in nursing home residents

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Background: Drugs used in the treatment of diabetes (T2D) have differential effects on cardiovascular outcomes, with some classes (e.g., sodium-glucose cotransporter-2 inhibitors [SGLT2I]) offering cardiac benefits and others (e.g., thiazolidinediones [TZDs] and sulfonylureas [SUs]) negatively affecting cardiac function. When a person with T2D and heart failure (HF) has an HF-related hospitalization, clinicians have an opportunity to substitute T2D drugs to enhance cardiac function. Our objective was to describe the use of SGLT2Is, TZDs and SUs before and after a CHF-related hospitalization in nursing home (NH) residents with T2D.

Methods: This was a cohort study using 20% sample of Medicare claims linked with Minimum Data Set resident assessments. The study population was long-stay NH residents with a HF-related hospitalization between 1/1/2013 and 8/31/2018. For individuals with multiple hospitalizations, one event was randomly selected. Diabetes drug use was ascertained using Medicare Part D during the 120 days before and after the hospitalization period. The outcomes were (1) the proportion of pre-hospitalization users who stopped or continued their diabetic drugs after the CHF hospitalization; and (2) the proportion of post-hospitalization users who were new users.

Results: A total of 12,990 NH residents with T2D and a CHF-related hospitalization were included (mean age 78 years; 66% women; 75% white, 19% Black; 1/4 had moderate/severe cognitive impairment). Before hospitalization, 1.5% received TZDs, 14.1% received SUs, and 0.3% received SGLT2Is. Among pre-hospitalization users of TZDs, SUs and SGLT2Is, 49%, 62% and 40% did not switch diabetic drugs; while 51%, 38% and 60% discontinued these drugs after the hospitalization. Among post-hospitalization users of TZDs, SUs and SGLT2Is, 37%, 10% and 11% were new users.

Conclusions: SGLT2Is were seldom used. A large number of residents did not switch diabetic drugs. TZDs and SUs were still used by many residents with T2D after the CHF hospitalization. Further studies are needed to identify barriers to optimizing drugs with cardiac benefits in older adults with CHF.

B102 Student Presentation

Factors Related to Depression among Urban Hispanic Senior Center Clients

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Background: Depression is common in older Hispanics. Yet, racial disparities exist as they are less likely to receive depression treatment than older non-Hispanic Whites. Hispanic senior centers may offer opportunities for improving knowledge about depression in older Hispanics. We studied depressive symptom scores and associated factors, with a focus on disability, in older Hispanic senior center participants.

Methods: We used data from a pilot study of clients at a Hispanic senior center in Hartford, CT, age ≥55, who spoke English or Spanish (N=42). Data was collected between July 2020 and August 2021. The Geriatric Depression Scale (GDS-15) assessed depression. Primary independent variables were ADL disability and mobility disability. Other variables included demographics, self-rated health (SRH), loneliness, social support, and stress. Linear regression models evaluated the association between depression and disability, controlling for age, gender and stress. Additional variables were included based on their association ($p<0.1$) with the outcome or independent variables in bivariate analyses.

Results: Participants' mean age was 73.74 (SD=9.54) and 76.2% were female. Mean GDS score was 3.49 (SD=3.66), range 0-12. There were 12 (31%) participants with score ≥ 5 indicating depression. ADL and mobility disability were reported in 12 (28.6%) and 19 (45.2%) participants, respectively. ADL disability was associated with GDS score, even after adjusting for age, gender, stress, living alone, and SRH (β =0.576, 95% CI=2.01-6.78). Mobility disability was associated with GDS score in unadjusted analyses (β =0.345, 95% CI=0.23-4.77) and when controlling for age and gender, but not after controlling for stress, living alone and SRH. However, stress was associated with depression (β =0.397, 95% CI=0.05-0.91).

Conclusions: Nearly one third of the participants had GDS scores indicating depression. Scores were significantly higher in those with ADL disability and mobility disability. Our findings may

help Hispanic senior centers determine priorities for programming (e.g., mind-body programs) and educating clients on the relationship between function and mental health. Our study also highlights the importance of collaborating with urban senior centers to engage minorities in research, which may contribute to developing targeted community interventions.

B103 Encore Presentation

Suboptimal Sleep Duration Is Associated with Poor Brain Health in Older Adults without Stroke or Dementia

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Background: The AHA's Life's Simple 7, a model of cardiovascular risk factors, recently added sleep duration, becoming the Life's Essential 8. Given the strong connection between cardiovascular and brain health, we hypothesized that suboptimal sleep duration leads to adverse clinical and neuroimaging brain health profiles in older adults without stroke/dementia.

Methods: We conducted a cross-sectional study within the UK Biobank, a population study done in the UK. We analyzed 2 cohorts of persons aged >= 60 years without a history of stroke/dementia: 1) those who had brain MRI data and 2) those who completed 5 different cognitive tests. We modeled sleep duration binary: 7-9 hours (optimal sleep) and <7 or >=9 hours (suboptimal sleep). We evaluated (1) the presence of any white matter hyperintensities, a well-established MRI marker of poor brain health, and (2) the General Cognitive Ability Score, a validated cognitive metric calculated as the first principal component of a principal component analysis of the cognitive tests.

Results: Among the 502,408 older UKB participants, 12,822 (2.6%) completed the research brain MRI (mean age 63, 47% female) and 20,894 (4.2%) completed the cognitive tests (mean age 64, 53% female). In the MRI group, 9,204 (71.8%) and 3,618 (28.2%) participants had optimal and suboptimal sleep, respectively. In multivariable logistic regression analyses, suboptimal sleep duration was associated with a 12% higher risk of having any WMH (OR 1.12, 95% CI 1.04-1.20; p=0.004). In the cognitive tests group, 14,083 (67.4%) and 6,811 (32.6%) participants had optimal and suboptimal sleep, respectively. In multivariable linear regression analyses, suboptimal sleep was associated with a 14% reduction in cognitive performance (beta 0.14, SE 0.02; P<0.001).

Conclusion: Among older adults without stroke/dementia in the UKB, suboptimal sleep duration was significantly associated with adverse MRI brain health profiles and worse cognitive performance. These results support the importance of sleep duration in determining brain health in older adults without clinically evident manifestations of brain disease.

B104

Predicting time to nursing home eligibility in community-dwelling older adults with dementia: Development and external validation of self- and proxy-respondent models

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Background: Many older adults living with dementia ultimately need nursing home (NH) level care. We developed models to predict time to NH eligibility using self- and proxy-reports to aid patients and family members with planning and care management.

Methods: We included community-dwelling older adults with probable dementia aged ≥65 enrolled in the Health and Retirement Study (HRS) from 1998-2016 (development cohort) and National Health and Aging Trends Study (NHATS) from 2011-2019 (validation cohort). The primary outcome was time to NH eligibility defined as 1) ≥3 activities of daily living (ADL) dependencies, 2) ≥2 ADL dependencies and presence of wandering/need for supervision, or 3) needs help with eating. We used a parametric survival model incorporating interval censoring and competing risk of death. We performed backward selection in imputed datasets to develop two models: one using self-responses and another using proxy-responses (for those not able to self-report). Model performance was assessed by discrimination (integrated area under the receiver operating characteristic curve (iAUC)) and calibration (calibration plots).

Results: The HRS cohort included 3,327 participants with probable dementia (mean age 82.4 years (SD=7.4), 70% female, 12% Black). The NHATS cohort (n=1,712) had similar demographics. By the end of follow-up in the HRS cohort, 2,107 (62%) were classified as NH eligible. The self-respondent model included 8 predictors and the proxy-respondent model 7 predictors representing multiple domains, including demographics (e.g. age, sex), function (e.g. ADL/IADL difficulty and dependency counts, difficulty walking several blocks, driving ability), chronic diseases (e.g. diabetes) and cognition (e.g. date recall). The optimism-corrected iAUC after bootstrap internal validation was 0.66 (95% CI=0.65-0.67) (self-respondent model) and 0.72 (95% CI=0.71-0.73) (proxy-respondent model). Upon external validation in NHATS, discrimination was similar. Calibration plots suggested slight overestimation of risk in the NHATS validation cohort.

Conclusions: We developed and externally validated two time to NH eligibility prediction models to help community-dwelling older adults with dementia and their families plan for the future.

B105

Trends in characteristics of prescription opioid-related poisonings among older adults in the United States, 2015-2021

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Introduction: While opioid-related overdoses have continued to increase nationally, few studies have considered how trends in opioid poisonings have changed among older adults. Therefore, the objective of this study was to use the most recent national poisoning data to examine trends in fatal and nonfatal opioid-related poisonings ("exposures") among older adults.

Methods: National Poison Control data from the Researched Abuse, Diversion and Addiction-Related Surveillance (RADARS) System were used to examine trends in characteristics of reported exposures to prescription opioids or fentanyl between 2015 and 2021 among adults age ≥60. We estimated the proportion of opioid exposures by sex, age, route of administration, other substances co-used, and medical outcomes for each calendar year. We then estimated whether there were linear changes in the proportion for each category by year using logistic regression.

Results: While there was an overall decrease in the number of opioid exposures from 7,706 in 2015 to 7,337 in 2021 (a decrease of 4.8%, p=0.04), there were sharp increases in the proportion of exposures among adults aged 70-79 (a 14.0% increase, p<0.001) and of major adverse outcomes (a 93.9% increase, p<0.001). The proportion classified as "misuse" decreased during the study period (a 23.3% decrease, p=0.048), but "abuse" increased by 63.3% (p<.001). There were significant decreases in the proportion of cases involving hydrocodone (9.3% decrease), hydromorphone (23.3% decrease), and morphine (22.0% decrease), but a sharp increase in cases involving buprenorphine (216.6% increase). The proportion also increased for co-use of cocaine (488.9% increase), methamphetamine (220.0% increase), and heroin (208.3% increase), gabapentin (43.8% increase) with a decrease in co-use with benzodiazepines (25.5% decrease).

Discussion: Poison Control data indicate that national patterns of opioid-related poisonings are changing among older adults, including the type of opioids involved and co-use of other drugs. These results can inform prevention and harm reduction efforts aimed at older adults.

B106

Older Adults with Pancreatic Cancer Considering A Whipple Procedure: A Nationwide Analysis

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Background: The elderly population is rapidly increasing in the US, with a high occurrence of pancreatic cancer. Whipple is the only curative option but is not well-studied in older adults. Therefore, we aimed to evaluate the effect of Whipple on survival outcomes in older adults with pancreatic adenocarcinoma.

Methods: Older patients (≥65 years) with stage I-III pancreatic adenocarcinoma diagnosed between 2004 and 2019 were selected using National Cancer Database. The Chi-square test compared clinical and sociodemographic characteristics of older adults who underwent Whipple vs. non-surgery. In addition, Kaplan-Meier with log-rank test was performed to calculate the median overall survival and Cox regression method for multivariable survival analysis after adjusting for confounding factors.

Results: Of 55,029 patients, 38.6% had Whipple. The utilization of Whipple surgery doubled in 2016-2018 compared to 2004-2006 in older adults (28% vs. 12%). Patients who underwent Whipple were more likely between 65-74 of age, male gender, White vs. African American (40% vs. 29%), treated at an academic center, and having private insurance compared to patients with non-surgery (all $p<0.001$). Patients who underwent Whipple had a higher rate of comorbidity score of 1 and stage II disease than their counterparts (all $p<0.001$). In addition, the Whipple group received a higher rate of chemotherapy than others (67% vs. 52%, $p<0.001$). The Whipple group had a better median survival time than the non-surgery group in older adults (20.7 vs. 7.4 months, $p<0.001$). However, 5-year survival rates were 20% for ages 65-74, 16% for 75-84 years, and 12% for ≥ 85 years. On multivariable analysis, Whipple was associated with improved overall survival (HR 0.4 [0.39-0.41], $p<0.001$).

Conclusions: This study showed that elderly patients with pancreatic adenocarcinoma who underwent Whipple had prolonged overall survival. However, 5-year survival rates were low, between 12-20% in ages above 65; therefore, the elderly population is unique and needs comprehensive assessment by a trained physician before a complex surgery like Whipple. Surgeons may obtain a Geriatrics consult for a thorough pre-op geriatric syndrome assessment for elderly patients.

B107

Update of meta-analysis of interventions to reduce adverse drug reactions in older adults

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Background: Polypharmacy is the most important risk factor for adverse drug reactions (ADRs) defined as a noxious and unintended response to a drug and occurs at doses normally used for the prophylaxis, diagnosis, or therapy of disease, or for modification of physiological function. We previously published a meta-analysis of intervention trials during 1996-2017 designed to reduce ADRs in older adults. We sought to update the meta-analysis to include trials published 2017-2022.

Methods: We searched OVID, Cochrane Library, Clinicaltrials.gov and Google Scholar January 1, 2016-October 31, 2022 for randomized controlled trials of older adults (age >65) that examined the outcome of ADRs. Two of the authors independently reviewed all citations, extracted relevant data, and assessed studies for potential bias. They evaluated potential ADRs using Naranjo's causality algorithm. Random-effects models were used to combine the results of multiple studies and create summary estimates.

Results: Five studies are new to this update, resulting in 18 studies total with 20 comparisons (15,293 participants). The studies were conducted in various settings including hospital (n=6), primary care (n=6), nursing home (n=5) and hospital with outcomes assessed after discharge (n=3). In the pooled analysis, the intervention group participants were 18% less likely to experience any ADR (odds ratio 0.82; 95% confidence interval [CI] 0.68 to 0.98). Pharmacist-led interventions were common (n=10) and reduced the risk of any ADR by 30% (odds ratio 0.70; 95% CI 0.50 to 0.97) compared to 9% (odds ratio 0.91; 95% CI 0.74 to 1.12) in non-pharmacist interventions. For the eight studies that examined serious ADRs, the reduction of 36% was noted (odds ratio 0.64; 95% CI 0.44 to 0.93).

Conclusion: Interventions, especially those lead by pharmacists, reduced the risk of ADRs including serious ADRs. Implementation of successful interventions in health care systems may improve medication safety in older patients.

B108

Comparative safety of BNT162b2 and mRNA-1273 vaccines across frailty subgroups among 6.4 million older adults

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Background: Clinical trials indicate that the risk of adverse events following vaccination with BNT162b2 (Pfizer-BioNTech) or mRNA-1273 (Moderna Inc.) is low. Head-to-head comparisons of vaccine safety are needed to inform decision making; however, current estimates lack generalizability and few studies have formally assessed whether safety varies by frailty – an age-related syndrome known to attenuate the immune response to other vaccines and increase one's vulnerability to external stressors. Our objective was to compare safety outcomes between mRNA vaccines in a large sample of older adults - overall and by frailty.

Methods: Using national linked CVS Health, Walgreens Inc., and Medicare data, we conducted a retrospective cohort study of US community-dwelling Medicare fee-for-service beneficiaries ≥66 years who received BNT162b2 or mRNA-1273 as their first COVID-19 vaccine between December 2020 and July 2021. We measured 13 serious adverse events in the 28-days following the week of vaccination. Frailty was measured using a validated claims-based frailty index (FI), with beneficiaries categorized as non-frail (FI<0.15), pre-frail (0.15≤FI<0.25), and frail (FI≥0.25). Generalized linear models with binominal distributions and log link functions estimated risk ratios (RRs) and 95% confidence intervals (CIs) adjusting for age, race, and sex.

Results: In total, 6,388,204 patients received a BNT162b2 or mRNA-1273 vaccine (median age=75 years; 59% female; 87% white; 38% pre-frail; 6% frail). The 28-day risk of all measured adverse events was low (<1%), with pulmonary embolism (0.23%) and deep vein thrombosis (0.27%) being the most common. BNT162b2 was associated with a greater risk of acute myocardial infarction (RR=1.07 [95%CI=1.01-1.14), deep vein thrombosis (RR=1.06; 95%CI=1.02-1.09), and pulmonary embolism (RR=1.07; 95%CI=1.04-1.11) compared to mRNA-1273. Relative differences in safety were greater among non-frail than frail patients for several outcomes.

Conclusions: These findings suggest that while both vaccines are safe, the mRNA-1273 vaccine may be preferred among non-frail older adults – though further assessment of potential clinical differences between vaccine groups is warranted.

B109

The Effect of Disruptive Medical Events on Function and Mortality in People With and Without Dementia

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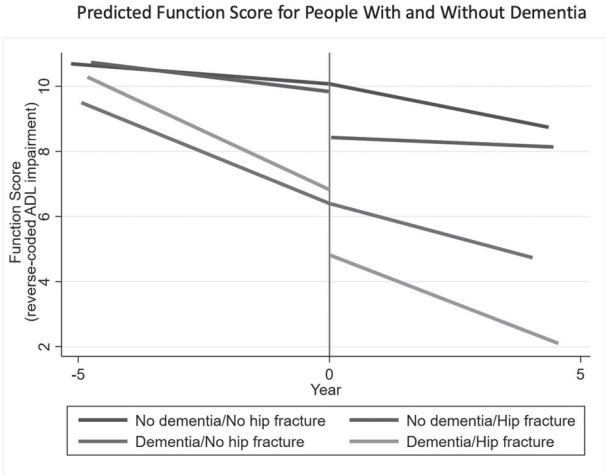
Background: The existing paradigm for dementia is that the trajectory of decline follows a slow and steady course. We hypothesized that common disruptive medical events such as pneumonia and hip fracture may accelerate decline for people with dementia (PWD) compared to (1) people without dementia (PWoD) and (2) PWD with no event.

Methods: Longitudinal cohort study of older adults 65+ enrolled in the Health and Retirement Study (2008-2016) linked to Medicare claims. Dementia status was determined using the validated Hurd algorithm; hip fracture and pneumonia were identified in Medicare Claims. Multivariate cox and linear regression models with matching for age, gender, education, and comorbidities were used to estimate function score (0-11 independence in ADL and IADL) and 1-year predicted mortality. Time 0 was centered at event onset with a simulated time 0 created for those with no event.

Results: The sample included 2,200 PWD and 10,997 PWoD. Both PWD and PWoD experienced a drop in function following hip fracture (see Figure). Functional trajectories for PWD continued a rapid decline post-event, whereas they stabilized for PWoD (p=0.006). While pre-post functional trajectories were similar for PWD with and without hip fracture, PWD with hip fracture had much lower functional scores post-event (p<0.001). Predicted 1-year mortality following hip fracture was higher for PWD compared to PWoD (35% vs. 24%) and to PWD with no event (13%). Findings were similar for pneumonia.

Conclusion: PWD decline faster and are more likely to die after disruptive medical events than PWoD or PWD with no event. This information can be used to inform rehabilitation efforts and anticipatory guidance for PWD.



B110 Student Presentation

Effectiveness of Pain Control Between Opioids and Gabapentinoids in Chronic Pain Patients

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Background:

GABA prescribing has substantially increased while opioid prescribing has decreased since the 2016 CDC guideline that restricted opioid prescribing for chronic pain. The federal policy and subsequent state laws were in response to the growing epidemic of opioid overdose death in the USA. The shift to GABA prescribing assumes better safety profile and equal effectiveness to opioids in pain control, but no data exist on comparative analgesic effectiveness of GABA vs. opioids in patients living with chronic pain. We thus examined the effectiveness of GABA vs. opioid by assessing changes in pain measures over time in patients with chronic pain.

Methods:

This study used data from 20% national sample of Medicare beneficiaries in 2017-2019. We selected beneficiaries diagnosed with chronic pain who initiated an opioid or GABA prescription and received Home Health care in the study year. Beneficiaries were divided into groups that initiated opioid or GABA therapy for ≥ 30 continuous days. Pain scores from Home Health assessments before and after drug initiation were reported. Our studied outcome was the difference-in-difference on pain score reduction from pre to post assessments between the two groups. Multivariable linear regression model was built for the outcome of pain score reduction. We also used multivariable logistic regression to compare any pain reduction between the two groups.

Results:

Within a 60-day window before and after drug initiation, our sample consisted of 3,208 GABA users and 2,846 opioid users. Rate of any pain reduction was 47.2% in the GABA group and 43.1% in the opioid group. After adjustment for patient demographics and comorbidities, GABA patients had 1.15 times the odds of any pain reduction (95% CI: 1.03, 1.28) compared to opioid patients. The adjusted difference-in-difference on pain score reduction between the two groups was -0.09 point in 0-4 scale (p=0.012).

Conclusions:

GABA use in chronic pain patients was associated with better pain control compared to opioid use, suggesting a shared-decision making discussion between clinicians and patients about prescribing of GABA for chronic pain. These results underscore the need for further research on the relationship between GABA prescribing for chronic pain and changes in function and quality of life.

B111

Longitudinal Trajectories of Audiometric Hearing by Sex: Evidence from the Baltimore Longitudinal Study of Aging (BLSA)

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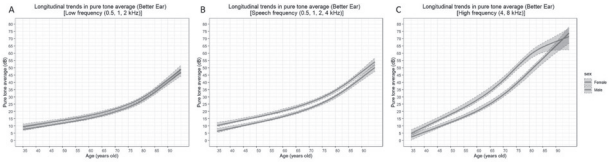
Background: Understanding how hearing changes over the life course is informative to patients and clinicians and may provide insights into physiological processes that contribute to hearing loss. While sex difference in cross-sectional data has been shown, sex-specific trajectories of hearing are rarely investigated.

Methods: 1013 adults (ages, 22-97 at baseline) enrolled in BLSA with audiometric data with up to 7 follow-ups were included. Exposure of interest is sex. Main outcome is hearing defined by pure tone averages (PTA) for low-frequency (0.5-2 kHz), speech-frequency (0.5-4 kHz), and high-frequency (4-8 kHz) from the better hearing ear. (Higher PTA means worse hearing.) Mixed effect models were

used for the trajectory analysis. Restricted cubic splines were used to account for non-linear relationship with age, and sex-specific trajectories were visualized.

Results: Cross-sectionally women had better hearing than men in low-, speech-, and high-frequency PTA across the age span. Longitudinally, sex differences were observed in rates of change in high-frequency PTA but not speech- and low-frequency PTA (likelihood ratio test $\chi^2 = 20.9$, $p < 0.001$ for high frequency). Annual change (dB/year) in high-frequency PTA in the age intervals between 60-65, 65-70, 70-75, and 75-80 were 1.2, 1.5, 1.8, and 1.7, respectively, for men, and 1.0, 1.2, 1.5, and 1.7, respectively, for women. The rate of change in low- and speech-frequency PTA increases with age, ranging from 0.3-0.4 dB/year at age interval 40-45 to 1.3-1.4 dB/year at age interval 85-90 (see figure).

Conclusions: Although hearing changes slowly (0.3~1.4 dB/year), the cumulative changes over time are remarkable (PTA>40 dB ismoderate to severe hearing loss). Women consistently have better hearing than men with rates of hearing change similar between men and women for low- and speech-frequency PTA but not high-frequency PTA. Further research is needed to explore the underlying mechanism of sex differences in hearing and the temporal course of when these differences begin to emerge.



B112

The prevalence high dose medication prescriptions among older adults with heart failure

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Background: Older adults are less likely to receive the highest target doses of HF medications, potentially due to concerns of adverse effects. However, little is known about the prescribing patterns of HF medication dose intensity to older adults.

Methods: We conducted a cross-sectional study to assess the prevalence of high dose HF medication use among older adults (65 and older) with systolic HF in a 5% sample of 2015 Medicare fee-for-service beneficiaries. The high vs low dose intensity of each medication was defined from the result of a scoping review of 464 studies. We estimated the percentage of older adults who received high dose for beta-blocker (BB), angiotensin converting inhibitor (ACEi), angiotensin receptor blocker (ARB), mineralocorticoid receptor antagonist (MRA), and angiotensin receptor-neprilysin inhibitor (ARNI).

Results: Among a total of 26,243, 13,364 (50.9%) patients received BB, 7,105 (27.1%) for ACEi, 5,912 (22.5%) for ARB, 4,990 (19.0%) for MRA, and 222 (0.8%) for ARNI. The percentage of high dose prescriptions was 32.3% for BB, 32.6% for ACEi, 22.4% for ARB, 21.2% for MRA and 16.2% for ARNI.

Conclusion: Most older adults with HF did not receive high dose medications, despite the guideline's recommendations. It could be the higher potential for adverse effects in this group but deserve further study.

Number and Percentage of Older Adults Received Low or High Dose HF Medications

	BB (N=13364)		ACEi (N=7105)		ARB (N=5912)		ARNI (N=222)		MRA (N=4990)	
	Low	High	Low	High	Low	High	Low	High	Low	High
Number of patients (n,%)	9047 (67.7%)	4317 (32.3%)	4789 (67.5%)	2316 (32.6%)	4590 (77.6%)	1322 (22.4%)	186 (83.3%)	36 (16.2%)	3932 (78.8%)	1058 (21.2%)
Mean Age (SD)	80.3 (8.0)	77.9 (7.4)	79.4 (7.9)	78.8 (7.8)	79.7 (7.8)	79.9 (7.7)	75.6 (6.2)	74.4 (5.4)	79.3 (7.8)	78.5 (7.7)
Race (n,%)										
Caucasian	7715 (69.2%)	3441 (30.8%)	4165 (69.2%)	1855 (30.8%)	3785 (78.5%)	1034 (21.5%)	159 (86.0%)	26 (14.0%)	3397 (78.8%)	916 (21.3%)
African American	814 (55.6%)	649 (44.4%)	410 (55.8%)	325 (44.2%)	483 (72.0%)	188 (28.0%)	16 (76.2%)	5 (23.8%)	360 (78.1%)	101 (21.9%)
Hispanic	178 (67.4%)	86 (32.6%)	75 (56.8%)	57 (43.2%)	109 (74.7%)	37 (25.3%)	1 (50%)	1 (50%)	67 (82.7%)	14 (17.3%)
Asian	152 (69.4%)	67 (30.6%)	60 (62.5%)	36 (37.5%)	110 (73.8%)	39 (26.2%)	4 (66.7%)	2 (33.3%)	50 (84.8%)	9 (15.3%)
Other	188 (71.8%)	74 (28.2%)	79 (64.8%)	43 (35.2%)	103 (81.1%)	24 (18.9%)	6 (75.0%)	2 (25.0%)	58 (76.3%)	18 (1.7%)
Sex (n,%)										
Male	4262 (67.8%)	2026 (32.2%)	2316 (67.8%)	1096 (32.2%)	1878 (80.8%)	446 (19.2%)	135 (81.8%)	30 (13.2%)	1790 (76.9%)	538 (23.1%)
Female	4785 (67.6%)	2291 (32.4%)	2473 (77.0%)	1220 (33.0%)	2712 (75.6%)	876 (24.4%)	51 (89.5%)	6 (10.5%)	2142 (80.5%)	520 (19.5%)

B113 Student Presentation

Adverse Childhood Experiences (ACEs): Implications for Physical, Cognitive, and Functional Impairment in a National Sample of Older Community-Dwelling Adults

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Background: Prior research on the health implications of ACEs has focused on early or midlife adults, not older adults who bear the greatest burden of health-related functional impairment. We examined associations between ACEs and mobility impairment, cognitive impairment, and functional disability in older community-dwelling adults.

Methods: Cross-sectional analyses of the National Social Life, Health, and Aging Project (2015-2016), a national cohort of community-dwelling older U.S. adults. Participants were interviewed about their history of ACEs (childhood experience of violence/abuse, witnessing of violence/abuse, financial insecurity, parental separation, or serious illness), underwent standardized physical performance testing (tandem balance, 3-meter walk, chair stand test) and cognitive testing (survey adaptation of the Montreal Cognitive Assessment), and reported functional disability (difficulty with activities of daily living).

Results: Among the 3387 participants (ages 50-97; 54% female; 26% ethnic minority), 44% reported a history of one or more types of ACEs. Thirty-five percent met criteria for mobility impairment and 24% cognitive impairment, and 24% reported functional disability. After adjusting for age, gender, race, and ethnicity, participants reporting at least one ACE were more likely to demonstrate mobility impairment (OR 1.30, 95% CI 1.11–1.52) and cognitive impairment (OR 1.26, 95% CI 1.03–1.54), as well as report functional disability (OR 1.69, 95% CI 1.38–2.07), compared to those with no history of ACEs. In analyses distinguishing between specific types of ACEs, poor childhood health was associated with a 65% to 74% increased odds of almost all measured outcomes, and childhood experience of violence/abuse was associated with a 38% greater odds of physical mobility impairment (95% CI 1.11–1.71) and 86% increased odds of functional disability (95% CI 1.49–2.33).

Conclusions: Adverse childhood experiences may be important markers of physical and cognitive functional impairment late in life, suggesting that efforts to mitigate ACEs may have implications for aging-associated functional decline. Clinicians may be able to provide more thoughtful and compassionate care to older adults by exploring the potential role of early life traumatic experiences in shaping or further complicating their functional challenges.

B114

Variation in Incidence of Humerus and Wrist Fractures among Older Asian American and Pacific Islander Women

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Background: Although Asian American and Pacific Islanders (AAPI) are the fastest growing race/ethnic minority, disaggregated AAPI data pertaining to skeletal health outcomes remains limited. This study expands on our prior understanding of racial and ethnic differences in bone health by comparing humerus and wrist fracture incidence among older AAPI women.

Methods: This retrospective study examined records of AAPI adults aged ≥50y who were members of Kaiser Permanente Northern CA in 2000-2019 and followed through to 2021. Race and ethnicity was self-reported. Incident humerus (proximal or shaft) and wrist (distal radius or ulna) fractures were determined by diagnoses codes. Fracture incidence was age-adjusted (using 2010 US Census weights). Log-Poisson regression was used to estimate fracture incidence rate ratios (IRR) with Chinese adults as reference, adjusting for age and calendar year.

Results: There were 215,359 AAPI women, with 49,694 Chinese, 60,864 Filipina, 11,944 Japanese, 11,037 South Asian, and 81,820 all others (5,011 mixed and 54,646 unspecified). Age at cohort entry was 58±10y with median follow up of 7 years (interquartile range 3-14). The age-adjusted incidence per 1000 person-years for humerus and wrist fractures by AAPI subgroup was 0.9 and 2.02 for South Asian, 0.87 and 1.66 for Japanese, 0.58 and 1.21 for Chinese, and 0.41 and 0.58 for Filipina women. Compared to Chinese women, the humerus fracture IRR was 1.82 (1.39-2.40) for South Asian, 1.35 (1.11-1.64) for Japanese, and 0.72 (0.60-0.85) for Filipina women. Similarly, compared to Chinese women, the wrist fracture IRR was 1.71 (1.43-2.04) for South Asian, 1.33 (1.15-1.53) for Japanese, and 0.48 (0.42-0.55) for Filipina women.

Conclusions: Humerus and wrist fracture incidence differs by AAPI subgroup with Japanese and South Asian women having higher incidence and Filipina women having lower incidence of fractures compared to Chinese women. These findings may have implications for fracture prevention strategies in higher risk AAPI subgroups and support the need for studies disaggregating AAPI skeletal health outcomes.

B115

Postoperative Use of Sleep Aids and Delirium in Older Adults After Major Surgery

S. Lee,[1] C. Park,[2] R. Levin,[1] D. Kim.[1,2] *1. Brigham and Women's Hospital, Boston, MA; 2. Hinda and Arthur Marcus Institute for Aging Research, Boston, MA.*

Background

Use of sleep aids has been associated with postoperative delirium. Melatonin receptor agonists (melatonin and ramelteon) are widely used as safer alternatives to treat sleep disturbances in the postoperative period among older adults.

Methods

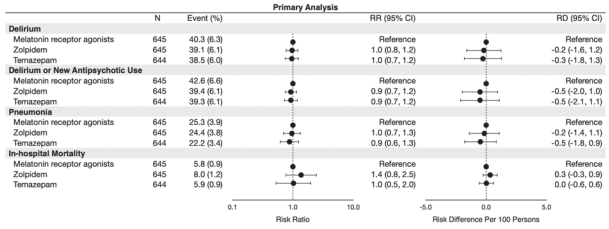
This retrospective cohort study included patients ≥65 years old who initiated melatonin receptor agonists, zolpidem or temazepam after major surgery in the Premier Healthcare Database 2009-2018. The primary outcome was delirium, measured using diagnosis codes. Secondary outcomes included a composite event of delirium or new antipsychotic initiation, pneumonia, and in-hospital mortality. We performed propensity score-based overlap weighting and estimated the risk ratio (RR), risk difference (RD) and 95% confidence intervals (CI) of the outcomes comparing zolpidem, temazepam, and melatonin receptor agonists.

Results

The weighted population included 1,934 patients (mean age [standard deviation], 79 [7] years; 57% female), with 645 melatonin receptor agonist, 645 zolpidem and 644 temazepam initiators. There was no significant difference in the risk of delirium among patients treated with melatonin receptor agonists (6.3%, reference group), zolpidem (6.1%; RR [95% CI], 1.0 [0.8-1.2]) and temazepam (6.0%; 1.0 [0.7-1.2]). The risk of secondary outcomes was similar among all the treatment groups (see Figure).

Conclusion

Use of melatonin receptor agonists was not associated with a lower risk of postoperative delirium compared with zolpidem and temazepam in older adults after major surgery. These results raise a question on the role of melatonin receptor agonists to prevent postoperative delirium.



The propensity score overlap-weighted analysis was performed to evaluate the association of sleep aid with delirium and other in-hospital adverse events.
Abbreviations: CI, confidence interval; RD, risk difference; RR, risk ratio.

B116

Falls and fall-risk increasing medication use among older patients with chronic obstructive pulmonary disease

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Background: Patients with chronic obstructive pulmonary disease (COPD) commonly use fall-risk increasing drugs (FRIDs) such as benzodiazepines and opioids, and are also at an increased risk for falls. Among COPD patients with falls, little is known about the prevalence of fall-related encounters across age groups and about FRID use in this population. We evaluated the prevalence of fall-related encounters and FRID use to inform the adaptation and implementation of deprescribing interventions for patients with COPD.

Methods: Cross-sectional study of adults aged ≥ 50 years with COPD per ICD-10 diagnosis codes who received care at an academic health center between 1/1/2016-1/1/2022. We examined patients age ≥ 65 along with patients ages 50-64, as patients with COPD experience accelerated aging. Using the local electronic health record, we identified fall-related encounters/injuries, FRID prescription(s) (e.g., benzodiazepines, anticonvulsants, antidepressants, antihyperglycemics, antipsychotics, diuretics, hypnotics, opioids), and the most common comorbidities associated with FRID prescriptions.

Results: Among 76,626 patients age ≥ 50 with COPD, 15% (n=11,737) had a fall-related visit; of those patients, 49% (n=5798) had a fracture. Fall-related visits increased with age: 13% (n=2590) of patients 50-64, 14% (n=5341) age 65-79, and 21% (n=3809) age 80+ had a fall-related visit. Among patients with COPD and a fall-related visit, the most common FRID prescriptions were for opioids (n=6105, 52%), anticonvulsants (n=3169, 27%; gabapentin comprised 68% of anticonvulsant prescriptions), diuretics (n=3126, 27%), and benzodiazepines (n=2849, 24%). Comorbidities associated with FRID medication use were common in this population with 85% also having

hypertension (n=10,010), 61% with chronic pain (n=7158) and 41% having an anxiety disorder (n=4772).

Conclusion: There is high FRID use among older adults with COPD and falls. Patients with COPD, including those under age 65, may benefit from additional medication management to mitigate falls risk. Future deprescribing interventions in COPD will need to work across primary care and pulmonology to address polypharmacy and optimally manage medications and symptoms for this multimorbid patient population.

B117

Post-COVID Symptom Trajectories and Predictors of Symptom Burden in Older Persons

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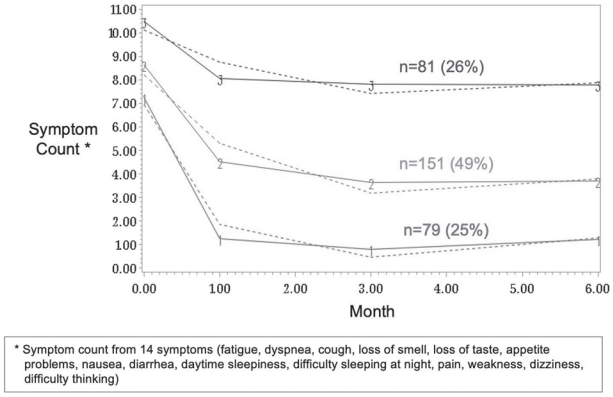
Background: Little is known about post-COVID symptom trajectories and risk factors for symptom burden in older persons.

Methods: In 311 community-living persons age ≥60 yrs hospitalized with COVID, we examined symptom count at 0, 1, 3, and 6-months post-discharge. Assessments occurred by phone and were supplemented by the EMR. We used the Edmonton Symptom Assessment System, which included 14 symptoms. Other assessments completed at baseline included mood symptoms (PHQ-4); social support (MOS Social Support); delirium (CHART-DEL); falls; frailty (modified Fried phenotype); impairments in cognition (MoCA 5-minute protocol), function (disability in up to 15 daily activities and mobility), hearing or vision. After multiple imputation, a zero-inflated Poisson model for trajectory analysis was conducted to find latent classes according to individual symptom count. Using group assignment as the dependent variable, unadjusted and adjusted multinomial regression models identified risk factors associated with different symptom trajectories.

Results: Mean age was 71 yrs, 52% were women, and 36% were minorities. Trajectory analysis revealed 3 groups: 1 (least symptoms), 2 (moderate), and 3 (most symptoms) [*Figure*]. After adjustment for demographics, compared to group 1, group 3 was significantly more likely to have mood symptoms (adjOR=1.76) and geriatric conditions (delirium, falls, frailty, impairments in cognition, function, hearing, vision; adjORs ranging 1.29-6.90) and significantly less likely to have social support (adjOR=0.85).

Conclusions: Psychosocial and geriatric conditions are associated with post-COVID symptom burden. These conditions may identify risk for adverse outcomes and be modified in future interventions.



Post-COVID Symptom Trajectories

B118

Transmission of Multi-Drug Resistant Organisms (MDROs) by VA CLC Residents: A Multisite Prospective Study

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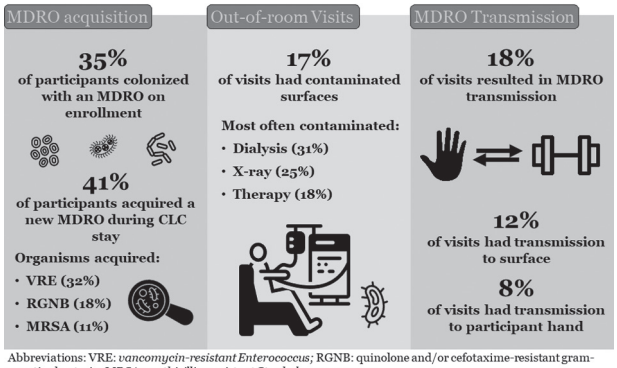
Background. Veterans Administration (VA) Community Living Centers (CLCs) provide short & long-term care. Veterans visit myriad locations outside their rooms (*e.g.*, rehab, dialysis) during which MDRO transmission may occur.

Methods. We cultured a cohort of newly-admitted Veterans at 3 CLCs at nares, groin, hands, and 7 surfaces in their rooms during routine in-room visits (IRVs). We accompanied Veterans to out-of-room visits (ORVs) and cultured patient hand and touched surfaces, defining transmission as (+) following initial (-) culture.

Results. We enrolled 137 Veterans with median follow-up of 29 days, conducting 539 IRVs (mean 3.9/Veteran; 5490 swabs) and 266 ORVs with 97 Veterans (mean 2.7/Veteran; 2360 swabs). Over one-third (47/137) of patients were colonized with an MDRO at enrollment and 58% (74/128) on a follow-up IRV. 55/133 at risk (41%) acquired a new MDRO. Contaminated surfaces were found in 17% of 266 ORVs (Fig). Patient hands were contaminated with an MDRO in 23% of ORVs. MDRO transmission occurred in 18% either to patient hand or surface (Fig). Transmission to a clean surface was preceded by contact with a contaminated hand with the same MDRO 58% of the time.

Conclusion. New MDRO acquisition in CLCs is very high. Transmission during ORVs is frequent. Veterans' hands shed MDROs to previously clean surfaces. Thus far overlooked, we show for the first time that ORVs contribute to MDRO transmission.



Abbreviations: VRE: *vancomycin-resistant Enterococcus;* RGNB: quinolone and/or cefotaxime-resistant gram-negative bacteria; MRSA: *methicillin-resistant Staphylococcus aureus*

B119

Comparative Analysis of Low-Dose Oral Antipsychotics for In-Hospital Adverse Clinical Events in Older Adults After Major Surgery

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Background

Antipsychotics are commonly used to manage postoperative delirium in older patients who are susceptible to the adverse effects of antipsychotics. We compared the risk of in-hospital adverse events associated with oral low-dose antipsychotics in older patients after major surgery.

Methods

This retrospective study used the Premier Healthcare Database that included 20,735 patients ≥65 years without psychiatric disorders who were prescribed an oral antipsychotic drug after major surgery in 2009-2018. We performed propensity score-based overlap weighting to compare 4 antipsychotics exposure groups: haloperidol (≤4mg), olanzapine (≤10mg), quetiapine (≤150mg), and risperidone (≤4mg). The primary outcome was in-hospital death, and secondary outcomes were cardiac arrhythmia, pneumonia, and stroke or transient ischemic attack (TIA). The study followed patients to the earliest occurrence of the outcomes, hospital discharge, or 14 days regardless of the treatment duration. We estimated the risk ratio (RR), risk difference (RD), and 95% confidence interval of the outcomes using log binomial regression and binomial regression after overlap weighting.

Results

The weighted population had a mean age of 79.3-80.3 years and 59.4-62.2% female. Quetiapine was the most prescribed (55.6%). There was no significant difference in the risk of in-hospital death among patients treated with haloperidol (3.0%, reference group), olanzapine (2.5%; RR [95% confidence intervals], 0.81 [0.54-1.23]), quetiapine (2.6%; RR, 0.87 [0.66-1.14]), and risperidone (3.3%; RR, 1.10 [0.78-1.55]). The risk of non-fatal clinical events was low, ranging from 1.9% to 2.4% for cardiac arrhythmias, 4.4% to 4.8% for pneumonia, and 0.8% to 1.2% for stroke or TIA, with no significant differences by the treatment groups.

Conclusion

Among older patients who were prescribed an oral low-dose antipsychotic drug after major surgery, the risks of in-hospital death and other adverse events were similar across haloperidol, olanzapine, quetiapine, and risperidone.

B120

Prevalence and Impact of Sarcopenia, Presarcopenia, and Dynapenia in Healthy Thai Older Adults

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Background: Thailand has been an aging society since 2005 and is expected to become an aged society in 2022. Sarcopenia is an important geriatric syndrome that leads to falls, physical frailty, and mortality. We aimed to study sarcopenia's prevalence and clinical impact in Thai healthy older population.

Methods: This cross-sectional analysis was part of the Healthy Elderly Cohort of The Thai Red Cross Society starting in 2020. Eligible criteria of the cohort were age 60 years and older, independent in basic activities of daily living (ADL), and capable of walking unassisted with or without gait aids. The cohort excluded the subjects with acute illnesses or life-expectancy-limiting conditions. Diagnosis of sarcopenia was based on the Asian Working Group for Sarcopenia (AWGS) 2019 cut-point using handgrip strength, gait speed, and bioelectrical impedance analysis. Presarcopenia was defined as low muscle mass but normal muscle strength and performance. Dynapenia was defined as impaired muscle strength or performance but normal muscle mass.

Results: 6,404 subjects were included in the analysis. Most subjects were female (77.4%), married (56.2%), and well-educated (66.6% obtained university degree). The mean age was 67 ± 5.2 years. Most subjects had BMI within the normal range, and only 5.3% were underweight. Most subjects had 2 or more comorbidities (63.7%), with hypertension and dyslipidemia being the most common comorbidities. The overall prevalence of sarcopenia, presarcopenia, and dynapenia were 12.6%, 29.1%, and 8.3% respectively. Prevalence of sarcopenia and dynapenia increased with age in both genders, while presarcopenia remained relatively constant. Sarcopenia and dynapenia were associated with mild cognitive impairment and diabetes mellitus. Falling was not shown to be increased in subjects with any of the sarcopenia spectrum.

Conclusions: The prevalence of sarcopenia using AWGS 2019 criteria is high even in healthy older populations. However, the clinical significance is uncertain. Cut-points for presarcopenia, dynapenia, and sarcopenia established from long-term clinical outcomes are needed to replace a population normative scale cut-off.

B121

Social Isolation, Cognitive Function, and Falls: Evidence from the Health and Retirement Study

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Background: Many older adults experience falls that lead to adverse health consequences. Little is known about the role of different types of social isolation on cognitive function and falls in older adults. The primary objective is to estimate the associations between different types of social isolation, cognitive function, and falls. The second objective is to identify whether cognitive function is on the pathway of the association between different types of social isolation and falls.

Methods: Longitudinal data analyses from the Health and Retirement Study included community-dwelling participants aged 65+ years (N=8464 in 2006). The outcome was the number of falls reported in 2008, 2010, and 2012. Independent variables reported in 2006, 2008, and 2010 included different types of social isolation (social disconnectedness, perceived social isolation) and total score of cognitive function (range=0-35) measured with the Telephone Interview Cognitive Status (TICS) scale. Generalized Estimating Equations for negative binomial regressions adjusted for repeated measures were performed to investigate the study objectives using SAS 9.4.

Results: The mean social disconnectedness score was 2.7 (ranging: from 0 to 5). About 47% of participants experienced a lack of perceived social support or feeling lonely, and 38% of older adults experienced at least one fall every two years. Regression models indicated that social disconnectedness was associated with a 5% increase in the risk of falls (IRR=1.05, 95%CI=1.01-1.09). With each score of cognition increase, the rate of falls is reduced by 4% (IRR=0.96, 95%CI= 0.96-0.97). Perceived social isolation was associated with a 22% increase in fall risks. When adjusting for cognition function, the association between different types of social isolation and falls was reduced by at least 15%, demonstrating a partial mediating effect of cognitive function on the association between each type of social isolation and falls.

Conclusions: The likelihood of falls was higher in groups with higher social isolation, and this association varied significantly among the different types of social isolation. Social isolation may be a potential area for therapeutic intervention in fall prevention, especially among older adults with cognitive impairment.

B122

The Widowhood Effect in Serious Illness: The Impact of Spousal Death on Mortality in Dementia, Organ Failure, and Cancer

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Background: The "widowhood effect," in which mortality rises in the period following death of a spouse, may be heightened in people with serious illnesses, like dementia, cancer, and chronic organ failure, in which support needs are high and for whom spouses typically provide extensive caregiving support. Yet there are limited data on widowhood and mortality that account for these serious illnesses. The aim of this study is to determine the relative mortality risk of widowhood among those with dementia, cancer, and chronic organ failure.

Methods: Retrospective cohort study among community-dwelling, married/partnered persons, ≥65 years, enrolled in the Health and Retirement Study, a longitudinal nationally representative survey of older adults linked to Medicare claims, from 2000-2018. We used cox proportional hazards model to determine short- and long-term mortality in people with dementia (PWD), heart failure (PWHF), and cancer (PWC).

Results: We identified 2,091 PWD (846 experienced widowhood), 463 PWHF (170 experienced widowhood), and 744 PWC (215 experienced widowhood). Compared to those with serious illness alone, those with serious illness and widowhood had increased 1-year mortality in PWD (7% vs. 5%; RR 1.4) and PWHF (11% vs. 7%; RR1.5) and decreased 1-year mortality in PWC (10% vs. 11%; RR 0.9). These effects were diminished beyond 1 year following the widowhood event (1-year mortality rate 6% for PWD [RR 1.2], 10% for PWHF [RR 1.4], and 8% for PWC [RR 0.73]).

Conclusions: Widowhood increases the risk of dying for those with heart failure and dementia within the first year following the event, suggesting that illnesses characterized by prolonged periods of poor function may experience the most pronounced effects from spousal death. Widowhood may be an important disruptive event that warrants further clinical- or community-based interventions.

B123

Bone Health Management in Elective Orthopedic Surgery

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Background: Evaluation of bone health is important for older adults undergoing orthopedic surgery as osteoporosis (OP) screening and treatment may improve outcomes. Although there are guidelines for OP screening, it is unclear how these are being applied. The objective of this study was to determine the prevalence of adults undergoing orthopedic procedures who are screened for OP.

Methods: This retrospective cohort study used pharmacy and medical claims data from Symphony Health, an ICON plc Company, PatientSource®, containing patient-level data from healthcare claims for >280 million US-based commercial and Medicare Advantage enrollees. We included patients age ≥50 who underwent kyphoplasty/vertebroplasty (KP/VP), total knee arthroplasty (TKA), and total hip arthroplasty (THA). The index date was the first procedural claim between May 1, 2017 to May 30, 2020. Screening rates for OP by bone mineral density (BMD) testing and treatment for OP were calculated for patients pre- and post-procedure, with a subgroup analysis for women age ≥65.

Results: 251,919 patients met the inclusion criteria and 80.3% were female. The mean (SD) age was 68.5 years (7.5) with 12.3% undergoing KP/VP, 59.5% TKA, and 28.2% THA. In the six months before their surgery, 11.8% (n=29,626) had BMD evaluation and/or treatment for OP. More patients that had KP/VP were screened or treated (17.5%) for OP compared with TKA (11.0%) or THA (10.9%). Men had a lower rate of testing and treatment vs. women (4.6% vs. 13.5%). Subgroup analysis of women age ≥65 showed higher rates of screening with BMD outside the six-month window pre-procedure (6 months prior: 7.3%; 12 months prior: 14.2%; 24 months prior: 26.3%) and for treatment post-surgery (6 months after: 9.8%; 12 months after: 12.7%; 24 months after: 16.3%).

Conclusions: Bone health management is suboptimal among older adults undergoing orthopedic procedures and worse among men and those undergoing TKA/THA than KP/VP. Most women age ≥65 lacked evaluation of BMD in the 24 months prior to their procedures and the majority remained untreated for OP in the 24 months after. As the US population ages, the management of bone health must be prioritized, especially among older adults undergoing orthopedic procedures.

B124 Student Presentation

Does Incident Cardiovascular Disease Lead to Greater Odds of Disability? Insights from the Health and Retirement Study (HRS)

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Background: While studies have shown that cardiovascular disease (CVD) is strongly associated with increased cognitive and physical disability risk, there is limited understanding of how the magnitude of risk varies by CVD subtypes or age cohorts.

Methods: We analyzed longitudinal data from 16,679 U.S. HRS participants aged ≥65 at study entry. Primary endpoints were physical disability (ADL impairment) or cognitive disability (Langa-Weir Classification). We compared these endpoints among participants who developed incident CVD vs. those who were CVD free, both in the short (<2 years post-diagnosis) and long term (≥2 years), controlling for sociodemographic and health characteristics. We then analyzed effects by CVD subtype (atrial fibrillation, heart failure, ischemic heart disease, stroke) and age at diagnosis (65-74, 75-84, ≥85 years).

Results: Across the sample, 5% of participants were Hispanic, 14% were Black, 78% were White, and 3% self-reported "other." 8,750 participants (52%) developed incident CVD with significantly higher adjusted odds [aOR] of physical and cognitive disability (Table). The oldest (≥85) age at diagnosis subgroup had highest overall risk, including short-term physical (aOR 3.01, 95%CI 2.40-3.77) and cognitive (aOR 1.96, 95%CI 1.55-2.48) disability. Among CVD subtypes, incident stroke conferred the highest disability risk.

Conclusions: Incident CVD was associated with physical and cognitive disability across age and CVD subtypes. Disability risk was highest among the oldest patients (≥85 years). This subgroup, in particular, should remain a target for CVD prevention efforts.

Table: Estimated short-term, long-term and 5-year adjusted odds ratios for physical and cognitive disability

			Short-term Disability		Long-term Disability		5-year Disability	
		N	Physical (aOR, 95% CI)	Cognitive (aOR, 95% CI)	Physical (aOR, 95% CI)	Cognitive (aOR, 95% CI)	Physical (aOR, 95% CI)	Cognitive (aOR, 95% CI)
Overall		8,750	2.03 (1.84, 2.23)	1.30 (1.18, 1.44)	1.04 (1.02, 1.06)	1.05 (1.03, 1.06)	2.46 (2.21, 2.73)	1.63 (1.47, 1.82)
By age at diagnosis	65-74	4,620	1.76 (1.53, 2.02)	1.35 (1.17, 1.56)	1.03 (1.01, 1.05)	1.01 (0.99, 1.04)	2.06 (1.81, 2.34)	1.45 (1.27, 1.65)
	75-84	3,053	1.97 (1.70, 2.28)	1.04 (0.89, 1.2)	1.09 (1.06, 1.11)	1.13 (1.1, 1.16)	2.97 (2.52, 3.50)	1.88 (1.60, 2.21)
	≥85	1,077	3.01 (2.40, 3.77)	1.96 (1.55, 2.48)	1.15 (1.09, 1.22)	1.12 (1.06, 1.18)	6.16 (4.58, 8.29)	3.40 (2.55, 4.54)
By CVD subtype (first diagnosis)	Atrial fibrillation	753	2.11 (1.53, 2.9)	1.71 (1.25, 2.35)	1.1 (1.05, 1.15)	1.08 (1.02, 1.13)	3.37 (2.52, 4.52)	2.47 (1.86, 3.29)
	Congestive heart failure	1,975	3.49 (2.9, 4.21)	1.75 (1.46, 2.1)	1.03 (1.00, 1.06)	1.05 (1.02, 1.09)	4.05 (3.30, 2.98)	2.28 (1.88, 2.78)
	Ischemic heart disease	4,867	1.75 (1.52, 2.02)	1.14 (1, 1.31)	1.06 (1.04, 1.09)	1.07 (1.05, 1.1)	2.40 (2.03, 2.83)	1.63 (1.40, 1.91)
	Stroke	1,155	5.28 (4.19, 6.65)	2.92 (2.34, 3.66)	1.05 (1.01, 1.09)	1.06 (1.02, 1.1)	6.63 (5.22, 8.43)	3.84 (3.07, 4.81)

aOR=adjusted odds ratio; 95%CI=95% confidence interval

B125

National prevalence and risk factors for loneliness and social isolation among adults with Chronic Obstructive Pulmonary Disease

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Loneliness and social isolation are distinct and modifiable social risk factors gaining increased clinical recognition for their role in health outcomes, quality of life, and healthcare use. However, their prevalence is not well-described in people with COPD, including those with COPD on oxygen which can be stigmatizing and limit mobility. Here we describe the national prevalence of and risk factors for loneliness and social isolation in people with COPD.

We used the nationally representative Health Retirement Study (2016-18) which includes 10,384 adults ≥50 years. COPD and oxygen use were self-reported. We categorized participants into three groups: 1) no COPD; 2) COPD; 3) COPD + oxygen. Loneliness was measured using the 3-item UCLA Loneliness Scale. Social isolation was defined using a 15-item scale measuring household contacts, social network interaction, and community engagement. We used multivariable logistic regression adjusting for clinically significant characteristics to determine the adjusted prevalence of and independent risk factors for loneliness and social isolation.

Participants were 68 (range 50-102) years old, with 54% female, 10% African American, 10% Latinx. Of the 1,092 (11%) who reported COPD, 191 used oxygen. After covariate adjustment, those with COPD compared to those without were significantly more likely to experience loneliness (no COPD: 11%, COPD: 18%, COPD + oxygen: 22%, $p<0.001$), social isolation (no COPD: 11%, COPD: 16%, COPD + oxygen: 20%, $p<0.001$), or both (no COPD: 3%, COPD: 6%, COPD + oxygen: 11%, $p<0.001$). Among those with COPD, characteristics independently associated with loneliness ($p<0.001$) included younger age (50-65 years: 13%, 86-102 years: 9%), being single (single: 16%, married: 8%), depression (depression: 32%, no depression: 8%) and low net worth ($<6000: 14%, $>239,000: 9%). Characteristics independently associated with social isolation ($p<0.001$) included male gender (men: 15%, women: 9%), race/ethnicity (White: 13%, Latinx: 8%, African American: 7%), depression (depression: 20%, no depression: 11%), and low net worth ($<6000: 21%, $>239,000: 8%).

One in five people with COPD experience significant loneliness and social isolation. Key demographic characteristics can identify those at highest risk for both to guide interventions and policy for this vulnerable group.

B126 Student Presentation, Encore Presentation

Long-term cognitive decline after total joint arthroplasty: a population-based approach

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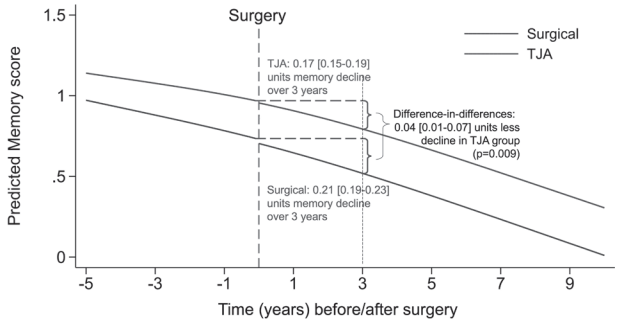
Introduction: 12 months after elective total joint arthroplasty (TJA), up to 20% of older adults meet criteria for postoperative neurocognitive disorder. However, because TJA also results in pain relief and improved mobility and sleep, which may be cognitively beneficial, the average long-term cognitive outcome from TJA is important to measure.

Methods: We linked Health and Retirement Study (HRS) data to Medicare claims to identify adults who underwent elective TJA between 1998 and 2018 at age 65 or older. Surgical controls were adults 65+ who underwent elective surgery not expected to result in functional benefits (e.g., cholecystectomy; hysterectomy). The primary outcome was change in memory z-score, incorporating self and proxy cognition responses from biennial interviews, from the time of surgery to 3 years after surgery in the TJA versus the surgical control group. We used linear mixed effects model adjusted for health and demographic factors flexibly modeled with restricted cubic splines (knots at -4, 0, 8 years; discontinuity at surgery) and including survey weights.

Results: There were 1,947 TJA recipients (average age 74; 63% women, 11% of a race/ethnicity other than white) and 1,631 surgical controls (average age 76, 38% women, 15% nonwhite). TJA recipients' average memory score declined 0.04 [0.01-0.07] units less than surgical controls over the 3 years after surgery. (Figure)

Conclusion: The population-average amount of memory decline in the 3 years after TJA in older adults is smaller than for other surgical procedures.



B127

Exploring Overt Racial and Ethnic Conflict in Resident-to-Resident Aggression in Long-Term Care Facilities

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Background: Resident-to-resident aggression (RRA) in long-term care settings is gaining recognition as a serious problem. Racial/ethnic conflict may be a contributing factor to RRA incidents, but it remains insufficiently studied. Our goal was to examine the previoulsy unexplored resident characteristics, acute precipitants, surrounding circumstances, and consequences of RRA involving racial/ethnic conflicts.

Methods: We used quantitative and qualitative secondary analyses of existing data from a large prospective study of RRA to describe in detail overt racial/ethnic conflicts. The parent study included comprehensive information of 2,011 residents in 10 randomly-selected New York State nursing homes with a wide range of racial/ethnic minority residents (4.2-63.2%). A subset of 407 residents were involved in RRA. We re-examined data from the parent study, which used an innovative approach to identify RRA incidents by reconstructing each incident based on residents' self-reports, staff interviews, field observations, and medical chart review.

Results: A total of 39 residents (9.6% of those involved in RRA incidents) were identified as involved in overt racial/ethnic conflicts. They were more likely to have had less education (p=.02) and lower levels of cognitive impairment (p=.03) than residents involved in RRA but not in overt racial/ethnic conflicts. More than half of the 55 incidents of RRA involving overt racial/ethnic conflict (56.3%) occurred repeatedly. Manifestation of racial/ethnic conflicts included physical violence, discrimination, racial/ethnic slurs, stereotypes, and microaggression. Acute precipitants of these incidents included various communal-living challenges and unmet needs at the facility, relational, and individual levels. Psychological and behavioral consequences were also reported.

Conclusions: This is the first study to systematically examine the types, triggers, circumstances surrounding, and consequences of racial/ethnic conflicts. We found a broad range of manifestations, acute precipitants, circumstances surrounding, and consequences of overt racial/ethnic conflicts in RRA. Additional research is needed to improve understanding of the role of racial/ethnic conflict in this phenomenon and how staff may effectively intervene and prevent it.

B128 Student Presentation

Motivations and Behaviors of Medical Marijuana Use in Older Adults: Preliminary Qualitative Findings

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Background: Marijuana legalization across the U.S. has contributed to its increased use for health-related concerns among older adults. However, few studies have examined experiences surrounding medical marijuana (MMJ) use in this population. We conducted a study to identify the motivations for and behaviors relating to MMJ use among older adults.

Methods: English-speaking older adults (ages 65+) who reported MMJ use in the previous 6 months completed an audio-recorded, semi-structured, qualitative interview. Interviews were transcribed verbatim and coded using NVivo Software and analyzed for emergent themes.

Results: Data from 15 adults (mean age [SD]: 76.5 [7.22] years; 60.0% female, 40.0% male; 86.7% non-Hispanic White, 6.3% White/Asian, 6.3% Hispanic) were analyzed. Participants used MMJ to manage symptoms for the conditions of pain, insomnia, and anxiety. Themes for motivations behind MMJ use included: 1) effectiveness, 2) side effects, and 3) safety. Participants believed that MMJ worked as or better than expected to treat some or all of their symptoms. Additionally, there was a broad perception that MMJ had fewer or minimal side effects compared to medications, including opioids. As a result, participants perceived MMJ to be safer than medications. Themes for behaviors of MMJ use included: 1) patterns of use with other medications and 2) a trial-and-error approach to its consumption. Participants incorporated MMJ into their medication regimen often stating that they had no concerns with using MMJ in addition to medications to treat their symptoms. Participants also referred to experimenting with different MMJ doses and formulations until achieving improvement of their symptoms.

Conclusions: The perception that MMJ was effective and safer than medications was a salient motivator for use among participants. Since older adults may use MMJ with medications, potential interactions and toxicities may be a concern. Future studies are needed to assess the interplay of MMJ in its various doses and formulations with prescription/non-prescription medications among older adults.

B129 Student Presentation

"It shouldn't be like this": Family Caregivers' Navigation of the Insurance Landscape for Family Members with Dementia

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Background: The almost 11.3 million family caregivers of individuals with dementia must navigate the health insurance landscape to meet the complex medical and social care needs of their family members. The goal of this study is to explore how family caregivers make decisions around insurance for their family member with dementia and how these choices affect the care individuals receive.

Methods: Semi-structured interviews were conducted from June-December 2022 with 16 family caregivers of individuals with dementia enrolled in home-based primary care in New York City and dually eligible for Medicaid and Medicare. After obtaining sociodemographic and clinical data, we asked a set of open-ended questions exploring caregivers' perspectives on navigating their family member's insurance plans. Interviews were recorded, transcribed, and analyzed using thematic analysis with both deductive and inductive coding.

Results: Participants described how social workers, lawyers, and health professionals helped with navigating insurance choices, but no centralized system for obtaining insurance information and support existed. Insurance decision-making thus compounded the stress of adjusting to caregiving. Initial choice of insurance coverage was impacted by a variety of factors including family dynamics, existing insurance, and home care and medical supply needs. Once insurance plans were in place, participants described advocating on behalf of their family member within the constraints of their insurance plans rather than considering alternatives due to high perceived burden of changing insurance plans. Caregivers did not see integrated Medicare-Medicaid plans as providing any inherent benefit to navigating insurance.

Conclusions: This study highlights the challenges that family caregivers experience when they navigate insurance choices and the limited support they receive for insurance decision making, especially when they are new to the caregiving role. These challenges may contribute to resistance to changing plans even when gaps in needed coverage exist. Robust professional support for family members both immediately after their loved one's dementia diagnosis and as disease progresses could alleviate burden on caregivers and increase their capacity to make insurance decisions that best support their family members with dementia.

B130

Virtual-based Home Visits and Photos to Explore Medication Practices of Older Adults with Multiple Chronic Conditions

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Background: Many older adults experience multiple chronic conditions (MCC), and those from racial/ethnic minority groups may receive poorer quality of chronic disease care. As part of a broader study on a patient-clinician photo-based communication tool about

factors important to MCC care, we explored the medication practices of older adults with MCC through virtual-based home visits and photos.

Methods: We recruited a convenience sample of patients from 2 primary care clinics that were age 65+, had 2+ chronic conditions based on the Elixhauser Comorbidity Index, and spoke English, Spanish, or Chinese. Due to the pandemic, we recorded semi-structured interviews by video or phone to explore factors in MCC care including medication practices. After the interview, participants used a checklist to take photos related to medication practices and other factors. We used thematic analysis to analyze transcripts and a two-step (foreground/background) method to apply codes to photos.

Results: Of the 15 participants, 53% were male, 60% from racial/ethnic minority groups, and average age was 77 years. 53% had 5+ chronic conditions and 60% took 5+ medications/day. An average of 18 photos were taken, and 80% of participants shared 1+ medication-related photo. Identified themes from interviews included how presence or absence of family caregiving, physical limitations, and/or language barriers can influence MCC medication practices. Photos related to medication use included pill organizers, storage areas, and medicine instruction/reminder notes (Figure 1).

Conclusion: Inclusion of photos in geriatric primary care visits could be a feasible, helpful tool to enhance understanding of medication practices in MCC care.

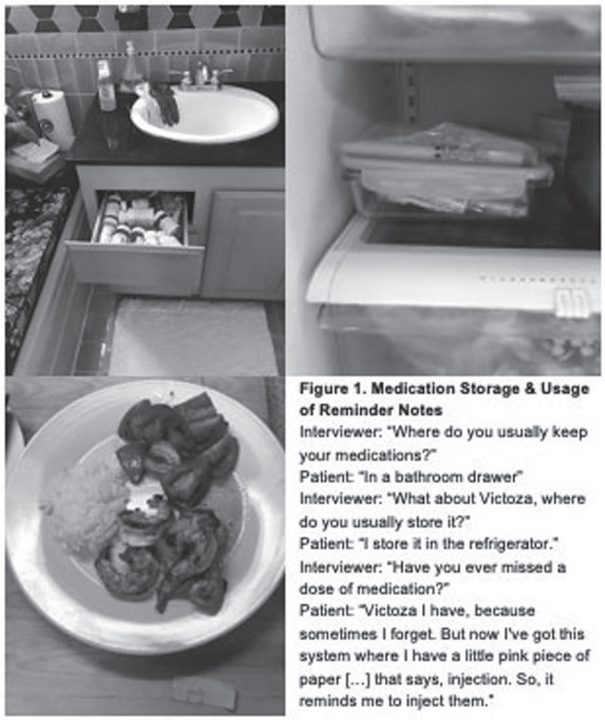

Figure 1. Medication Storage & Usage of Reminder Notes
Interviewer: "Where do you usually keep your medications?"
Patient: "In a bathroom drawer"
Interviewer: "What about Victoza, where do you usually store it?"
Patient: "I store it in the refrigerator."
Interviewer: "Have you ever missed a dose of medication?"
Patient: "Victoza I have, because sometimes I forget. But now I've got this system where I have a little pink piece of paper [...] that says, injection. So, it reminds me to inject them."

B131

Preparing Caregivers for Surrogate Decision-Making: Development and Pilot Testing of the PREPARE For THEIR Care Program

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Background: Surrogate decision-makers (surrogates) have expressed the need for better preparation. This study aimed to develop an online program to prepare surrogates for their role.

Methods: To develop PREPARE for THEIR Care, we leveraged qualitative findings from prior advance care planning studies and conducted 3 focus groups with an advisory board (4 MDs, 1 chaplain, 2 patient advisors) to create Prototype 1, which we reviewed via cognitive interviews with 10 surrogates from the National Patient Advocate Foundation (NPAF). We then created Prototype 2 and led 4 waves of pilot testing and program refinement with 26 surrogates from NPAF and through snowball sampling. We transcribed, coded, and analyzed all qualitative data using thematic analysis and evaluated feasibility (i.e., ease of use, 10-point scale) and satisfaction (i.e., comfort, helpfulness, likelihood to recommend, 5-point scale) using descriptive statistics.

Results: Two themes for a surrogate program were (1) how to help others with medical planning and (2) how to make decisions for others. Qualitative feedback included adding challenging topics (e.g., family conflict) and improving readability and usability (e.g., add "how to" examples). This resulted in an online program with 2 parts and 16 brief video modules with communication modeling by actors. Of the 26 pilot participants, mean age was 52±12.7 years; 27% were men, 4% were non-binary, 27% identified as Asian, 27% Black, 11% Multi-Racial, and 35% White. Caregivers described the program as informative ("*I wish I had this when my dad was sick*"); relevant ("*these resources are a lifesaver no matter what stage of medical planning you are in*"); relatable ("*the messages hit home*"); easy to use ("*I can see my 85 year-old mother use this*"); and celebrated diversity ("*I see people who look like me")*. Ease-of-use was rated 9.6±0.92 on a 10-point scale; and, on 5-point scales, comfort using was rated 4.8±0.51, helpfulness 4.6±0.65, and likelihood to recommend to others 4.7±0.53.

Conclusions: PREPARE For THEIR Care was developed through rigorous cycles of feedback from surrogates and was found to be informative, relevant, relatable, easy-to-use, inclusive, feasible, and resulted in high user satisfaction. Efforts to make this program publicly available are underway to prepare surrogates for decision-making.

B132

***"Hate Has Chipped Away My Sense of Security":* The Impact of Racism on the Health of Asian American and Pacific Islander (AAPI) Older Adults**

L. Li,[2] J. Kang,[2] B. Nguyen,[1] M. Ho,[2] A. Li,[2] J. Shih,[2] A. Kotwal,[2] J. Yeh,[2] L. S. Karliner,[2] R. Jeung,[3] A. K. Smith.[2] *1. UC Davis, Sacramento, CA; 2. UCSF, San Francisco, CA; 3. SFSU, San Francisco, CA.*

Background: Violence and discrimination against AAPI older adults have risen; yet, the impact of hate on the health of AAPI older adults is unknown. This study aimed to (1) examine how AAPI hate impacts the health of AAPI older adults, and (2) understand clinicians' roles in screening for and responding to hate incidents.

Methods: In this mixed-methods study, we surveyed AAPI adults age 50+ from the San Francisco Bay Area (in 7 languages) and interviewed a subset of survey respondents and clinicians (MD, NP, SW). Surveys were analyzed using descriptive statistics. Interview transcripts were translated to English when needed, then double-coded and analyzed using the constant comparative method in Atlas.ti.

Results: Of 144 survey respondents, 65% were age 65+, 68% were women, and 50 were interviewed. Of 18 clinicians interviewed, 61% were women and 89% identified as AAPI. 96% of older AAPI worried about hate incidents; 32% changed their daily activities to stay safe; and 45% were advised to avoid activities perceived as risky, like going to Chinatown. Interviews revealed an impact on multiple domains of older AAPI health: (1) physical health (Older AAPI: "*Whenever I go outside, my blood pressure goes up");* (2) mental and social health (NP: "*There's a ton of depression, anxiety, suicidal ideation, isolation, loneliness. People are self-medicating with alcohol");* (3) Missed in-person clinic visits (MD: "*Older AAPI are not willing to come to clinic because they're too fearful. I need to do a physical exam and now I can't").* While 79% of older AAPI felt comfortable talking with a clinician about hate incidents, 90% did not recall a clinician raising this issue. Most clinicians agreed that "*Do you feel safe outside your home*?" may be a culturally appropriate

screening question. However, some clinicians worried that universal screening for AAPI hate would be ineffective without an actionable plan (MD: "*Why am I screening if I can't fix it?")*. Older AAPI identified a need for advocacy from politicians and community leaders to address racism. Clinicians identified a need for language-concordant mental health providers and care navigators.

Conclusion: AAPI hate is a public health issue that is particularly harmful to AAPI older adults' physical, mental, and social health.

B133

Managing Medications across the Alzheimer's disease spectrum from a Patient-Caregiver Perspective

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Background: Older adults with Alzheimer's disease and related dementias (ADRD) have higher rates of multimorbidity and polypharmacy. Medication adherence is critical to maintain health, but is difficult with complex regimens. Little is known about how older adults with varying levels of cognitive impairment self-manage medications, and how responsibilities transition to caregivers. We examined medication-taking strategies across the ADRD cognitive spectrum.

Methods: We conducted qualitative interviews among patient-caregiver dyads that explored how patients managed multidrug regimens. Patients were eligible if they had 1) MCI, mild or moderate ADRD, 2) ≥3 chronic conditions, 3) ≥5 medicines and 4) a caregiver. 3 coders applied a priori codes to transcripts and reviewed using the framework method.

Results: We interviewed 46 participants (Patients: mean age 77 years, 65% female, 52% white, 30% Black; Caregivers: mean age 65 years, 68% female, 60% spouse, 26% child). Patients had an average of 5 comorbidities and 10 medicines; cognitively, 41% had MCI, 32% mild ADRD and 27% moderate ADRD. Patients with MCI and mild ADRD managed their medications independently using multiple strategies (establishing a daily routine, using pillboxes). While their caregivers were willing to assist, they were not proactively familiarizing themselves with prescribed regimens. When caregivers observed errors, they sought to take a greater role, but patients often rejected assistance and preferred autonomy. Among patients with moderate ADRD, caregivers assumed all medication responsibilities except when living separately. In those scenarios, caregivers set up organizers and made reminder calls, but did not observe medication intake.

Conclusions: In MCI and mild ADRD, patients self-manage their multidrug regimens until an error is observed and transition is mutually agreed upon. With moderate ADRD, caregivers assume the role but many cannot directly monitor intake. This is concerning when patients take medicines multiple times a day and may forget doses. Clinicians should work to simplify regimens, reduce polypharmacy, and initiate conversations with caregivers and patients about medication assistance.

B134 Student Presentation

Characterizing Care Partner Burden Associated with Disease Management in Caring for PLWD and DM

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Background: Care partners (CPs) of persons living with dementia (PLWD) may experience considerable burden due to cumulative physical, emotional, and social impacts of providing care. Co-occurring chronic illnesses such as diabetes mellitus (DM) require daily management and may create additional burden for CPs. We explored whether patients' dementia severity, and CPs' social support, physical and mental health are associated with CPs' treatment burden.

Methods: We conducted a cross-sectional telephone survey of CPs of eligible patients enrolled in a quality improvement study at NYU Langone Health. We measured CPs' treatment burden using the treatment burden questionnaire (range: 0–15). Predictor measures were CPs' assessment of PLWD dementia severity (using a 12-item 6-point Likert scale), CPs' social support (using a 5-item 5-point Likert scale), and self-appraised measures of CPs' physical and mental health (using a multi-item 5-point Likert scale). We performed a quantile regression analysis of predictors of burden, controlling for CPs' age, sex, race/ethnicity, and enrollment time relative to the COVID pandemic. We report adjusted median differences (aMD) and 95% confidence intervals (95% CI).

Results: 311 CPs completed baseline surveys. Most were female (77.5%), had completed some level of college (72.7%), and were recruited before COVID-19 onset (76.8%). Increased dementia severity was associated with a median increase in treatment burden (aMD: 0.05; 95% CI: 0.02, 0.07). Increased CPs' social support was associated with a median decrease in treatment burden (aMD: 0.02; 95% CI: -0.04, -0.01). Increased self-appraised measures of physical health (aMD: -0.08; 95% CI: -0.12, -0.04) and mental health (aMD: -0.06; 95% CI: -0.13, -0.05) were associated with decreased treatment burden.

Conclusion: Greater dementia severity is associated with greater treatment burden for CPs of PLWD and DM. Increased social support and better physical and mental health may lessen the burden experience. These findings support the use of psychosocial interventions and health-promoting activities to address CP treatment burden. Whether reducing treatment regimen complexity for PLWD and DM can further reduce treatment burden is unknown.

B135 Student Presentation

Goal Setting among Older Adults Starting Mobile Health Cardiac Rehabilitation

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BACKGROUND: There is growing recognition that healthcare should align with individuals' health priorities, however these priorities remain undefined, especially among older adults. The RESILIENT trial, which is designed to test the efficacy of mobile health cardiac rehabilitation (mHealth-CR) in an older cohort, also measures participant-defined health outcome goals as a prespecified secondary endpoint. Our current study aimed to characterize the health priorities of older adults with ischemic heart disease (IHD) using goal attainment scaling (GAS)—a technique for measuring individualized goal achievement—in a sample of 100 RESILIENT participants.

METHODS: The ongoing RESILIENT trial randomizes patients age ≥65 years with IHD (defined as hospitalization for acute coronary syndrome and/or coronary revascularization), to receive mHealth-CR or usual care. At baseline, we use GAS to prompt participants to identify a primary goal and create a 5-category goal-attainment scale ranging from -2 (much less than expected) to +2 (much more than expected) to describe what would constitute goal achievement over 3 months. Participants also discuss their action plans and perceived obstacles. For the current study, we randomly selected batches of 20 participants, and used deductive and inductive qualitative approaches to develop a coding scheme for their goals, barriers, and plans until thematic saturation was achieved.

RESULTS: Our sample of 100 older adults set diverse health outcome goals. Most (55.2%) prioritized functional recovery and physical activity, fewer (17.2%) identified symptom management, fewer still (13.8%) listed health metrics, mostly comprised of weight loss goals (10.3%), and by far the fewest (< 3%) related to clinical metrics such as reducing cholesterol or preventing hospital readmission. Participants anticipated extrinsic (e.g. weather, time) and intrinsic (e.g. non-cardiac pain, motivation, health uncertainty) barriers.

Action plans commonly detailed strategies for exercise, motivation, accountability, and overcoming time constraints.

CONCLUSIONS: Using GAS, we elicited specific and measurable recovery goals among older adults with IHD. Priorities were predominantly functional which is discrepant with the types of clinical metrics likely to be emphasized by clinicians and health care systems.

B136 Student Presentation
The Aggravating Effect of Frailty on Heart Rate Dynamics during Physical Activity in Patients with Heart Disease
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Background: Aortic stenosis (AS) is the most common acquired valvar disease and is associated with increased risk for frailty. Frailty is a geriatric syndrome associated with low physiological reserves and higher vulnerability to adverse events. Muscle weakness is the main symptoms of frailty, which can be further exacerbated by a compromised autonomic nervous system (ANS) performance in older adults with heart disease. The purpose of the current work was to assess differences in both motor and ANS performance as symptoms of frailty between community dwelling older adults with and without AS.

Methods: Older adults (≥65 years) with and without AS were recruited. Frailty was assessed using the Fried phenotype. Participants performed an upper-extremity function (UEF: 20 seconds of rapid elbow flexion) as the physical task with the right arm. Arm motion was measured using gyroscopes and heart rate (HR) was measured using ECG sensor attached on left side of the chest. Outcomes included UEF motor score (a validated score from 0-not frail to 1-extremely frail based on slowness, weakness, exhaustion, and flexibility) and ANS performance (measured using convergent cross mapping (CCM) between HR and motor data, scored from 0-poor to 1-excellent ANS function). ANOVA models were used with Fried frailty, AS condition, age, BMI, sex as independent and UEF outcomes as dependent variables.

Results: Eighty-six participants were recruited, including 30 with (age=72±11, 10 non-frail and 20 pre-frail/frail) and 56 without AS (age=80±8, 12 non-frail and 44 pre-frail/frail). There was a significant difference in UEF motor score between older adults with and without AS ($p<0.01$, mean values of 0.57±0.25 and 0.48±0.23). Differences in UEF motor score was also observed between the frailty groups ($p=0.02$, mean values of 0.55±0.24 and 0.40±0.20 for pre-frail/frail and non-frail). CCM parameters showed significant differences only between the frailty groups and not between the AS groups ($p=0.02$, mean CCM of 0.69±0.05 for non-frail and 0.54±0.03 for pre-frail/frail). No significant interaction was observed between frailty and AS condition ($p>0.08$).

Conclusion: Current findings suggest that ANS measures may be highly associated with frailty regardless of heart disease condition. Combining motor and HR dynamics parameters in a multimodal model may provide a promising tool for frailty assessment.

B137 Student Presentation
Sleep Maintains Immune Homeostasis Limiting Murine Tauopathy
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Sleep declines in both quality and quantity with age, and inadequate sleep is associated with both cardiovascular and neurodegenerative diseases, such as atherosclerosis and Alzheimer's disease (AD). Poor and inadequate sleep drives many disease sequalae including immune dysfunction and systemic inflammation; however, little is known about the molecular and cellular mechanisms that link sleep, the immune system, and disease. Systemic inflammation drives many disease processes, including cardiovascular disease, and may be involved in the development of AD. The contribution of circulating immune cells and their secreted factors to AD pathology remains unclear.

Using spectral flow cytometry to analyze the cellular composition of tissues from mice harboring mutations causative in AD, we show that 5xFAD (mutant human APP) mice demonstrate increased levels of bone marrow hematopoiesis and increased numbers of circulating immune cells. Additionally, we show that young PS19 (mutant human tau) mice exhibit increased leukocyte populations in the spleen compared to wild type mice well before clinical signs of AD are evident. This increase in splenic leukocytes is likely mediated by extramedullary hematopoiesis in the spleen, as we observe significant rises in myeloid and lymphoid progenitor cells in splenic tissue. Further, aged PS19 mice exhibit significantly impaired sleep on implanted EEG telemetry readings compared to wild type mice, and 8 weeks of sleep fragmentation greatly exacerbates tau phosphorylation in these mice, a marker of aggregate stability and burden of disease.

Our findings suggest there is early activation of the innate immune system in AD, which is known to elicit widespread inflammation and can disrupt resident immune cell functionality in the brain. We are still exploring whether systemic inflammation due to increased immune cell activation is causative in AD. We also suggest a bi-directional relationship between tau burden and sleep fragmentation that may be mediated by the immune system. Ongoing experiments using orexin receptor antagonists, which promote sleep, are examining whether rescue of sleep impairment and the associated return to immune homeostasis can ameliorate tau burden. While orexin receptor antagonists have already been identified as treatments for insomnia, we hope to decipher possible neuroprotective roles of these compounds in mitigating tau hyperphosphorylation and disruption of microglial architecture.

B138 Student Presentation
Targeting metabolic genes with RNAi and drugs to delay Alzheimer's pathology using the model organism Caenorhabditis elegans
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Introduction: Alzheimer's disease (AD) is a devastating neurodegenerative disease with no cure as of today. The importance of recently described pathophysiological mechanisms of AD has become increasingly clear, among which, possible therapeutic targets such as mitochondrial dysfunction and metabolic dysregulations. We hypothesize that modulation of metabolic gene expression could delay Alzheimer's pathology. To approach this, we are using a *Caenorhabditis elegans* muscle model of AD with amyloid-beta-induced-paralysis.

Methods: First, we conducted an RNAi screen of 32 metabolic genes reported to extend lifespan in *C.elegans* and assessed their ability to delay paralysis in an AD model of *C. elegans*. As genetic manipulation is not a feasible option in humans, we searched for drugs that could modulate the expression of these protective metabolic genes. Using bioinformatic analysis of the scREAD and CMap databases, we selected drugs that inhibit metabolic genes found to be protective in vivo. Finally, we tested the selected drugs in our model of AD for their ability to delay paralysis in a liquid medium. Worms were filmed every 2-3 days and videos were analyzed to score worms as alive, paralyzed, or dead. Statistical analysis was conducted using a Kaplan-Meier survival curve.

Results: Interestingly, down regulation of 4 of the 32 metabolic genes (atp-1, tkt-1, mrps-30, and daf-2) significantly delayed worm paralysis in our model of AD($p<0.001$). The bioinformatic analysis identified 10 drugs that inhibit all 4 metabolic genes. Three of the drugs tested: diminazene aceturate, epirubucin, and amsacrine showed a significant delay in paralysis compared to the control ($p<0.05$).

Discussion: Three drugs were identified as a potential therapeutic option to treat AD in humans. By conducting research exploring possible mechanisms of AD and finding commonalities, the pertinent information

can be used to develop novel therapies for AD. Further research remains necessary to understand how inhibiting genes in specific metabolic processes delay AD and to expand these results to humans.

B139 Student Presentation
Phenothiazines increase lifespan and are protective in 2 *C. elegans* models of aging related diseases
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Introduction:

Until now, most drugs developed for a given age-related disease (such as Alzheimer's Disease (AD), ALS, diabetes, etc.) are based on specific targets and are at best symptomatic treatments. The Geroscience hypothesis states that age is a major risk factor for age related diseases and neurodegenerative diseases in particular. We hypothesized that generally protective drugs against aging could plausibly protect against aging related diseases. Using phenotypic screens, we identified phenothiazines as a class of drugs protective of aging and proteotoxicity in a *C. elegans* muscle model of AD. In the present studies we assessed the effect of exposure to phenothiazines on HD PolyQ repeats induced paralysis in a *C. elegans* muscle model of Huntington's disease (HD), AM140 strain.

Methods: Adult AM140 strain of *C. elegans* were exposed to our 3 most protective phenothiazine compounds (triflupromazine, trifluoperazine and chlorpromazine) in liquid medium at a concentration of 8uM. Worms were filmed every 2-3 days until all worms were immobile. Videos of worms were scored for HD PolyQ repeats induced paralysis. A Kaplan-Meier survival analysis was conducted using Prism software.

Results: All 3 phenothiazines tested significantly ($p<0.005$) delayed HD PolyQ repeats induced paralysis in our *C. elegans* model of HD.

Discussion: Phenothiazine compounds reported to increase lifespan and delay Abeta induced paralysis in *C. elegans* also delay HD PolyQ repeats paralysis in *C. elegans*. These results support the hypothesis that manipulations increasing lifespan and targeting hallmarks of aging can delay aging related diseases.

B140 Encore Presentation
Ketone bodies selectively insolubilize misfolded proteins into inert aggregates in aging and Alzheimer disease models
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Background: The loss of proteostasis, a hallmark of aging, results in misfolded protein accumulation and the formation of soluble, toxic oligomers associated with cognitive decline and Alzheimer's disease (AD). Ketone bodies are small metabolic molecules integral in supplying energy to the body as an alternate fuel source in states of prolonged hypoglycemia, and also show promise in mouse AD models by supporting neuronal energy metabolism. It is unknown whether ketone bodies directly affect misfolded protein toxicity in AD or aging.

Methods: We tested the effect of physiologically relevant concentrations (0-10mM) of BHB and related metabolites on protein insolubility *in vitro, ex vivo, and in vitro*. *In vitro* experiments used heat-misfolded albumin or pathogenic Amyloid β (Aβ). *Ex vivo*, we treated brain homogenates from aged wild-type C57BL/6 mice and an AD model (hAPPJ20) with BHB to test induced insolubility and to monitor β-sheet content via Thioflavin T (ThT) assays. To test the effects of BHB *in vivo* we administered an oral ketone ester twice daily for up to one week to aged C57BL/6 mice followed by collection of whole brain homogenates. In all studies, insolubility fractions were defined by serial centrifugation and resolubilization in detergents of increasing stringency.

Results: We observed dose-dependent induced insolubilization of heat-misfolded albumin and pathologically misfolded Aβ when treated with BHB. ThT fluorescence diminished with BHB, indicating a decreased abundance of β-sheet structure typical of prion-like proteins. We obseved the same induced insolubility with *ex vivo* treatment of brain homogenates, which was replicated by several structurally related compounds. Treatment with BHB reduces the *in vitro* toxicity of Aβ oligomers in a cell assay. *In vivo*, short-term gavage of ketone ester induced a proteomic shift from less insoluble to more insoluble fractions, while long-term administration resulted in clearance of insoluble aggregates.

Conclusion: We show a reproducible biochemical mechanism by which ketone bodies selectively deposit aberrant, misfolded proteins into restructured insoluble aggregates, thereby reducing cytotoxicity from clinically relevant, AD-associated Aβ.

B141 Student Presentation
Investigating the Role of Neuronal Pentraxin-2 in Alzheimer's Disease Pathogenesis
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Background

Alzheimer's disease (AD) continues to be a leading cause of dementia and death in older populations. Although the accumulation of amyloid β and neurofibrillary tangles are hallmarks of AD, some individuals experience no cognitive dysfunction despite significant pathological changes, which is described in neuropathological studies as "asymptomatic AD" or "high pathology controls". Neuronal pentraxin 2 (NPTX2) is implicated to regulate excitatory synapses on parvalbumin-positive interneurons. Previous work reported that NPTX2 is reduced in AD brain but not in asymptomatic AD. Here, we examine this association in a different cohort and include new assays of NPTX2 with co-functional proteins including the AMPA receptor subunit GluA4, neuronal pentraxin receptor (NPR), and complement factor C1q.

Methods

Sixty postmortem human brain samples, defined as low pathology control (Ctrl_LP), high pathology control (Ctrl_HP), or AD, were analyzed. We performed Western blots (WB) to assess levels of NPTX2, GluA4, and NPR in addition to proximity ligation assays (PLA) to investigate the interaction between NPTX2 and GluA4, NPR, and C1q.

Results

WB revealed that NPTX2 was preserved in Ctrl_HP (also called asymptomatic AD) compared to Ctrl_LP but diminished in AD patients. Similar results were obtained regardless of using Actin or PSD95 as internal reference. GluA4 was decreased in AD. NPTX1 and NPR, the other two members in pentraxin family, did not show any decline in AD relative to control. Findings are consistent with our prior studies comparing AD and "asymptomatic AD" samples. Additionally, PLA demonstrated that interactions between NPTX2 and GluA4, NPR, as well as C1q, are reduced in AD, but not in Ctrl_HP samples.

Conclusions

These findings confirm the reduction of NPTX2 in AD and provide evidence for reduced synaptic function. Reduction of NPTX2 expression and function do not occur in individuals with historically preserved cognition despite neuropathological indicators of AD. Reductions in NPTX2 and its function complexes may be a specific mechanism underlying cognitive failure in AD.

B142

Association between senescence, delirium, and functional outcomes in older adults following hip fracture

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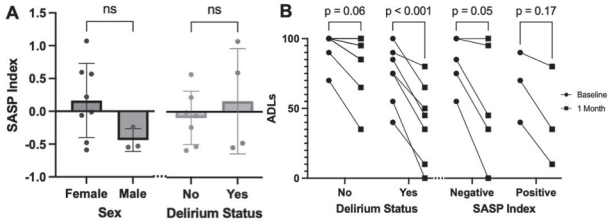
Background: Biological age may be distinct from chronological age. Delirium is more common in older adults but its association with biological aging mechanisms is unknown. We investigated whether proinflammatory factors secreted by senescent cells (SASP) are elevated in older adults with vs without pre-operative delirium, and assessed their 1-month functional outcomes.

Methods: Adults age 65+ hospitalized for acute hip fracture surgery underwent daily delirium screening (Confusion Assessment Method), blood collection and 1-month functional measures (Barthel ADLs). Cytokines were quantified in pre-op plasma by multiplex immunoassays (Eve Technologies). SASP Index was calculated via equal-weighted Z-score of a set of 34 cytokines derived from the Facility of Geroscience Analysis SASP panel. Differences in performance over time were calculated using repeated measures ANOVA.

Results: Of 20 subjects (enrollment ongoing): mean age was 77±10, 70% were women, 40% had dementia, and 40% had delirium. In a subset of 11 subjects with pre-op blood (73% women; 36% delirious), women (vs men) and those with delirium (vs without) trended toward more advanced biological age indicated by higher average SASP Index (Fig 1A; p=0.11 and p=0.50 respectively). Paired functional measures worsened on average from baseline to 1-month for delirious subjects (p<0.001) (Fig 1B). We found unexpected borderline worsening in 1-month function for subjects with negative (vs positive) SASP (p=0.05) (Fig 1B).

Conclusions: Suggested trends in SASP Index by sex and delirium status in this pilot warrant further investigation in a larger cohort. Adults with delirium experience worse post-op functional decline.



B143

***Adapting to Health Change:* An Aging Sensitivity Training for Health Professions Students**

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Background: Although nearly all health professionals will care for older adults, education in geriatrics is often limited in health professions training programs. In studies, point-of-view simulation increased confidence in clinical skills, appreciation of patient challenges, and decreased stigma. *Adapting to Health Change (AHC)* is an aging sensitivity, small-group simulation training with the learning objective to improve student empathy and understanding of common age- and chronic illness-related functional changes that may impact performance of ADLs, health tasks, and independence.

Methods: AHC was delivered annually to social work (N=49) and preclinical medical (N=542) students from 2016-2022. Students completed 4 simulations (hearing loss+telephone call, neuropathy+dressing/oral care, vision loss+medication management, mobility impairment+ ambulation/transfers) with props (vision-impairing glasses, ear plugs, finger splints, gloves, leg braces/weights) to experience health changes common among older adults. Stations were facilitated by older adult volunteers and interprofessional faculty. Post-survey items were summarized and open-ended questions about training strengths and weaknesses were coded and grouped into themes.

Results: 97% of students reported simulations helped them better understand the experience of aging with health changes, 96% felt training helped them understand unintended aging biases/stereotypes, and 97% felt it would help them be better providers for older adults. No differences were seen between medical and social work students. Suggestions for improvement focused on malfunctioning equipment and making simulations more realistic.

"It will really help me empathize with patients with disabilities a lot more."

"Tasks requiring manual dexterity were much more difficult [with simulated neuropathy] than I initially anticipated."

"The wheelchair [activity] showed how important accessibility truly is."

"I [found] myself frustrated when having to talk louder [with simulated hearing loss], but that was humbling to understand."

"The medication activity was useful in understanding how easy it is to mix up medication."

Conclusions: AHC was well received and improved perceptions of aging. Simulation training using role play, inexpensive items, and a small-group format could be easily replicated and expanded to other trainee audiences.

B144

Nursing Workforce Diversity – Eldercare Enhancement Program

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In September 2020, the Health Resources and Services Administration awarded two 2-year grants to pilot the Nursing Workforce Diversity – Eldercare Enhancement (NWD-E2) Program. The aim was to build a more diverse eldercare workforce by providing enhanced education and training opportunities to pre-licensure nursing students from disadvantaged backgrounds, including racial and ethnic minorities underrepresented among registered nurses. Methods used and outcomes achieved at Marquette University's College of Nursing are reported herein.

Methods: Ten (10) BSN nursing students were recruited from an existing nursing workforce diversity initiative. The 2-year NWD-E2 program began at the onset of their second year. Content was designed to supplement the BSN curriculum. Participants received wrap-around services including financial aid (i.e., scholarships, stipends, travel award), geriatric education (i.e., webinars, workshops), special programming (i.e., book club, social events), advising and mentoring. Students also participated in a new 16-week clinical rotation, providing home care to community-dwelling elderly veterans living in rural and underserved communities. Data was collected throughout the two years via participant forms, mentor/advisor meetings, and Qualtrics surveys.

Results: Measured along 5-point Likert scales, 1(low) – 5(high), learner satisfaction was very high (N=9, M=4.8), with the program "far exceeding/exceeding" expectations (M=4.6). Students reported "the program positively affected their attitudes toward older people" (M=4.8) and that they "felt better prepared to work with older people" (M=4.7). They reported "the program enhanced their eldercare expertise beyond what the traditional BSN program provides" (M=4.9). Their "interest in the older adult population grew because of what they learned in the program" (M=4.4) and most reported "an increased likelihood of searching for jobs working with older adults after graduation" (M=4.1). Eight (8) nursing students fulfilled all requirements and completed the 2-year program.

Conclusions: The NWD-E2 was successful at Marquette University. Wrap-around educational services are necessary to attract

and retain a diverse group of nursing students from disadvantaged and underrepresented backgrounds. Curricular enhancements to traditional BSN programs may also be necessary to adequately prepare nurses for eldercare job opportunities.

B145

LGBTQ+ Older Adults: In *Their* Shoes

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Background:

LGBTQ+ older adults experience health disparities disproportionately and may face dual discrimination due to their age and sexual orientation/ gender identity. Our objective was to improve knowledge and confidence around working with LGBTQ+ older adults at the VA Palo Alto Health Care System

Method:

A 2-hour training session was held on two occasions for interprofessional trainees and clinical staff. This session included an introduction to LGBTQ+ terminology and case-based learning through a virtual reality training platform (Embodied Labs). In addition, a Q&A session was led by the VA Palo Alto Health Care System LGBTQ+ committee members, which included sharing available ally and patient resources. A subset of learners also completed one case-based learning scenario asynchronously via teaching platform (Aquifer Geriatrics). Post intervention surveys ascertained change in knowledge and understanding using a post-retrospective pre survey design. This survey was administered after the training session with before and after questions seeking responses on a scale of 1-10 indicating comfort level. Improvement was measured by comparing the increase of these scores across each question

Results:

We collected 17 responses from 20 total participants, or a response rate of 85%. Knowledge in LGBTQ+ terminology increased from an average score of 6.5 to 7.8, which interestingly was the lowest percentage increase of our measured dimensions. Knowledge in working with LGBTQ+ patient population increased from 4.8 to 6.8, or a 43% increase. Similarly, knowledge of the interpersonal issues increased by 46% on average from a score of 5.2 to 7.6. The most substantial improvement was exhibited in awareness of resources, with a 100% increase from an average score of 3.4 to 6.7. Finally, there was a 30% increase in confidence in working with LGBTQ+ patients from an average score of 5.5 to 7.2. Separately, we evaluated the perceived effectiveness of virtual reality in clinical education, which yielded a 40% increase in average score

Conclusion:

Our findings suggest that a blended training using multiple modalities was well-received by learners and yielded improvements in knowledge and confidence in working with LGBTQ+ older adults. To ensure accessible and quality care for LGBTQ+ older adult patients, it is imperative that medical professionals receive training to provide inclusive care

B146

Collaborating to Care for Older Adults: A Longitudinal Interprofessional Virtual Learning Experience for Healthcare Students

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Background: Interprofessional education (IPE) prepares future health professionals to meet the complex needs of older adults. Our university requires students in medicine (MD), nursing (BSN), and pharmacy (PharmD) to complete longitudinal IPE curricula that includes a semester-long, virtual course in their final year. Learners collaborate in small interprofessional teams to care for a simulated geriatric patient across multiple settings and health episodes. 470 learners (108 teams) completed the course in 2021-22. This study assessed collaborative competencies for each team during a video-recorded meeting to prepare for a goals of care meeting with the patient's family.

Methods: In an iterative process that began with independent coding of four sample videos, 12 researchers modified the Creighton Interprofessional Collaboration Evaluation (C-ICE) [2], eliminating 9 items not applicable to the assignment's context. Five dyads were randomly assigned different videos, independently rating each remaining item as a 0 (does not demonstrate competency) or 1 (demonstrates competency), and resolving discrepancies through consensus. Items were summed for a total possible score of 0-17.

Results: Interrater agreement for each dyad ranged from 73%-87%. After resolving discrepancies, total C-ICE scores ranged from 6-16, with a mean of 11. There was a moderate correlation between length of team meeting and C-ICE score ($r=0.65$, $p=0.005$). The majority of teams demonstrated the ability to integrate patient-specific circumstances into care planning (100%) and were able to identify both the patient's and the team's goals for the patient (88%). Teams generally did not identify and discuss disagreement (6%), and most did not explain discipline-specific terminology when necessary (18%).

Conclusions: Some collaborative competencies were more apparent in student IPE teams than others. Educators must make collaborative competencies explicit, so that teams learn how to interact effectively and can demonstrate those skills in the context of care.

References: Iverson L, Todd M, Ryan Haddad A, Packard K, Begley K, Doll J, Hawkins K, Laughlin A, Manz J, Wichman C. The development of an instrument to evaluate interprofessional student team competency. Journal of Interprofessional Care. 2018 Sep 3;32(5):531-8.

B147 Student Presentation

Put Students at the Helm! A New Leadership Model in a Geriatric Scholarly Concentration Program

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Background: Geriatric Scholarly Concentration Programs (GCSPs) engage medical students in geriatric medicine early in their careers. They often rely on donated time from geriatric-trained faculty, who balance these duties with clinical, educational, and institutional obligations. Previously, GSCP faculty unilaterally developed and refined programming based on student feedback and other institutional factors. This year, GSCP faculty appointed student leaders to help design and implement programming for medical education in geriatrics.

Methods: In May 2022, GSCP students applied to become the first Geriatric Medical Student Chiefs (GMSCs.) Four students in classes MS2-MS4 were selected. GMSCs met with faculty leadership in June 2022, before recruitment of new MS1s, to build expanded programming around: 1. clinical exposure, 2. service, 3. research, 4. curriculum, 5. School of Medicine community and 6. recruitment. The GMSCs led these new initiatives, with faculty providing support and guidance as needed.

Results: Between June and September 2022, GMSCs developed: 1. a buddy program partnering students with older adults in the community, 2. an early clinical exposure program to introduce preclinical students to a geriatric inpatient service, specialty clinic, and continuing care retirement community, and 3. a welcome dinner to connect GSCP students and faculty and encourage community around the care of older patients. Future project plans include a student-run mobile geriatric clinic or telehealth service and case-based curriculum

written by students rotating on geriatric services. Since the establishment of this new program, applications to the GSCP have increased by 50% (n=15.)

Conclusions: This poster recommends a student leadership model to enhance engagement and improve educational coverage in GSCPs. Students are well-positioned to understand their educational needs, identify curricular gaps, and organize to address them. The creation of student leadership positions maximizes the benefits of faculty's donated time and offers students valuable, mentored experiences in medical education, service, and advocacy. Furthermore, student investment in helping to run their GSCP program produces a greater sense of community and excitement around geriatric medicine, ultimately driving higher recruitment.

B148

'Geriatricizing' primary care: Changes in knowledge, confidence, and attitudes of primary care providers trained through an innovative 4-week geriatric curriculum model

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Background: Most primary care providers (PCPs) receive little training in geriatrics, yet they care for most older adults. A large integrated health care system composed of 47 primary care clinics sponsored the development of an innovative 4-week geriatric mini-fellowship (GMF) curriculum for a select group of employed PCPs to complete over one year. The curriculum, structured around the 4Ms of an Age-Friendly Health System (Medication, Mobility, Mentation, What Matters), was designed around adult learning principles that include didactic instruction, case-based learning, interdisciplinary team-based change management, simulated role playing and patient actors, and patient/family/participant reflections.

Methods: Begun in 2018 and enrolling 6-7 PCPs each year, the GMF program has trained 26 PCPs in principles and best practices promoting 4M geriatric care. Knowledge, confidence, and attitudes were evaluated for each GMF week, as well as at the beginning and end of the entire GMF using a pre-post design. Data was analyzed within cohorts and across cohorts. Qualitative data reflecting attitude changes and program feedback was collected at the end of each week and completion of the GMF.

Results: Data on 26 GMF graduates (35% non-white; 77% female) demonstrated significant increases in knowledge (12% for Introduction to Aging/Medication; 13% for Mobility; 18% for Mentation; and 18% for What Matters) for each week across all 4 cohorts. Confidence levels increased each week and increased 34% by the end of the entire program. Attitude changes were reflected in quotes such as: "The fellowship exceeded my expectation in terms of ... helping me feel qualified to take really great care [of older adults]" and "So amazing how this fellowship changed me as a person, which I was not expecting."

Conclusions: An innovative 4-week curriculum designed for practicing PCPs successfully increased knowledge, skill development and confidence in geriatric care. PCP attitudes towards older adults and their competence in caring for them also improved, underscoring the need to develop Age-Friendly educational programs that capitalize on adult learning techniques beyond didactic instruction.

B149

Increasing Institutional Quality Improvement Capacity: Training Faculty & Fellows to Lead QI initiatives

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Background: Programs with limited faculty QI expertise struggle to meet ACGME mandate that learners participate in interprofessional quality improvement (QI)/patient safety (PS) initiatives. Our fellows participate in a 9-month project-based QI curriculum coached by volunteer faculty. Survey of faculty coaches revealed 43% never completed a formal QI curriculum, only 43% felt 'very comfortable' being a QI mentor, and 86% would welcome QI faculty development (FD). Feedback from 1st year fellows requested stronger faculty-facilitation. Our project aims to improve QI capacity by training faculty & fellows as QI coaches.

Methods: All QI coaches participated in a web-based FD curriculum to learn QI principles, and the Train-the-Trainer Model on teaching & facilitating QI team projects for faculty-fellow "co-learning" QI curriculum. A mid-year "check-in" with faculty explored team project challenges.

Faculty and fellows completed a prospective pre-post survey with demographics; 5-item questionnaire on comfort with QI concepts on a Likert Scale (5= Very Comfortable, 1= Very Uncomfortable); 3 cases from the Quality Improvement Knowledge Application Tool (QIKAT); and an open-ended course evaluation.

Results: 52 coaches (39 faculty + 13 2nd year fellows) mentored 62 1st year fellows on 20 QI initiatives from 2019-2022. 60% were 1st time coaches (18 faculty + 13 fellows). 50% (19) of faculty coaches completed fellowship <5 years ago while 39.4% (15) completed fellowship > 10 years ago. 28% (11) of faculty coaches had no prior QI training.

100% (31) of 1st year QI coaches completed both pre- and post-surveys. Post curriculum, 1st year coaches demonstrated improved comfort in utilizing the 5 key QI concept/tools ($p<0.01$), improved QI knowledge (PRE 23.6; POST 24.6 $p<0.03$); and improved comfort coaching a QI team (PRE 3.2; POST 3.7, Paired t test $p=0.09$).

1st year fellows (54) mentored by these QI coaches demonstrated improved comfort with utilizing all 5 QI concept/tools ($p<0.0004$) and improved QI knowledge (QIKAT PRE 19.7, POST 22.7; Paired t-test $p<0.003$).

Conclusions: Use of asynchronous web-based training with the Train-the-Trainer Model to coach faculty and 2nd year fellows on how to lead QI initiatives is an effective method to increase institutional QI capacity and meet ACGME QI mandates.

B150 Student Presentation

Educational Videos To Inform Older Adults About Medication Safety

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BACKGROUND: Little is known about how educational videos on medication safety shown to patients will resonate with the target audience. An animated video was developed to inform older adults about medication safety. This study examined feedback on and lessons learned from the video, through a qualitative analysis of open-ended survey questions.

METHODS: The study used a serial cross-sectional survey following an educational 4-minute animated video advising patients how to advocate when prescribed new medication. The intervention was carried out at 2 primary care sites targeting older adults. Participants were provided a link by mail or email to the video and completed consent and a baseline questionnaire that captured demographics and open-ended feedback on the video. Participants were sent a follow-up survey ~2 months later. Study team members analyzed responses to the baseline survey prompt, "Describe how the video could be improved", and responses to the follow-up survey question, "What do you think was the most important message of the video?". Three authors independently coded responses, identified themes, and conferred to reach a consensus.

RESULTS: 406 of 3,275 subjects (12.4%) completed the survey. 96% were Caucasian. 58% were female. 144 offered critiques

for the video. The main themes were: providing information about specific potentially harmful medications, improving the technical content delivery of the video (volume, length, etc.), and changing aspects of the video seen as condescending. 242 follow-up surveys were completed, of which 204 participants identified the most important message of the video. Themes included: personal knowledge and responsibility about medication safety, discussing medication with providers, and the effects of medication on older adults.

CONCLUSIONS: Participants appear to have absorbed important lessons from the videos and also offered important feedback on video content and presentation. These findings will inform future development and use of video-based interventions for older adults related to medication safety.

B151 Student Presentation

Simulated patient encounters mirror physician, observer, and actual patient perception of performance

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Background: Geriatric medicine requires advanced communication techniques, and research has demonstrated that simulated patient encounters can improve clinician performance in these areas. It is unknown how actual and simulated geriatric patients, faculty observers, and fellows themselves rate clinical performance. We aimed to determine the correlation between actual and simulated patient satisfaction, faculty evaluation, and fellow self-evaluation of performance during simulated encounters.

Methods: Geriatric medicine fellows (N=11) completed three sessions of simulated patient encounters. For each, fellow performance was assessed using the American Board of Internal Medicine (ABIM) patient satisfaction survey. Fellows and faculty observers evaluated performance using the Arizona Clinic Interview Rating Scale (ACIRS). Fellow performance was also assessed using the ABIM tool by actual patients. ABIM and ACIRS scores were individually averaged, and paired t-tests run comparing nine and fourteen metrics, respectively.

Results: For simulated encounters, patients rated fellows as performing the best (mean 4.56/5, SD 0.32), followed by faculty observers (mean 4.41/5, SD 0.30), followed by fellows (mean 4.20/5, SD 0.41). There was no statistically significant change in fellow performance over time ($p = 0.220$). Notably, fellows rated themselves as establishing significantly less rapport with simulated patients than observed by faculty ($p < 0.05$). Actual patients (mean 4.8/5, SD 0.17) scored fellows higher than simulated patients (mean 4.7/5, SD 0.39), but this was not statistically significant regardless of visit timing ($p = 0.624$).

Conclusions: Similar scores were given by actual patients and simulated patients on geriatric fellow clinical performance. Additionally, faculty evaluations and self-evaluations of simulated clinical encounters were similar; these hold for point estimates at individual timepoints and evolution of these parameters over time. These findings demonstrate the value of simulated encounters in geriatric medicine training.

B152

Improving geriatric LGBT+ care in graduate medical education: a curricular evaluation

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Background

LGBT+ older adults face numerous barriers accessing safe, equitable healthcare.[1] Providers caring for these diverse populations would benefit from training on issues related to the care of LGBT+ older adults, but this is not often part of graduate or continuing medical education. This study, which represents a development based upon a previously presented needs assessment, is an evaluation of a novel curriculum for Family Medicine, Geriatrics, and Palliative Care providers.

Methods

Anonymous surveys were administered to Family Medicine, Geriatrics, and Palliative Care physicians at an urban academic institution before and after their participation in a one-hour department-wide Grand Rounds session and after two hours of resident/fellow didactics on the care of LGBT+ older adults. Six true/false questions assessed knowledge of LGBT+ older adult care: gender-affirming care, HIV, screenings, and end-of-life issues. Seven Likert questions (not at all confident – very confident) measured comfort with specific aspects of care.

Results

31 respondents completed the Grand Rounds knowledge assessment and 28 completed the confidence assessment. Average knowledge scores improved from 68% pre-session to 86% post-session. Confidence scores on transgender advance care planning, screenings, and gender-affirming care rose substantially after the session; changes were statistically significant. 12 Family Medicine residents and Geriatrics and Palliative Care fellows participated in the resident/fellow didactic and post-assessment; mean score was 78%. Confidence scores related to gender-affirming care and screenings were notably higher compared to a previously presented needs assessment.

Conclusions

A novel curriculum for Family Medicine, Geriatrics, and Palliative Care providers showed potential to improve both knowledge and confidence in caring for LGBT+ older adults. Improvement in confidence scores around care for transgender older adults, a particularly vulnerable population, were promising. Ideally, this curriculum can be expanded, evaluated further, and disseminated to other institutions.

Reference

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B153

Geriatrics education for medical students: A national survey of Deans for Medical Education at US medical schools

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Background

Geriatrics education is inconsistently incorporated into US medical school curricula; yet, most graduating medical students will care for older adults in their clinical practice. Understanding how current medical school leaders view the role of geriatrics education in the context of the broader medical student curriculum is critical, and Deans for Medical Education can offer an important, overarching perspective.

Methods

Deans for Medical Education or Curriculum at all 191 allopathic and osteopathic medical schools across the US were invited to participate in an electronic survey. Survey questions elicited opinions on medical student geriatrics education and motivators driving curriculum change in geriatrics.

Results

The survey response rate was 73% (140/191). Respondents felt that medical students should be introduced to geriatrics (98%), should have required education in aging physiology/pathophysiology (98%), should have clinical exposure to geriatrics (92%), and should be required to meet minimum competencies in older adult care (71%). When comparing geriatrics and pediatrics, 77% of respondents agreed with requiring a rotation or clerkship in geriatrics vs. 99% in pediatrics. Write-in comments pointed out a shortage of geriatrics-trained faculty and challenges inherent in adding new curricular content, as well as opportunities to integrate geriatrics education into existing clinical training. The two highest ranked motivators among 8 potential factors driving curriculum change were (1) a school accreditation requirement for geriatrics education and (2) funding for geriatrics curriculum innovation and implementation.

Conclusions

Agreement exists among Deans for Medical Education that medical students should receive a foundation in geriatrics education. Differing views exist about geriatrics requirements and optimal geriatrics integration. Advocates of geriatrics education should explore accrediting body requirements and geriatrics education funding opportunities. Future research should investigate the most effective ways to integrate geriatrics into medical school curricula.

B154

Creating an Age-Friendly Research Community

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Background: Research studies often underrepresent older adults due to recruitment, retention, and analysis challenges. The Center for Leading Innovation & Collaboration[1] created a toolkit to increase the inclusion of older adults in clinical and translational research. Using this toolkit and the 5Ts Framework for Inclusion of Older Adults[2], we designed an interactive webinar series aimed at educating researchers to better align research participants with disease demographics.

Methods: We recruited 40 OHSU researchers to participate in a 6-session webinar series (20-30 minute didactic plus 30-40 minutes for group discussion) from October to November 2022. Participants completed pre- and post-program surveys and post-webinar session surveys. Feedback was analyzed for evidence of change and to identify ways to improve trainings for future audiences.

Results: Cancer, neurology, and dermatology researchers from varying positions participated in this pilot with high attendance. Feedback was positive: 93.1% reported sessions delivered valuable content and 96.3% stated session objectives were met. About 87.6% reported high session satisfaction and 78.4% reported relevance to their research goals. Participants appreciated the recruitment tips and discussion time to learn from others' experiences. Several reported making immediate changes to their project (e.g., buying a pocket talker, increasing font size on materials). One major challenge was making the webinars relevant to industry sponsored clinical trials.

Conclusions: An interactive Age-Friendly Research webinar series was well-received by a wide range of clinical researchers. Future iterations should include more researcher experiences and focus on industry-sponsored trials.

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B155

Elect to Connect: Teaching Age-Friendly Care in Medical School

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Background

Providing age-friendly care requires an understanding of the unique medical and social needs of older adults. Intergenerational engagement benefits students as they apply their clinical knowledge and skills. We created an elective for pre-clerkship medical students to improve their knowledge and attitudes about geriatrics.

Methods

In this two-part elective, one semester focuses on older adult home care while the second addresses care of the hospitalized older adult. Both include classroom (lectures and discussion), asynchronous, and experiential components. The asynchronous component uses online discussion boards to encourage reflection on art, videos, and short stories on aging. For the experiential component, students are paired with a homebound older adult for the home care semester and meet monthly for directed activities. For the hospital semester, students spend time with hospitalized geriatric patients, engaging in delirium prevention interventions.

Results

Sixteen students have participated. Post-course surveys for one semester of the home care elective show 100% of students (N=6) able to list components of a mini-cog exam, compared to 16.7% in pre-course surveys. All students were able to describe the Timed Up and Go, compared to 50% in pre-course surveys. Prior to the course, 83.3% of students reported feeling "not at all confident," "somewhat unconfident," or "neither confident nor unconfident" in describing the geriatric syndromes, listing mobility aids, and comparing living options for older adults. After the course, 100% of these students reported feeling "somewhat confident" or "very confident" in presenting a geriatric patient, describing geriatric syndromes, listing mobility aids, and performing a mini-cog exam. Prior to the course, none of the students could correctly categorize ADLs and IADLs, compared to 83.3% of students after the course. Data collection continues in current and future semesters.

Conclusion

We created a successful longitudinal elective for pre-clerkship medical students focusing on geriatric medicine concepts and emphasizing intergenerational connections. This early exposure improves geriatric knowledge, encourages age-friendly care, and highlights geriatrics as a career. Future directions include expansion to other health professions students.

B156 Student Presentation

STUDENT DELIVERED TELEPHONE PROGRAM IMPROVES CONFIDENCE IN COMMUNICATING WITH OLDER ADULTS: THE COAST-IT PROGRAM.

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Background: Given the growing number of older adults, it is critical that future health care professionals are prepared to care for an aging population. The COAST-IT (Connecting Older Adults with Students Through Interprofessional Telecare) program is a longitudinal telephone-based program in multiple health professional schools

at the University of Colorado that provides students the opportunity to improve their ability to communicate and connect with older adults.

Methods: Over 200 community-dwelling older adults were paired with students from pharmacy, nurse practitioner, dental, and medicine programs. Students made social phone calls every one to two weeks to their older adult partner (OAP) for at least 6 months. Students were surveyed before and after program participation. Attitudes and confidence in communicating with older adults were measured and a chi-square test was used to examine statistical significance between aggregate pre- and post- responses.

Results: 186 students completed the pre and post survey. The percentage of students who ranked their confidence level in communication skills as "very confident" increased from 12.42% pre-participation to 31.1% post-participation and the percentage of students who ranked themselves as "not really confident" decreased from 3.7% to 0.5%. In the post survey, greater than 80% of students were able to define ageism, and felt comfortable talking with or being with an older adult.

Conclusions: Caring for a growing, older adult population will require interprofessional teams that have well-developed communication skills and knowledge of the challenges older adults face. Many geriatric curricula are not longitudinal programs which limits student exposure to aging adults and learning of necessary skills. Participation in the COAST-IT program by health professional students is associated with improved attitudes and confidence in communicating with older adults. Future program study will include an evaluation of the impact that COAST-IT has had on loneliness and perceived social isolation among OAPs.

B157

Development of a Geriatrics Training Curriculum for the Toronto Police Service

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Background: Law enforcement services worldwide need to better serve their ageing populations. In Toronto, Canada, we aimed to develop a geriatrics training curriculum for the Toronto Police Service (TPS) to better meet the needs of older Torontonians. To inform this curriculum, we aimed to collect local data that explored the experiences of older adults who interact with the police service and establish the learning needs of TPS officers.

Methods: From July-November 2022, we conducted focus groups with older Torontonians and surveyed TPS officers. The focus groups were held virtually with consenting volunteers in Toronto who self-identified as older adults. We explored these participants' experiences with and attitudes towards police services in a semi-structured format. Responses were documented and analysed thematically. Anonymous demographic data were collected. Following this, we distributed a voluntary online survey to TPS officers to identify their interest in and training needs around policing issues involving older adults. Anonymous responses were evaluated using descriptive statistics and thematic analysis.

Results: 26 older adults from diverse backgrounds participated in 5 virtual focus groups. Key themes derived from their responses were the intersectionality of age, race, and culture; the impact of police officer attitudes and biases on their interactions with older adults; and what age-friendly policing looks like from the perspective of older adults. 101 TPS officers completed the online survey. Key areas identified for further training were cognitive impairment, elder abuse and available resources and supports for older adults and their caregivers.

Conclusions: Our findings suggest that geriatrics- and inclusion-focused police officer training may improve their interactions with and better meet the needs of older Torontonians. We have used these findings to develop a geriatrics training curriculum for Toronto Police Service officers. If successful, this curriculum could be adapted for other services within and outside of Canada to promote age-friendly community policing initiatives.

B158

Tele-geriatrics Curriculum Implementation and Quality Improvement in an Academic Medical Center

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Background: Telehealth bridges the gap in access to specialist care for an increasing population of older adults living in remote communities. Clinicians need specific telehealth skills, which are not a standard part of Geriatrics curriculum, to address the needs of this population effectively. Geriatric Medicine Fellows at the VA Palo Alto have been taught tele-geriatrics for 3 academic years since 2020. The curriculum teaches tele-physical exam, cognitive assessment and tele-dementia management through telephone and video encounters. The ultimate goal of this quality improvement project is to develop a standardized curriculum with asynchronous learning components.

Methods: At the start of this academic year, we conducted an informal needs assessment of current fellows to understand their learning goals during the tele-geriatrics rotation. In addition, we analyzed curriculum evaluations obtained from 3 cohorts of fellows on a 5-point Likert scale examining rating of knowledge in telehealth, dementia care and skills in tele-geriatrics.

Results: The pre-rotation needs assessment survey identified interest in dementia management and goals of care discussions. The curriculum was modified to include asynchronous modules with a focus on these topics. We received 7 of 9 rotation evaluations, a 77% response rate. Fellows reported improved knowledge in telehealth and, confidence in conducting brief cognitive assessments and counseling caregivers on dementia stages and progression (4.8 of 5, SD 0.4, for each of these measures). Fellows also reported increased confidence in identifying management strategies and community resources over telehealth (4.5 of 5, SD 0.8).

Conclusions: Teaching tele-geriatrics builds a crucial skill set for geriatric medicine fellows who care for a vulnerable population with a complex interplay of aging and social factors. Fellows who completed the tele-geriatrics rotation reported increased skill and confidence in tele-dementia management. The addition of asynchronous learning components to the curriculum in the 2022-2023 academic year allows for easier replication of this tele-geriatrics curriculum at other sites.

B159

A Dynamic Quality Improvement Curriculum for Fellowship Training

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Background: In 2013, a project-based Quality Improvement (QI)/ Patient Safety (PS) curriculum was created for the Geriatric and Palliative Medicine fellowship at the Icahn School of Medicine. Fellows applied asynchronously-learned QI concepts to a departmental prioritized, interprofessional team-based QI project of their choice to improve patient care. Over 9 years, the curriculum has been continuously adapted in response to learner feedback, health system demands, and resource availability.

Method: At midterm and conclusion of each academic year, learners and their coaches provided 360-degree evaluations resulting in iterative QI changes for each subsequent year.

Results: 30 geriatric and palliative medicine fellows and 14 faculty coaches worked on 7 QI initiatives from 2021-2022. 41% (12) fellows and 58% (8) faculty completed anonymous online midterm feedback (12/2021) and 83% (24) fellows and 93% (13) faculty completed end of year feedback (5/2022). Based on feedback, strategies to address barriers implemented in the Year 10 fellows QI curriculum (2022-2023) included:

1. Structured QI project "Pitch Day" to improve project selection to address fellow goals and motivation

2. Revised Team accountability contracts to address equitable participation

3. 1-hour QI bootcamp for senior coaches

4. Monthly protected work time

5. Enhanced centralized digital space to improve teamwork efficiency

6. Innovative "Tiered" coaching process to empower 2nd year fellows to optimize their "learning edge" of QI skills to facilitate project delivery and "managing up and down" leadership skills inherent to this role

Conclusion: Use of a 360-degree feedback design and self-reflective process can promote adaptive incremental quality improvements as a "meta-Plan-Do-Study-Act" of the curriculum itself. It has identified actionable interventions to address curricular challenges for the adult learners in this cross-generational QI curriculum. Almost a decade of meaningful, continuous assessment has helped shape our QI/PS curriculum design with innovative instructional models and high-quality evaluation of learners. The flexibility of a "living" QI/PS curriculum that evolves in response to learner characteristics, iterative assessments, and availability of resources, suggests that it could be successfully replicated in other institutions.

B160 Student Presentation

The Art of Medicine: Bridging the Gap Between Palliative Medicine and the Arts

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Background: Pre-clinical medical education is often taught to students through an objective lens. When students enter the clinic, they are faced with ambiguity, cultural diversity, and emotional challenges sometimes with little preparation. Incorporating the arts into the curriculum gives students the opportunity to become comfortable with ambiguity, contrasting opinions, and emotionally jarring subjects prevalent in medicine while refining their observational skills.

Methods: A pilot program with the goal of educating students about palliative medicine through art was created. The program invited students at EVMS to participate in a 1.5 hour event at a local art museum. Upon arrival, each student received a card with a unique statement or prompt with concepts that are prevalent in palliative medicine such as aging well, support, death, conflict, grief, and healing. Students had 30 minutes to find a piece of art that represented their specific card. Each student then led the group to their chosen artwork and explained their reason for choosing that specific piece. Discussion about the artwork's relationship to palliative medicine was encouraged.

Results: Four sessions of this event have been held with a total of 38 students. Each session produced unique, meaningful, and thought-provoking discussions. After the event, students wrote a reflection about their experience. Several themes emerged: the event was novel, a welcomed change from didactics, and the conversations were a unique platform to discuss art as it relates to palliative medicine. Students reflected on the varied interpretations of art and the prompts. They found it illuminating to hear the perspectives of other students regarding the art, the prompt, and their reason for connecting the two. Students all expressed appreciation for the opportunity and many suggested making the event a regular activity.

Conclusions: Students pursuing medical education engage in rigorous, objective, technical coursework in preparation for a career where interpersonal communication, empathy, and cultural humility are equally essential. From the reflections of students, the event was successful in initiating discussions that broach social, emotional, and/or spiritual topics. Developing this event into a permanent program will allow for the continued progress of bridging the gap between the objective and subjective elements of medical education.

B161 Resident Presentation

Teaching Ageism and Social Drivers of Health in A Medical School Geriatrics Clerkship with My Life My Story

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Background

Bias against older adults is common in medical trainees and difficult to overcome.[1] Teaching the importance of social determinants of health (SDOH) is also challenging. The My Life My Story (MLMS) program has been shown to be an effective medical education tool for increasing empathy.[2] We explored its use as an instrument for combating ageism and increasing understanding of SDOH.

Methods

We implemented a MLMS protocol for fourth year medical students in a Geriatrics clerkship and evaluated its effectiveness. 151 students interviewed patients about their lives using a semi-structured question guide. We facilitated 9 debriefs with students and 5 interviews with faculty. Discussion analysis used a modified grounded theory approach looking for emergent themes. We evaluated students pre-and post-clerkship using the UCLA Geriatrics Attitudes Scale and the Expectations Regarding Aging Survey. Paired t-test analyses were then done.

Results

After completing MLMS, students were more likely to disagree with "I would rather see younger patients than elderly ones" ($p=0.021$) and "it's normal to be depressed when you are old" ($p=0.035$). Themes identified in interviews included an awareness of difficulties faced by patients including food insecurity, political climate, and housing instability. Many students noted the honor in being entrusted with these stories.

Conclusions

After participating in MLMS, students' attitudes towards aging changed. In debriefs, they noted the SDOH, including race, immigration status, and gender, at play in their patients' lives. A narrative medicine program structured around life story can be a practical tool for addressing ageist stereotypes and understanding unmet social needs impacting patients' health.

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Example Quotes

Social Determinants of Health (SDOH)	"We had a long discussion on racism and all the changes that she's seen and what she hasn't seen yet… It was really eye opening to see how similar the situations are now and then."
Ageism	"I expected more of her stories to be about family but the big emphasis was on all these passions she had as a younger person that she wanted to pursue but wasn't able to…it made me realize that people still have alternative lives that they hold with them as they age…"

B162

NegotiAge: Pilot Testing an Artificial Intelligence-Based Family Caregiver Negotiation Training Program

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Background: Family caregivers of people with Alzheimer's disease (PWD) often experience conflicts as they navigate the healthcare system but do not have adequate training to resolve these disputes. We sought to develop and pilot test an artificial-intelligence negotiation training program, NegotiAge, for family caregivers.

Methods: With NIH funding [R01AG068421], we convened negotiation experts, geriatrician, a social worker, and community-based family caregivers (N=9; Illinois, Florida, New York, California). Content matter experts created short informational videos/didactics to teach negotiation skills. Family caregivers generated dialogue surrounding caregiver conflicts. Computer science experts used the dialogue with the Interactive Arbitration Guide Online (IAGO) platform to develop avatar-based agents (e.g. sibling, older adult, physician) for caregivers to practice negotiating with on their own time.

Results: NegotiAge.com was developed to facilitate negotiation skills training for family caregivers of PWD. Family caregivers progress through didactic material, then receive scenarios to negotiate (e.g. physician recommends gastric tube in PWD, sibling disagrees with home support, PWD refusing support). Caregivers negotiate in real-time with avatars who are designed to act like humans, including emotional tactics and irrational behaviors. Caregivers send/receive offers, using tactics until either mutual agreement or time expires. Immediate feedback is generated from the response chosen/tactics used to assist with the negotiation skills training.

Results: Pilot testing was conducted with family caregivers of PWD (n=15). and showed that the negotiation and conflict resolution training program was feasible and usable for family caregivers. Subjects found the program to be highly satisfying with real-world applicability.

Conclusion: NegotiAge is an Artificial Intelligence-based online Caregiver Negotiation Program, that is usable and feasible for family caregivers to become familiar with navigating conflicts commonly seen in caring for PWD. Further Multiphase Optimization Strategy (MOST) randomized testing will be conducted next to optimize this program.

B163 Encore Presentation

Fellowship-Trained Physicians Who Let Their Geriatric Medicine Certification Lapse: Now What?

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Background

In prior work, we found that only 62% of American Board of Internal Medicine (ABIM) fellowship-trained and certified geriatricians maintain their certification in geriatric medicine (GM), the lowest rate among internal medicine subspecialties. The objective of this study is to determine whether physicians who allowed their GM certification to lapse would consider recertifying in GM and under what circumstances.

Methods

In Fall 2021-Spring 2022, ABIM surveyed internists who completed a GM fellowship, earned initial certification in GM between 1999-2009, & maintained certification in Internal Medicine (IM) and/or another specialty, but not GM. Online survey included 18 items.

Results

723 internists met inclusion criteria; 152 completed surveys; 21% response rate. 54% would consider recertifying in GM. Factors associated with increased likelihood of recertifying: flexible maintenance of certification assessment options (49%), exam more pertinent to work (39%), and more convenient exam dates (31%). 15% noted additional factors in free text comments including: 1) regulatory reform to recognize GM as a field by employers (one respondent noted: "*I may recertify if the specialty is recognized as an authority in this field by all payers and geriatricians are preferred on job opportunities related to their specialty over non-trained physicians."*), 2) healthcare reform to address payment challenges, 3) addressing physician burnout. Additional comments demonstrated that respondents valued GM fellowship training and view themselves as more skilled at care for older adults than colleagues; one respondent noted: *"I learned an incredible amount about caring for older patients, knowledge that was not taught in IM residency or medical school that is still not known by most providers."*

Conclusions

The value proposition of GM certification to health care systems needs strengthening. ABIM & other stakeholders can explore ways to foster greater understanding of GM certification by employers and payers. Additional research to study healthcare settings that require GM certification and to explore attributes that can be adopted by other organizations caring for older adults may help in understanding how to develop the GM workforce.

B164 Student Presentation

Preparing Preclinical Medical Students for Routine Code Status Discussions: A Mixed-Methods Study

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Background

Routine code status discussions (CSDs), outlining patients' preferences for life-sustaining treatments, often occur during hospitalizations for older adults. As members of medical teams, medical students may participate in routine CSDs. This is consistent with the Association of American Medical Colleges' Entrustable Professional Activities, which states that medical students should be able to elicit goals of care, and with the American Geriatrics Society Medical Student competencies, which includes identifying life-sustaining treatment preferences and asking about and honoring patient priorities. However, formal training in conducting routine CSDs prior to clinical clerkships is often lacking.

Methods

We designed and conducted an interactive workshop for medical students to learn about routine CSDs and practice this skill, using Kern's Six Steps to Curriculum Design. A qualitative and quantitative pre- and post-survey was administered. A convergent, parallel, mixed methods analysis was performed.

Results

A cohort of 135 medical students participated in an hour-long workshop as part of a transition to clinical clerkships course. Students named more options for code status following the workshop (pre-survey 1.3 vs. post-survey 4.3, $p < 0.01$). There was an increase in the proportion of students reporting that they felt "somewhat comfortable" or "extremely comfortable" conducting a CSD (pre-survey 19% vs. post-survey 64%, $p<0.01$), and a decrease in the proportion of students reporting that they felt "extremely uncomfortable" or "somewhat uncomfortable" (pre-survey 53% vs. post-survey 18%, $p<0.01$).

Thematic analysis revealed that students were concerned about knowledge gaps, communication tools, personal discomfort, and upsetting patients or family, and the workshop addressed many of these concerns.

Conclusions

A workshop to train medical students to conduct routine CSDs can be included as part of a preclinical medical education curriculum. Students reported that the workshop increased their confidence conducting such conversations and demonstrated an increase in corresponding knowledge, preparing them to deliver person-centered care for older adults.

B165

Evaluating Hearing Loss Training in Internal Medicine Geriatrics Fellowships

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Background:

The prevalence of hearing impairment in Americans is 43% in ages 65-84. Hearing loss has a high relative risk for developing dementia and research suggests that hearing aid use is the largest modifiable factor protecting from decline. Despite the high prevalence and consequence of untreated hearing loss, the Accreditation Council for Graduate Medical Education's only educational requirement for geriatric medicine fellows is providing care in a geriatric clinic whose patients may require additional services including audiology. This project aims to evaluate current programs' approach to hearing loss education.

Methods:

Using the Association of American Medical Colleges' Electronic Residency Application Service directory of internal medicine geriatrics programs for 2022, an environmental scan was conducted by reviewing all programs' websites to evaluate any available information about hearing impairment training, and also for the presence of a curriculum. Search terms included "curriculum," "audiology," and "hearing impairment."

Results:

Of the 116 program websites evaluated, only 8% (9/116) mention audiology. Hearing loss was discussed in 5% (6/116) of programs evaluated. Hearing loss was only mentioned if audiology was also discussed. For these programs, audiology or hearing loss was discussed in the context of subspecialty electives, core rotations, and working in multidisciplinary teams as a trainee. Only two programs mention specific learning objectives for trainees regarding hearing loss. The presence of a curriculum was found on 43% (50/116) of program websites.

Conclusions:

Despite the breadth of knowledge and research demonstrating the prevalence of hearing loss and value of hearing aids for older adults, there is limited description of hearing loss training in U.S. geriatric fellowship program websites. Because there are no formal recommendations for geriatrics fellowships regarding hearing impairment assessment, utility of an audiology referral, or assistive device education, developing a standardized curriculum would benefit learners and geriatrics education overall. Next steps include surveying current geriatrics fellows' experience with hearing loss, including their level of confidence, practice behaviors, and knowledge in evaluating and treating hearing impairment among older adults.

B166

Nip It in the Bud: Combating Ageism Amongst Internal Medicine Primary Care Track Residents

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Background: Those entering the primary care field will likely care for the bulk of older adults in the outpatient setting. It has been shown that many medical students and physicians harbor negative attitudes towards older adults, but little is known about attitudes amongst Internal Medicine (IM) residents training for primary care (PC) based careers. Ageism among healthcare professionals is of significant concern as it leads to negative health outcomes for older adults.

Methods: PC track IM residents completed a voluntary, anonymous survey before and after participating in a 90-minute-long interactive ageism workshop. Survey domains assessed residents' prior exposure to ageism didactics, perceived importance of ageism, and confidence in recognizing and confronting ageism. The survey also included the 12 item Expectations Regarding Aging (ERA-12) questionnaire, which is a validated instrument that assesses expectations regarding physical health, mental health, and cognitive function of older adults.

Results: Of the 15 residents invited to participate, 12 residents (80%) completed both surveys. Responses were obtained from all training levels including 5 PGY-1 (42%), 4 PGY-2 (33%), and 3 PGY-3 (25%). Most residents (66%) had received at least some level of ageism education while in medical school. Sixty-four percent of residents ranked ageism as less important in their careers compared to other health equity-related topics such as sexism and racism. After participating in the workshop, residents had significantly higher total ERA scores and improved expectations regarding cognitive function (68 vs. 58, $p = 0.012$, 63 vs. 45, $p = 0.003$, respectively). Summed confidence scores for recognizing and confronting ageism increased after the workshop was given by 14% and 23% respectively.

Conclusions: PC track IM residents who participated in a pilot anti-ageism workshop had improved attitudes towards aging and increased confidence in recognizing and advocating against ageism. More research is needed to assess if these improvements are sustained over time and can be reinforced through further educational initiatives.

B167

Systems Older Adult Report (SOLAR) Tool, a Geriatrics Electronic Health Records Leveraged for Point-of-Care Education Resources (E-HELPER) for Learners

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Background: The Age-Friendly Health System model helps to provide optimal care to inpatient older adults, but a continued challenge seen in delivering this age-friendly care is ongoing education of healthcare staff. Presented here is a novel method which uses the EHR to enable "point-of-care" learner education of best practices in age friendly care for hospitalized older adults.

Methods: An Epic-based EHR tool, Duke Geriatrics' Systems Older Adult Report (SOLAR), centralizes Epic-based print groups into a single page, is accessible to all stakeholders, and allows sharing of information across disciplines and collaborative problem-solving during hospital patient rounds. It includes patient-specific geriatric health data, such as medication lists, cognitive and functional assessments, delirium screening, pain/wound/tether data, and nutritional data. It also includes provider-focused nudges suggesting generally appropriate management for older adult patients. Tool implementation was piloted within Duke's Geriatrics fellowship program. Participants were geriatrics fellows (n=5) over a 12 month period. Fellows' experiences with the tool were assessed with an end-of-the-year survey measuring usability (1=never, 4= every day) and utility (1=not at all helpful, 5=almost always helpful) of the tool in promoting age-friendly hospital care.

Results: Completion rate was 100%, fellows indicated nearly daily use of the tool (mean 3.6 out of 4), and was rated as "often" or "always" useful across a variety of patient scenarios, including admissions for falls, delirium, failure to thrive, polypharmacy, and dementia with behavioral disturbances. Fellows were asked how well they felt the tool aligned with the 4 M's of the Age-Friendly Health System (i.e. tool utility), and fellows rated this alignment with mean scores of: Medications (5.0), Mentation (4.4), Mobility (3.8), and Matters Most (1.9). Qualitative comments suggested fellows used SOLAR as a teaching and orientation tool about age-friendly care for learners on the Geriatrics consult service (including residents, interns, and medical students).

Conclusions: SOLAR teaches age-friendly care principles and is easily adopted among providers and trainee providers. The point-of-care availability of the tool during inpatient rounds enables strong maintenance within provider workflow.

B168

Integration of 4Ms and Long-Term Care Experience into Nursing Curriculum

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Background: It is estimated by 2050, the number of adults aged 60 and older will double and more long-term care (LTC) beds will be needed.[1] Nurses are vital members of the LTC team and are in short supply, which was made worse by the pandemic. Also, during the pandemic, all optional LTC experiences for student nurses were canceled. This report describes how the LTC experience was integrated into a required course for most of our senior nursing students.

Methods: In a population health course, senior-level Bachelor of Science in Nursing (BSN) students participated in a 1-hour lecture presented by geriatricians focusing on the 4Ms (what Matters to the patient, Mobility, Mentation, Medication).[2] Post-lecture students wrote three facts they learned. Responses were coded using the 4M themes. Within 2-months of the lecture, students were assigned to a 4-hour rotation with a LTC staff member among four LTC sites. Students participated in the staff member's normal duties with oversight. Following the rotation, students completed a reflection and survey.

Results: Eighty-two students participated in the 4Ms lecture. Of the 82 students, 70 (85.4%) completed a post-lecture response. Of the 4Ms, 90% (n=63) stated at least one fact related to medications. Sixty-one students (74.4%) completed a 4-hour rotation at a LTC facility and a sub-set (n=10) completed two rotations for a total of 284 contact hours in LTC setting with 28 LTC staff, who volunteered to participate. Of the 70 completed post-site surveys, 90% (n=63) recommended future students visit during the course and 84.3% (n=59) agreed they were able to learn about population health at the site.

Conclusions: Integrating a 4Ms lecture and short duration LTC experience into a BSN population health course is feasible. Most students reported that the experience was beneficial to their learning, including increased awareness of LTC, such as the role of a nurse and importance of resident/staff rapport. More research is needed to see if these experiences encourage more BSN students to pursue careers in LTC.

References:

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B169

Using a Virtual Geriatric Case Competition to Help Students' Achieve Interprofessional Collaboration Competencies

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Background: It is challenging to create positive learning experiences for health professional students to achieve interprofessional collaboration competencies. We present Minnesota's experience conducting a virtual geriatric case competition for developing interprofessional competencies sponsored by the Geriatric Workforce Enhancement Programs at Saint Louis University and the University of Minnesota.

Methods: Minnesota held competitions in 2020, 2021 and 2022. Students were assigned to teams of 4-6 undergraduate and graduate students and one coach from multiple health professions and presented comprehensive care plans using a simulated complex geriatric patient case. Participants completed evaluation surveys focused on satisfaction with the competition format/procedures and achievement of interprofessional competencies. Judges rated presentations using a rubric based on Core Competencies for Interprofessional Collaborative Practice. Coaches and judges rated students' attainment of four interprofessional competencies. Students rated attainment of interprofessional competencies by completing the Interprofessional Collaborative Competency Attainment Survey (ICCAS) before and after the competition. Dependent t-tests assessed students' attainment of competencies.

Results: Over three years we enrolled 231 health professional students from 17 disciplines, and 44 coaches and 73 judges from 15 disciplines. Participants rated their experience with the competition as good to excellent with mean ratings on 8 experience questions ranging from 1.6-2.2 for students and 1.4-1.8 for coaches and judges using a 5-point Likert scale. The mean(SD) team score from the judging rubric was 88(13) out of a maximum of 110. Coaches and judges rated student achievement of four interprofessional competencies as good to excellent with a mean score of 1.57(.48) using a 5-point Likert scale. Students' mean(SD) score for the ICCAS was 3.75(.69) pre-competition and 4.41(.59) post-competition ($t=-11.0$, $p<.00001$).

Conclusions: The virtual case competition provided a positive, engaging experience to introduce health professional students to geriatric team-based care and helped them achieve interprofessional competencies.

B170

Cultivating an Equitable Clinical Environment

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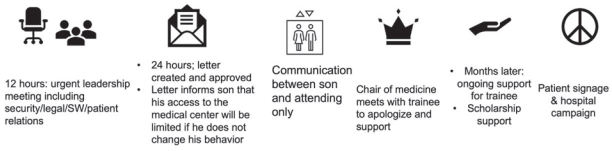
It is widely recognized that providers of color face microaggressions and discrimination while caring for patients. These experiences make victims of both targets and witnesses, and stymy crucial efforts to diversify the healthcare workforce and reduce healthcare disparities. We present a case describing an incident of racism experienced by a trainee of color and the institutional response.

Case: A 97-year-old woman with advanced frailty, advanced Alzheimer's dementia with FAST score 7c, and multiple comorbidities, was admitted with lethargy, hypoxia, and hypotension. Her evaluation revealed sepsis of unknown source, multiple electrolyte derangements, acute kidney injury, uncontrolled hypothyroidism, and a type II myocardial infarction. On assessment, she was non-verbal, refusing oral intake and care.

At the family goals of care meeting, attended by four members of the patient's family and 15 members of the care team, including attendings and nurse leadership, her son gestured at the only Black

provider present and said, "Where would you like me to send her - to the Nigerian jungle?" The racist abuse was not addressed during or immediately after the meeting. A week later, Diversity, Equity, and Inclusion leadership learned of the event, and it was logged in the safety reporting system.

Conclusion: This event highlights the gap between institutional change and the reality on the frontlines. There are two policies representing the institution's full support of any staff that suffers discrimination, and efforts have also been made to engage staff in upstander education. A prompt and public response to any act of discrimination is now a minimum expected competency of all attendings. A hospital-wide campaign with public signage is also underway to publicize expected behaviors and the supports that exist for these specific circumstances, including an anonymous reporting system. This case, however, is a stark reminder that despite system-level changes, more must still be done to create sustainable structures to effectively promote an equitable workplace.



Flow diagram of the institutional response.

B171 Encore Presentation

Aging Care 5M Competencies for Canadian Medical Students

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Purpose: There is significant variation in quality and quantity of geriatric teaching in Canadian medical schools. The aim of this project was to revise the existing 2009 Canadian Geriatrics Society (CGS) Graduating Medical Student Competencies to meet the current trends using a consensus process.

Methods: The working group chose the 5Ms model and CanMEDs framework to develop the competencies. A modified Delphi process was used. National participants were recruited and three rounds of online Delphi surveys were conducted from 2019-2021, using a 7 point Likert scale questionnaire that also solicited qualitative comments for each item. Purpose of the first round, n=66, was identifying the importance of the components of the competencies under three headings; knowledge, skills and attitudes. The second round, n=54, assessed agreement with proposed 31 competencies under seven headings; aging, caring for older adults, (5Ms): mind, mobility, medications, multi-complexity and matters most. In spite of reaching consensus, minor revisions were made and the final survey, n=53, was conducted for revised competencies.

Results: First round: the importance for all the components was 72- 81 %, mean 81 %, and new themes were also identified by qualitative comments. Second round: The agreement level for all 31 competencies was 80-97 %, mean 89 %, with 50 % disagreeing on one part of a one competency by qualitative comments. Agreement level for the final round was 87- 95 %, mean 90 %.

Conclusion: Thirty-three core competencies for caring for older adults were created for graduating Canadian medical students as a minimal requirement by a consensus process by national experts.

B172

Implementation of a Geriatric Assessment SmartPhrase: A Multi-Institution Pilot Study

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Background: The geriatric 5Ms are an increasingly utilized framework to communicate the complexity of the geriatric assessment (GA) to medical trainees and non-geriatricians. The objective of this study is to pilot an electronic medical record (EMR)-based SmartPhrase using the 5Ms (Mind, Mobility, Medications, Multicomplexity, and Matters Most) to teach the GA to medical students and internal medicine/family medicine residents.

Methods: We developed a concise Epic SmartPhrase organizing the GA within the 5Ms framework using iterative feedback from learners and educators. We incorporated the SmartPhrase into geriatrics teaching across 3 academic institutions, including two inpatient Acute Care for Elders rotations (medical students and residents) and one geriatrics outpatient rotation (internal medicine residents only). Pre- and post-rotation surveys were used to evaluate utilization of the SmartPhrase, effects on comfort performing a GA, and influence on patient care.

Results: Survey data collection is ongoing and planned to end in April 2023. Preliminary data demonstrated that less than half of learners (43%, n=10/23) felt comfortable performing a GA prior to their geriatrics rotation; only 30% had a framework for the GA. Nine learners completed post-rotation surveys, all of whom reported feeling comfortable performing a GA and having a framework for the GA. Eight respondents (89%) used the 5Ms SmartPhrase, all of whom agreed that it was helpful when caring for older adults. Use of the SmartPhrase also affected clinical practice by improving interdisciplinary teamwork and aiding in identification and management of delirium, cognitive impairment, and polypharmacy.

Conclusions: An EMR-based SmartPhrase is an effective educational tool to disseminate geriatric principles and increase comfort with the GA among medical trainees. It can be used across multiple sites of care to enhance geriatrics education and patient care.

B173

Pilot study of dental AFHS metrics based on a new 4Ms checklist.

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Background

Due to the lack of existing or published guidelines in Age-Friendly Health Services (AFHS) in dentistry, we aimed to generate the dental definition of 4Ms (what matters, medication, mentation, mobility) in a clinical template (tab) format that can be used as a checklist for dental screening of older adults. As a second step, in order to confirm the corresponding AFHS metrics for age-friendly care, we conducted the preliminary analysis of the new 4Ms tab extracted from the electronic dental records of 100 older individuals.

Methods

For developing the new 4Ms template, we adopted the Institute for Healthcare Improvement guidelines for ambulatory care clinics since dental protocols are unavailable. We prepared the 4Ms template as a clinical checklist, which evolved through focus group discussions with postgraduate dental residents and interdisciplinary and intramural resources such as recommendations from medical providers and expert opinions of geriatric specialists.

Results

Once the template was created, we added it as a 4Ms procedure note to the Axium dental software and launched the pilot period for eight months, starting in January 2021. Dental postgraduate residents at Eastman Institute for Oral Health, Specialty Care Clinic were trained to assess the 4Ms of patients and instructed to document the clinical management decisions in the new template of patients' electronic charts. Our project included every patient over 65 who presented during a recent visit. The data analysis from the 4M tabs of the first 100 patients highlighted potential 4Ms metrics for reliable AFHS practice. Accordingly, 70 patients had a risk for falling (mobility), and 78 agreed with comprehensive dental treatments (what matters), including extractions. Eighty patients had polypharmacy (medication), and 45 were taking high-risk medications. Five patients were screened positive for cognitive impairment (mentation). Only 57 patients brushed their teeth two times daily, and 23 patients were unable to brush alone (mobility). The average anticholinergic burden from medications that can block saliva secretion was 1.56, representing a high risk for dry mouth and dental caries.

Conclusions

We developed and piloted a 4Ms template for dental providers that can be integrated into dental charts. It can be used at patient encounters to implement healthy-aging key oral health processes, including oral health assessment, planning, and daily oral hygiene support.

B174 Student Presentation, Encore Presentation
Validation of the Edmonton Frail Scale-Acute Care in patients ≥ 65 years undergoing surgery

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Background: Frailty is common in geriatric surgical populations (37%), and associated with poor postoperative outcomes. The Edmonton Frail Scale (EFS) is a frailty assessment that has been previously validated in geriatric surgical populations. The Edmonton Frail Scale-Acute Care (EFS-AC) is a newly developed version where the Clock Draw and Timed Get Up and Go Test were replaced with self-reported questions. The EFS-AC has not been validated in the surgical population. Our aim was to validate the EFS-AC for use in geriatric surgical patients.

Methods: This is a single-institution prospective cohort study of patients ≥ 65 years undergoing preoperative assessment with the EFS and EFS-AC prior to elective surgery from 10/2021 to 10/2022. EFS and EFS-AC ≥ 6 was considered frail. Procedural variability was controlled for using the operative stress score. Patients undergoing procedures not assigned an OSS were excluded. Outcomes of interest were loss of independence (LOI), length of stay (LOS), ICU stay, and ICU LOS. Univariable and multivariable analyses were performed. Receiver operating characteristic (ROC) curves were generated to estimate discriminatory thresholds for all outcomes of interest.

Results: 688 patients were included. 122 (18%) were frail by EFS and 112 (16%) were frail by EFS-AC. The EFS-AC was associated with increased odds for all outcomes of interest: increased risk for LOI (OR 4.34 [4.05, 4.65]), longer LOS (OR 1.23 [1.09, 1.39]), ICU admission (OR 1.48 [1.26, 1.73]), and longer LOS in the ICU (1.57 [1.23, 2.02]). EFS was similarly significantly associated with increased odds for all outcomes of interest. ROC analysis showed that the EFS-AC performed similarly to the EFS in predicting all outcomes of interest with the greatest sensitivity and specificity for predicting LOI.

Conclusion: The EFS-AC is a valid frailty assessment for predicting poor postoperative outcomes in geriatric surgical patients and performs similarly to the previously validated EFS. This tool requires no physical assessments and can be performed quickly in an emergent setting, making this a valid option for expanding preoperative frailty assessments into emergency surgery.

B175 Student Presentation
Association of prediabetes and insulin resistance with bone turnover in mid-life women: results from the Study of Women's Health Across the Nation (SWAN)

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Background: Prediabetes affects 350 million adults worldwide. The clinical significance of prediabetes remains a topic of debate, in part because it has not been directly linked to end-organ manifestations. Type 2 diabetes mellitus (DM2) is a risk factor for fracture and one mechanism of DM2-related skeletal fragility is due to low bone turnover. Whether the precursor state of prediabetes is similarly associated with low bone turnover is uncertain. We examined, in midlife women, the associations of prediabetes with bone turnover.

Methods: The Study of Women's Health Across the Nation (SWAN) is a multi-center, U.S.-based, longitudinal study of the menopause transition. At the SWAN study baseline, participants were between 42-52 years of age and in pre- or early perimenopause. Using SWAN baseline visit data, we constructed multivariable linear regression models to examine the cross-sectional association of prediabetes with three outcomes: bone resorption, bone formation, and overall bone turnover (bone resorption + bone formation). Women with diabetes (blood glucose >126 mg/dL and/or use of diabetes medication) or who used bone-modifying medications were excluded. Bone turnover was assessed using the urine collagen type I N-telopeptide (U-NTX) bone resorption and osteocalcin (OC) bone formation markers. Outcomes were analyzed in separate models using Z-scores: bone resorption (U-NTX Z-score), bone formation (OC Z-score), and bone turnover [U-NTX Z-score + OC Z-score)/2].

Results: Adjusted for age, race/ethnicity, menopause transition status, and study site, women with prediabetes had 0.16 lower bone turnover Z-score (p=0.01), and 0.20 lower OC Z-score (p=0.01); prediabetes was not significantly associated with U-NTX Z-score (p=0.11).

Conclusions: Similar to DM2, prediabetes was associated with lower bone turnover. This lower bone turnover seemed to be driven more so by lower bone formation. Future studies should examine whether prediabetes, like diabetes, is a risk factor for fractures. The clinical awareness that prediabetes may have similar end-organ manifestations to DM2 can help prediabetics better prepare and prevent these effects on their bone and overall health.

	Bone Resorption (U-NTX Z-score)		Bone Formation (OC Z-score)		Bone Turnover [U-NTX Z-score + OC Z-score)/2]	
	Beta coefficient (95% CI)	p-value	Beta coefficient (95% CI)	p-value	Beta coefficient (95% CI)	p-value
Pre-diabetes (yes)	-0.126	0.11	-0.201	0.01	-0.164	0.01

B176 Student Presentation, Encore Presentation
Identifying and reducing racial disparities in pain treatment with geriatric emergency department programming

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Background: Disparities exist in Emergency Department (ED) pain care for older adults based on race and age. Prior studies have also found Black patients receive less opioids. We investigated if such disparities exist at the VA and are addressed by geriatric-specific programs in EDs.

Methods: Evaluation of ED pain care for older Veterans (65+) discharged from the ED (1/1/21-9/30/22). ED visit encounters, demographics (age, race), ED visits, chief complaints (cc) (pain-related vs. not), and ED pain care (documentation of pain scores and prescription of analgesics [categorized as opioids, NSAIDs, acetaminophen, and topical]) were extracted from VA Corporate Data Warehouse. Stratified comparisons were made of ED pain care (documented assessment and prescribing), Geriatric ED (GED) site accreditation vs. not, sites with Enhancing the Quality of Provider Prescribing in the ED (EQUIPPED: education, clinical decision support pain menus, and audit & feedback) vs. not, and by Black vs. non-Black Veterans.

Results: 276,999 ED visits were made by Veterans 65+; mean age was 74.3, 28.8% were Black, & 95.2% were male. Of the 111 VA EDs: 44 were GED accredited, 20 used EQUIPPED pain menus. Older Veterans with pain-related chief complaints had more pain score documentation if seen at GEDs vs. not (94.5% vs. 93.0%) and seen at EQUIPPED EDs vs.not (96.2% vs. 92.6%). Both GED and EQUIPPED sites prescribed fewer analgesics for pain-related complaints (61.2% GEDs vs. 61.6% not, 60.9% EQUIPPED vs. 61.8% not). In unadjusted analyses, regardless of GED or EQUIPPED status, disparities existed by type of analgesic prescribed. Black older patients with pain complaints received more analgesic prescriptions (OR 1.21 [95% CI 1.19, 1.23]), but were less likely to receive this as an opioid (OR 0.76 [95% CI 0.74, 0.78])

Conclusions: Practices to improve geriatric ED care and prescribing may be mitigating disparities in the identification and treatment of pain. While there appears to be increased pain documentation and treatment for older patients, there was a disparity in the prescription of opioids for Black patients. Future studies should evaluate how this aligns with quality of care related to pain treatment goals.

B177 Student Presentation

"Are we gonna be able to get the treatments that we need:" Patient-informal caregiver perspectives on healthcare access barriers in multiple myeloma

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Background

Differential access to healthcare continues to drive the age and race-related survival gap observed among those diagnosed with multiple myeloma (MM). We designed a qualitative study to understand better contextual factors contributing to healthcare access barriers among older adults with MM and their informal caregivers.

Methods

Between 11/2021-04/2022, we recruited 45 study participants from the Lineberger Comprehensive Cancer Center in NC to participate in a single dyadic interview lasting 60-75 minutes and to complete a self-reported sociodemographic survey. We interviewed 21 dyads consisting of an older adult with MM paired with an informal family caregiver. The interview guide was designed to explore perspectives on MM-related healthcare access barriers. We used the Sort and Sift, Think, and Shift data analytic approach (ResearchTalk Inc). To stratify the identified barriers, we used participants' zip codes linked to NC county-level social vulnerability (CDC Social Vulnerability Index).

Results

All dyads were racially concordant (11 Black and 10 White), 24% had a median annual household income < $50,000, and 38% resided in a moderate or high social vulnerability county (e.g., highest poverty levels and transportation barriers). Identified barriers to healthcare access included lack of transportation, financial constraints, delays in receiving the MM diagnosis, and subsequently delayed referrals to an oncologist. Dyads living in NC counties with the greatest social vulnerability often reported accessibility/transportation challenges and financial worries. Dyads also expressed uncertainty about their financial future. Limited patient knowledge and perceived limits of provider knowledge led to delayed diagnoses and referrals for oncology care. Scheduling challenges led to dyadic frustration with the timing and frequency of cancer center visits.

Conclusion

Dyads affected functionally and psycho-socially report many healthcare access barriers further compounded by living in NC counties with high social vulnerability. Findings highlight the need for tailored multilevel interventions to better support socially disadvantaged populations affected by MM. Addressing these barriers could reduce existing disparities in survival and other key patient-centered outcomes.

B178

The Association of Social Vulnerability with Geriatric Assessment Impairments among Older Adults with Gastrointestinal Cancers-The CARE Registry

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Background Older adults comprise the majority of gastrointestinal (GI) cancer cases. Geriatric assessments (GA) are recommended in clinical care of older adults with cancer in part to detect aging-related impairments (e.g. frailty), which are associated with early mortality. Social factors like social vulnerability, a composite of 16 social factors like minority and socioeconomic status, may also influence aging-related impairments. However, the association between social vulnerability and potentially intervenable aging outcomes among older adults with cancer is understudied.

Methods We included 645 older adults ≥60y recently diagnosed with GI cancer undergoing GA at first pre-chemotherapy visit to the UAB oncology clinic. The exposure was Centers for Disease Control and Prevention Social Vulnerability Index (SVI), which ranks census tracts 0-1, 1 represents the 100th and 0 the 0th percentile for highest and lowest social vulnerability, respectively. Primary outcomes were frailty using the CARE Frailty Index (Giri *et al*. JAGS 2022), based on principles of deficit accumulation, and total GA impairments. We examined the association between SVI and outcomes using logistic and Poisson models for frailty and total GA impairments, respectively with generalized estimating equations to control for census tract clustering.

Results Median age at study participation was 69 (IQR: 64, 75), 57.7% were male, 75.0% were non-Hispanic black, 32.1% had colorectal and 27.9% had pancreatic cancer, and 71.3% presented with stage III/IV disease. Adjusting for age, race, sex, cancer type and stage, a decile increase in SVI (i.e. decile increase in social vulnerability) was associated with 7% higher odds of frailty (OR 1.07 95% CI 1.00, 1.15 *p*: 0.044) and 3% higher total GA impairments (RR 1.03 95% CI 1.00, 1.06 *p*: 0.046).

Conclusions Greater social vulnerability is associated with higher odds of frailty and higher total GA impairments among newly diagnosed older adults with GI cancers prior to systemic therapy. Screening for and intervening on social vulnerability may be targets to identify those at highest risk of frailty and GA impairments.

B180

DMARD Initiation in Older Adults with New Diagnosis of Late-onset Rheumatoid Arthritis

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Background: Older adults with rheumatoid arthritis (RA) account for up to one third of the RA population, however, they are less likely to receive optimal treatment. Older adults with late-onset RA (LORA) experience more symptomatic and progressive disease. We evaluated disease modifying anti-rheumatic drug (DMARD) use in older adults with new diagnosis of LORA.

Methods: In this retrospective observational study, using 20% Medicare data from 2009-2017, we identified adults 66 years of age or older with new diagnosis of LORA. Information on baseline patient characteristics and DMARD initiation during the first 12 months after LORA diagnosis were collected. We also assessed concomitant use of glucocorticoids (GCs) and opioids that are not disease modifying but can improve symptoms of RA.

Results: We identified 25,139 older adults with new diagnosis of LORA in continuous fee-for-service Medicare. Average age at LORA diagnosis was 76.9 (SD 7.6), 76.4% were female, 76.7% were non-Hispanic white, and 37.2% had low-income subsidy. Less than one third were initiated on some form of DMARD (28.9%). During the first 12 months after LORA diagnosis, concurrent long-term GC use was higher among those on any DMARD (44.7%) compared to those without (15.0%). Opioid use was common and observed in 48.6% and 48.4% of those on any DMARD and those without DMARD, respectively. In multivariable analyses, DMARD initiation was associated with younger age, fewer comorbidities, absence of low-income subsidy status (Table 2).

Conclusions: DMARD use in older adults with new diagnosis of LORA is low despite current clinical practice guidelines recommending early aggressive initiation of treatment. Long-term GC use is common among those on any DMARDs, raising concern for suboptimal DMARD use. Further studies are needed to understand drivers of DMARD use in older adults with LORA.

Patient characteristics associated with initiation of any DMARD after new diagnosis of LORA among Medicare beneficiaries ≥66 years of age

Variable	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Age at diagnosis	0.941 (0.937, 0.944)	0.944 (0.940, 0.948)
Female	0.853 (0.801, 0.909)	0.985 (0.922, 1.051)
Race	.	.
White, non-Hispanic (Ref)	1	1
Black	0.715 (0.650, 0.787)	0.928 (0.837, 1.028)
Hispanic	0.730 (0.659, 0.810)	0.985 (0.881, 1.102)
Other	0.899 (0.785, 1.030)	1.042 (0.903, 1.203)
Low Income Subsidy	0.519 (0.489, 0.551)	0.567 (0.530, 0.606)
Comorbidity	.	.
<3 (ref)	1	1
3-5	0.716 (0.675, 0.760)	0.848 (0.797, 0.902)
≥6	0.431 (0.396, 0.468)	0.566 (0.519, 0.617)

B181

Low Oral Anticoagulant Use Among Veteran Nursing Home Residents with Atrial Fibrillation

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Title: Low oral anticoagulant use among Veteran Nursing Home Residents with Atrial Fibrillation

Background: Oral anticoagulants (OAC) mitigate the risk of stroke in atrial fibrillation (AF) and are underutilized. Aspirin is frequently used instead of OAC. We evaluated prevalence and predictors of OAC and aspirin use among Veterans with AF in VA nursing homes (NH).

Methods: Retrospective cohort study of Veterans with a CHADS2VASc score ≥2 admitted to a VA NH from October 1, 2006 to September 30, 2020. Receipt of aspirin/OAC for > 70% of days in the first 4 weeks of stay was considered long term therapy. Multinomial logistic regression was used to compare demographics, comorbidities, functional status and concurrent prescriptions in Veterans with receipt of OAC (+/- aspirin) or aspirin alone compared to no therapy.

Results: Of the 11379 Veterans (98% male) with AF and a CHADS2VASc score of ≥ 2, 34.2% received OAC and 33.8% received aspirin without OAC. Each decade of ascending age was associated with a lower likelihood of receiving OAC (relative risk ratio [RRR] 0.82, 95% Confidence Interval [CI] 0.77-0.88) and a greater likelihood of receiving aspirin (RRR 1.08, 95%CI 1.01-1.016). Black Veterans were less likely to receive OAC (RRR 0.82, 95% CI 0.71-0.96) or aspirin (RRR 0.86, 95%CI 0.74-0.99) as were Hispanic Veterans (OAC– RRR 0.70, 95%CI 0.55-0.91; aspirin–RRR 0.58, 95% CI 0.46-0.75;). Greater body weight was associated with greater OAC and aspirin use (RRR per 10 lbs 1.06, 95% CI: 1.05, 1.07, and 1.01, 95% CI: 1.00, 1.02, respectively). Other conditions independently associated with greater OAC or aspirin use included diabetes, cerebrovascular disease, heart failure, and peripheral vascular disease. Aspirin use was significantly greater among Veterans with dementia. Presence of a bleeding disorder did not affect OAC use but decreased aspirin use. A prior diagnosis of epilepsy was associated in decreased in OAC or aspirin use.

Conclusion: OAC are markedly underutilized among Veterans with AF admitted to VA NH with significant age/racial differences. Future research efforts should aim to understand the reasons and improve evidence based prescribing for stroke prophylaxis in AF in older adults.

B182 Student Presentation

Effect of Polypharmacy and Potentially Inappropriate Medications on Patient-Reported Functional Decline in Older Adults with Advanced Cancer Receiving Systemic Treatment

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Background: Polypharmacy and potentially inappropriate medications (PIM) are common among older adults with advanced cancer, but their association with functional outcomes is understudied. This study aimed to estimate the risk of the patient reported functional decline associated with polypharmacy and PIM in older adults with advanced cancer starting a new line of systemic treatment.

Methods: This secondary analysis of the prospective GAP 70+ Trial (PI: Mohile) enrolled patients aged 70+ with advanced cancer, had ≥1 geriatric assessment domain impairment, and planned to start a new antineoplastic regimen with a high risk of toxicity. Polypharmacy (concurrent use of ≥8 medications (meds)) was assessed before initiation of treatment. PIM were categorized using the Screening Tool of Older Person's Prescriptions (STOPP) criteria. Functional outcomes were assessed within 3 months of treatment initiation: 1) Activity of Daily Living (ADL) decline: decrease in ADL score between baseline and 3 months; 2) Instrumental ADL (IADL) decline: decrease in IADL score between baseline and 3 months; 3) ≥1 falls within 3 months of treatment. Separate multivariable, cluster-weighted Generalized Estimating Equations models adjusted for relevant covariates were used to examine the association of polypharmacy and PIM with functional outcomes.

Results: Among 616 participants (mean age 77 years), the mean number of meds was 6 (range 0-24); 28% received ≥8 meds, and 27% were taking ≥1 PIM. Polypharmacy was associated with increased risk of ADL decline (adjusted risk ratio [aRR], 1.31; 95% CI, 1.00-1.71). Taking ≥1 PIM was associated with increased risk of IADL decline (aRR, 1.21; 95% CI, 1.04–1.40) and falls (aRR, 1.93; 95% CI, 1.49–2.51).

Conclusions: In a large cohort of vulnerable older adults with advanced cancer receiving systemic treatment, polypharmacy and PIM were independently associated with an increased risk of functional decline. This emphasizes the need to develop interventions to optimize medication use, intending to improve outcomes in these patients.

B183 Student Presentation, Encore Presentation
Palliative and Hospice Care Utilization: The Effect of Caregiver and Patient Beliefs

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Background: Despite efforts to promote equity in hospice care (HC) and palliative care (PC) utilization, disparities remain for marginalized populations. Furthermore, there is a lack of information on the impact of caregiver's health care beliefs on HC and PC use among cancer patients–particularly, in minoritized populations. The purpose of this study is to evaluate the impact of caregiver and patient HC and PC beliefs and belief agreement on patient utilization of HC and PC, and if this relationship differs between minoritized (Black and/or LatinX) and non-minoritized (non-Hispanic White and Asian) patients with advanced cancer.

Methods: We performed a prospective cohort study of newly diagnosed patients ≥18 years old with advanced lung cancer (stage 3 and 4) and their caregivers at a single institution in New York City. Patients and caregivers completed baseline surveys within 3 months of their initial diagnosis and were followed every 4 months for a period of 12 months. Our primary outcome was the receipt of HC and/or PC via medical record review. We used validated instruments to assess HC/PC beliefs and created a composite score for positive, neutral, and negative beliefs, and medical mistrust. Level of agreement among patients and caregivers was determined with Cohen's Kappa coefficient. Multivariable regression analysis compared the impact of patient/caregiver agreement on PC and HC use, stratifying by minoritized status.

Results: We enrolled 99 patients and 43 caregivers. Of the forty-three racially/ethnically concordant dyads included in the analysis, 27 (63%) identified as minoritized and 16 (37%) were non-minoritized. Mean age was 65.2±10.2 and 52.1±15.2 years among patients and caregivers, respectively. Non-minoritized patients were more likely to use HC and/or PC (67% vs 25%; p=0.02). Minoritized patients held more negative beliefs (2.7±6.7 vs 7.1±4.9; p=0.02). The difference between patient/caregiver beliefs was thus larger for minoritized patients (3.6±6.2 vs 1.0±3.2). However, level of belief agreement did not predict HC/PC utilization[CMMA1].

Conclusion: Minoritized lung cancer patients held more negative beliefs about HC/PC yet were more likely to receive HC/PC. Thus, further work is needed to determine impacts of beliefs among diverse patients with advanced cancer.

B184 Resident Presentation
Safety of carotid endarterectomy in nonagenarians: a National Surgical Quality Improvement Program Analysis

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Background: Carotid endarterectomy (CEA) is a treatment option for carotid artery stenosis (CAS), a common disease that can result in stroke with severe debility. With an increasing life expectancy and higher prevalence of CAS in the aging population, there is a need to analyze outcomes in this understudied population. As nonagenarians are typically considered high-risk surgical candidates due to their advanced age, we aimed to examine risk factors associated with postoperative complications within 30 days following CEA in this population.

Methods: We analyzed patients aged 90+ years who underwent CEA from 2015-2018 in the National Surgical Quality Improvement Program (NSQIP) database. Only patients with data in the Vascular Targeted Participant Use Data File were included, as these data were specific to CEA. Multivariable linear regression was performed to identify factors associated with postoperative length-of-stay, and logistic regression was similarly performed to analyze myocardial infarction (MI), stroke, or death within 30 days of CEA.

Results: A total of 161 patients met study criteria with incidences of one (0.6%) stroke, seven (4.3%) MIs, and five (3.1%) deaths. MI was associated with dyspnea (OR=65, 95% CI=3.5-3142.0, p=.01) and partially dependent function (OR=37.5, 95% CI=2.8-1035.8, p=.009). Death was associated with dyspnea (OR 129.8, 95% CI=6.3-8686.0, p=.005) and partially dependent function (OR=70.1, 95% CI=4.2-3003.9, p=.007). Preoperative statin use was associated with significantly lower risk for MI (OR=0.03, 95%CI=0.008-0.3, p=.01) or death (OR=0.03, 95% CI=0.0009-0.4, p=.02). The median postoperative LOS was 2 days. Non-elective surgery and preoperative hypernatremia were associated with 2 and 4 extra LOS days.

Conclusion: Dyspnea and partially dependent functional status were associated with higher odds of MI or death within 30 days following CEA. Statin use was associated with lower odds of postoperative complications. LOS was shorter for elective CEA and longer for those with hypernatremia. This study provides insight into CEA as a consideration for nonagenarians with CAS, while demonstrating the need for further investigation into preoperative symptoms and functional status to optimize outcomes for this rare population.

B185
Quality of Virtual versus In-Person Outpatient Palliative Care in a Multi-site, Diverse Sample of Older Adults

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Background: Virtual visits, or real-time patient-clinician video/telephone visits, have increased in outpatient palliative care (OPC). Yet, their quality compared to in-person visits is unknown, particularly among minoritized populations and older adults who experience digital health barriers.

Methods: Using outpatient visit data from the Palliative Care Quality Network, we included patients ≥18 years old with ≥1 OPC visit between 2017–2021. In mixed effects logistic regression, we assessed whether process measures (screening (yes/no) for psychosocial needs, spiritual needs, and goals of care) were associated with visit type at first OPC visit. We adjusted for age, race/ethnicity, and preferred language, as well as sex, diagnosis, and Palliative Performance Scale (PPS), and clustered by site.

Results: Among 2,815 patients, 855 (31%) had virtual visits (19% pre- vs 35% post-pandemic). Mean age was 64 (SD 15); 17% were Hispanic/Latinx, 9% Black, 16% Asian, 5% Native Hawaiian/Pacific Islander (NH/PI); 11% were Spanish-speaking, 6% Chinese-speaking, and 6% had another non-English language preference; 47% were women; 58% had cancer; mean PPS was 64 (SD 15). Patients had lower odds of screening for psychosocial (aOR 0.55, 95% CI 0.37-80) and spiritual needs (aOR 0.64, 95% CI 0.49-0.83) in virtual compared to in-person visits; there were no differences by age, race/ethnicity, or language. Screening for goals of care was similar overall in virtual vs in-person visits (aOR 0.90, 95% CI 0.65-1.25); however, those ≥80 years old had higher odds of screening (aOR 2.07, 95% CI 1.18-3.62) and those with a non-English/Spanish/Chinese language preference had significantly lower odds of screening (aOR 0.49, 95% CI 0.27-0.87).

Conclusions: Virtual visits are associated with lower rates of screening for psychosocial and spiritual needs compared to in-person visits and some patients with non-English language preference

have lower odds of screening for goals of care. As virtual OPC delivery continues to grow, additional interventions are needed to ensure virtual visits are equitably able to provide a full scope of palliative care services.

B186

Preoperative Frailty and Mortality in Medicare Beneficiaries Undergoing Major and Minor Surgical Procedures

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BACKGROUND

Preoperative frailty is associated with poor surgical outcomes. Whether the association is consistent across major and minor surgical procedures of different surgical stress has not been well studied.

METHODS

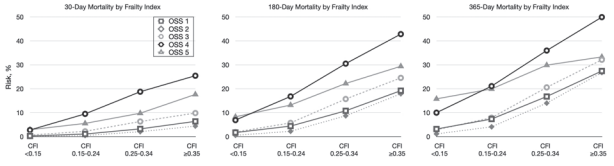
This retrospective study used the 2014-2019 5% random sample of Medicare fee-for-service beneficiaries who underwent surgical procedures (N=1,129,055). Surgical procedures were categorized by the Operative Stress Score (OSS) (range: 1 [e.g., knee arthroscopy] to 5 [e.g., pneumonectomy]). Preoperative frailty was measured by a claims-based frailty index (range: 0 to 1; non-frail <0.15, pre-frail 0.15-0.24, mildly frail 0.25-0.34, and moderate to severely frail ≥0.35). We estimated the age and sex-adjusted risk ratio (RR) of mortality at 30 days, 6 months, and 1 year associated with frailty category stratified by OSS category.

RESULTS

We identified 1,885,652 surgical procedures (OSS category 1 to 5: 30.1%, 47.7%, 20.2%, 1.9%, and 0.2%). The mean age was 76.3, 48.5% were female, and 90.3% were white. Overall, postoperative mortality was 1.6% at 30 days, 5.1% at 6 months, and 7.8% at 1 year. Frailty was associated with increased 30-day, 6-month, and 1-year postoperative mortality across OSS categories (Figure). At 1 year, patients with moderate-to-severe frailty had significantly elevated mortality after OSS category 1 minor procedures (27.4% vs 3.2%; adjusted RR [95% CI], 7.9 [7.6-8.1]) as well as after OSS category 5 major procedures (33.3% vs 15.8%; adjusted RR [95% CI], 2.1 [1.4-3.1]) compared to non-frail patients.

CONCLUSION

Frailty is associated with increased 30-day, 6-month, and 1-year mortality after major and minor procedures. These results obtained from national data can be useful for risk stratification and shared decision-making before surgery with older patients.



B187

Association of beta-blocker use with exercise capacity in participants with heart failure with preserved ejection fraction: a post-hoc analysis of the RELAX trial

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Background: Beta-blockers (BB) are commonly prescribed among older patients with heart failure with preserved ejection fraction (HFpEF). Prior studies have failed to demonstrate a significant improvement in clinical outcomes with using BB in HFpEF. Furthermore, there are anecdotal concerns about increased exercise intolerance with BB use. However, the association of BB with measures of exercise capacity and quality-of-life in patients with HFpEF is unknown.

Methods: We performed a post-hoc analysis of the RELAX trial that included chronic stable patients with HFpEF and assessed exercise capacity using maximal exercise test at baseline, 12 weeks and 24 weeks follow up. Key outcomes included peak exercise oxygen uptake (Peak Vo_2), anaerobic threshold (Vo_2AT), 6-min walk distance (6MWD), and quality-of-life (QOL) assessed by Minnesota Living with Heart Failure (MLWHF) score. The adjusted association between BB use over time and outcomes was assessed using linear mixed effect models with BB use as a time-updated covariate, participants as random intercept, and adjustment for potential confounders (Table).

Results: Of the 216 participants, 76% reported baseline BB use. Participants with (vs. without) BB therapy were older (69.8 vs. 64.4, p=0.001) and had ischemic heart disease (44% vs. 23%, p=0.01). In adjusted analysis, BB use over time was not associated with Peak Vo_2 and 6MWD (Table). However, BB use is associated with a higher Vo_2AT suggesting greater aerobic endurance, and a lower MLWHF score, suggesting a better QOL.

Conclusions: BB use was associated with a higher Vo_2AT and QOL but not Peak Vo_2 or 6MWD in HFpEF patients.

Association of beta-blocker use with different outcomes as assessed in the multivariable-adjusted linear mixed effects model

Outcomes	Beta coefficient (95% CI)	P value
Peak Vo_2, ml/kg/min	0.18 (-0.33, 0.68)	0.50
6-minute walk distance, m	12.65 (-15.7, 40.99)	0.38
Vo_2 at anaerobic threshold, ml/min	46.39 (15.83, 76.94)	0.003
Minnesota Living with Heart Failure	-6.53 (-10.78, -2.27)	0.003
Separate models were constructed for each outcome with use of beta-blocker over time as a time-updated covariate and adjustment for treatment arm, age, sex, EF, NYHA HF class, duration of HF, exercise modality, history of atrial fibrillation, NTproBNP, creatinine, time of exercise test. The beta coefficients represent the difference in outcome variable among those with vs. without beta-blocker use (reference group).		

B188

Gait Variability is Associated with Future Adverse Events in Community-Dwelling Older Adults

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Background: Increased stride-to-stride fluctuations (i.e. gait variability) has been associated with deteriorated global health status and with future falls and fractures even before gait speed is slowing.

Aim: To assess whether increased gait variability is associated with different types and severity of adverse events (AEs); and whether variability predicts them earlier than slow gait.

Methods: Five years follow-up study investigating the relation of gait performance at baseline and incidence of AEs including falls, injurious falls, fractures, new comorbidities, hospitalizations, visits to emergency room and death. Gait performance, including coefficient of variation (CV) of stride time (i.e. gait variability) and gait speed at baseline were recorded. High gait variability cut-off was defined as the nearest integer value of the stride variability mean in the gait variability quartile with the highest percentage of AEs in the follow-up recorded every 6-months via telephone call interviews. Adjusted Poisson and Cox-regression models assessed associations between high gait variability/slow gait and risk of AEs.

Results: 162 participants (82.59±7.53 years old; 73.8% women) were followed for an average of 43.1±19.5months. High gait variability (>3%) and slow gait (<106 cm/s) were defined according with our criteria. Compared to low gait variability, individuals with high gait variability had significant increased IRR for any AEs (IRR=2.18, 95%CI 1.43~3.31, p=.009), falls(IRR=1.73, 95%CI 1.14~2.63, p=.02), falls requiring immediate medical attention (IRR=2.67, 95%CI 1.42~4.99, p=.01), emergency room admissions (IRR=2.05, 95%CI

1.27~3.31, p=.01) and hospitalizations (IRR=1.84, 95%CI 1.08~3.14, p=.04). Furthermore, high gait variability (HR=3.37, 95%CI 1.34~8.42, p=.04), but not slow gait (HR=1.55, 95%CI 1.02~2.37, p=.20), was able to predict time to first fall and fall requiring immediate medical attention.

Conclusions: High gait variability is associated with an increased risk of incident AEs in community older adults. High gait variability, but not slow gait, is an earlier predictor of life-threatening fall events.

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Effect of Sex and Age on Antiretroviral Therapy Response in Treatment-Naïve HIV Older Adults

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Background

An estimate of 70% of people living with HIV in the United States will be ≥50 years old by 2030. However, there is a lack of data specific to treatment response based on sex and age. The objectives of this study were to compare the virologic and immune responses and inflammatory recovery between treatment-naïve (TN) HIV-positive males and females aged ≥50 years.

Methods

TN HIV+ patients (n=75, median age=54) were enrolled from the HIV Clinic. Viral suppression (Viral load (VL) ≤48 copies/mL), immune recovery (increase in CD4 ≥150 cells/mL) and inflammatory recovery (CD4/CD8 ratio >1) at follow-up were analyzed using multivariable logistic regression with adjustment.

Results

There were a total of 40 males and 35 females with reported compliance of 95% and 97% respectively. Immune recovery was documented in 63% of females and 50% of males (aOR: 0.51, 95% CI: 0.17-1.42, p=0.204); viral suppression in 83% of females and 80% of males (aOR: 0.91, 95% CI: 0.22-3.60, p=0.890) and inflammatory recovery in 34% of females and 18% of males (aOR: 0.39, 95% CI: 0.10-1.44, p=0.162), although no differences were statistically significant. A 1 SD increase in age (4.9 years) corresponded to a 13% reduction in odds of immune recovery at follow-up (aOR:0.87, 95% CI:077-0.97, p=0.022). Patients with initial VL>100,000 copies/mL had 4.04 times higher odds of immune recovery (aOR:4.04, 95% CI: 1.13-16.40, p=0.038). Patients with initial CD4<200 had a 96% reduction in odds of inflammatory recovery (aOR:0.04, 95% CI:0.00-0.30, p=0.008). Patients with history of recreational drug use had 58% lower likelihood of achieving viral suppression at any point in time (aHR: 0.42, 95% CI: 0.19-0.89, p=0.025).

Conclusions

Agreeing with existing literature, our findings indicate that males are less likely to achieve CD4/CD8>1 at 1 year which suggests chronic inflammation. Also, patients who started treatment at an older age had less immune recovery, therefore developing early intervention strategies in HIV diagnosis and treatment tailored to this population may contribute to improvement in immunologic and inflammatory long-term outcomes.

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Frailty is associated with serious infections in biologic and targeted-synthetic DMARD treated patients with rheumatoid arthritis

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Background

Whether frailty status portends an increased risk of adverse outcomes in patients with rheumatoid arthritis (RA) on biologic or targeted synthetic disease modifying anti-rheumatic drugs (b- or tsDMARDs) remains unknown. Our objective was to evaluate the association between frailty and adverse outcomes in patients with RA exposed to b- or tsDMARDs.

Methods

Using the IBM/Watson MarketScan® Commercial Claims and Encounters Databases, we identified all patients with RA who filled new prescriptions for TNFα antagonists (TNFi), non-TNFi biologics or Janus Kinase inhibitors (JAKi) between 2008-2019. The date of the first prescription within these three drug categories was the index date. Patients' frailty risk score was calculated using the Claims-Based Frailty Index (CFI) [2, 3], which estimates a deficit-accumulation frailty index in administrative claims data in the 1-year baseline period. The index ranges from 0 (not at all frail) to 1 (severely frail). The primary outcome was time to infections requiring hospitalization. Secondary outcomes included outpatient or inpatient encounters for infections and all-cause hospitalizations. Cox proportional hazards model adjusting for demographics, calendar year, serious and/or opportunistic infections in the 12-months prior to index was used to estimate the adjusted hazard ratios (aHR) and 95% confidence intervals (95% CIs) for each outcome. In separate model, we additionally adjusted for comorbidity burden, and health care utilization (HCU).

Results

A total of 62,246 patients with RA met our inclusion criteria of whom 3928 (6%) were considered frail. In multivariable analyses, frail patients had higher risk of serious infections compared to non-frail patients (aHR 2.37, 95% CI 2.05-2.74) which decreased to aHR 1.34, 95% CI 1.13-1.58 after adjusting for comorbidity burden and the HCU. Frailty was also associated with increased risk of any infection (aHR 1.18, 95% CI 1.11-1.25), and all-cause hospitalizations (aHR 1.34, 95% CI 1.21-1.49).

Conclusion

Frailty is an important predictor for the risk of adverse outcomes among patients with RA treated with b- or tsDMARDs. Our findings underscore the need for considering this parameter in patient evaluations (even among younger patients) in the clinic.

B191

Cognition during non-small cell lung cancer (NSCLC) treatment among older adults who live alone

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Background

Living alone is associated with better cognition in the general older adult population. However, data on cognition during NSCLC treatment among older adults who live alone remain limited.

Methods

We enrolled adults age ≥65 with NSCLC starting palliative chemo-, immuno-, and/or oral targeted therapy. Patients completed Montreal Cognitive Assessments (MoCA) pretreatment and at 1, 2, 4,

and 6 months. Using a minimum clinically important difference, we categorized cognition during treatment as stable/improved, declined with recovery, or declined without recovery. We used multinomial logistic regression to compare cognitive outcomes between patients who lived alone vs with others stratified by treatment.

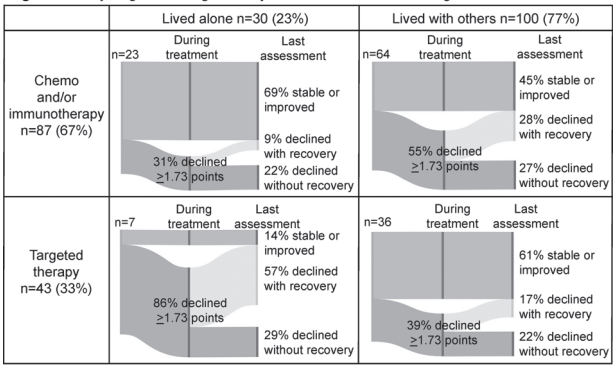
Results

Among 130 patients, median age was 73 (range 65-94); 23% lived alone. There were no differences in pretreatment MoCA scores between patients who lived alone vs with others (median 25, IQR 14-30). Among patients who received chemo and/or immunotherapy, those who lived alone were more likely to have stable/improved cognition (Figure; 69% vs 45%, p=0.047). Among patients who received targeted therapy, those who lived alone were more likely to develop cognitive decline but recovered (57% vs 17%, p=0.03).

Conclusions

Living alone is associated with stable/improved cognition among older adults with NSCLC receiving chemo and/or immunotherapy but not targeted therapy. Patients who live alone need tailored support to preserve their cognitive function during NSCLC treatment, especially during targeted therapy.

Figure: Sankey diagrams of cognitive trajectories for older adults during NSCLC treatment



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Association Between Handgrip Strength and Functional Performance with Loss of Independence in the Preoperative Frail Older Adult

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Background: Handgrip strength (HGS) is a validated physical measure that is part of the gold standard for assessing the Fried frailty phenotype. Recently, the Get-Up and Go and the self-reported aspects of functional performance (SRFP) measured by the Edmonton Frail Scale (EFS) has been shown to be predictive of postoperative LOI. We wished to examine the added value of the HGS to the SRFP of the EFS to analyze its utility to identifying older adults at increased risk of LOI postoperatively.

Study Design: This is a retrospective cohort study at a single institution that included patients 65 years or older who underwent frailty screening with the EFS in the preoperative optimization clinic between June 2018 and January 2020. The Operative Severity Score (OSS) classified different surgical procedures. LOI is defined as discharge to an alternate destination other than home. This model was adjusted for OSS and age. Based on prior population assessment, HGS was evaluated separately between male and female.

Objective: To assess whether HGS is associated with LOI.

Results: 636 patients were included. 350 females were included, and HGS was 29.04 ± 0.64. 286 males were included, and HGS was 60.24 ± 1.21. There was no association between HGS in females and LOI. However, in males, for every incremental increase in HGS, the likelihood of LOI was decreased by 3% (OR 0.97 [0.95, 0.995], p=0.019). Heterogeneity analysis was performed to explore effect medication between HGS and SRFP in males with LOI. An SRFP of 0 had an OR of 0.97 [0.93-1.01]. An SRFP of 1 had an OR of 0.97 [0.93-1.01]. An SRFP of 2 had an OR was 0.99 [0.95-1.02]. This suggests that HGS can provide additional information about LOI, despite the SRFP.

Conclusion: HGS is associated with LOI in males independent of self-reported functional performance, suggesting that it provides additional information on the physical status of male patients. Further studies are needed to explore how to optimize frailty screening the preoperative setting using a combination of self-reported studies and physical frailty markers such as HGS.

B193 Student Presentation

Racial disparities in treatment presentation, modality, and complications in older adults with oropharyngeal squamous cell carcinoma

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Objective

The rise of HPV infections has caused an increase in oropharyngeal squamous cell carcinoma (OPSCC). This cancer had been associated with the middle-aged population (45-65 years); however, as the HPV+ population ages the cancer burden will likely shift to the elderly cohort. Additionally, white patients are more likely to have HPV+ disease which had limited research studies on other racial/ethnic groups with OPSCC. This is the first study to investigate racial and ethnic disparities in treatment presentation, type, and complications for older adults with OPSCC.

Methods

We identified 140 elderly patients, aged ≥ 65 who were newly diagnosed and treated at Mount Sinai from 2007-2020 for non-metastatic, OPSCC. Patients were categorized according to race and ethnicity as identified in the EMR. We excluded individuals with recurrent disease, prior history of OPSCC, or previous head and neck radiation. Time to treatment initiation (TTI) respective to race was analyzed using ANOVA for continuous variables. Treatment modality, pain levels, and PEG placement, were compared across races using the χ^2 test and Fisher's exact test.

Results

Patients of Hispanic ethnicity had the longest TTI (mean 53 days with sd=40) compared to patients from other races/ethnicities (mean white non-Hispanic= 33 days with sd=25, mean black non-Hispanic= 35 days with sd=19, mean other race/ethnicity= 29 days with sd=28). This was statistically significant when compared to white non-Hispanic patients (p=0.037). This relationship remained even after adjusting for stage, gender, insurance status, ECOG status, number of concomitant medications, Charleston Comorbidity index, smoking status, smoking amount (pack-years), alcohol status, and HPV status.

We also found a significant association between race/ethnicity and treatment modality used (p=0.004).

There were no significant differences between race/ethnicity in treatment complications including pain and frequency of PEG tube placement.

Conclusion

Preliminary analysis shows differences between racial/ethnic groups in length of time between diagnosis and treatment as well as in types of treatment modalities used. Further research is needed to elucidate the etiology of these disparities.

B194

Use of the Mini Sarcopenia Risk Assessment (MSRA) in Sarcopenia Case-finding Amongst Community-Dwelling Older Adults

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Background: Sarcopenia is an age-related, progressive skeletal muscle disorder associated with adverse health and health utilization outcomes. SARC-F or SARC-CalF are recommended for case finding in community-dwelling older adults by the Asian Working Group for Sarcopenia (AWGS) 2019 consensus. Recently, MSRA was developed and validated in Italian community-dwelling older adults as a full seven-item (MSRA7) self-report questionnaire evaluating general and dietary risk factors for sarcopenia and a short five-item (MSRA5) version omitting two questions on dairy and protein intake. The aim of our study is to compare the diagnostic performance of the MSRA5 and MSRA7 with SARC-F and SARC-CalF in healthy community-dwelling older adults in Singapore.

Methods: We performed a post-hoc cross-sectional secondary data analysis of the GeriLABS-2 longitudinal cohort study in Singapore. SARC-F and SARC-CalF were administered to participants per study protocol, while MSRA5 and MSRA7 scores were derived from appropriate questions available from baseline data. We performed receiver operating characteristic curve analysis to ascertain area under the curve (AUC) against sarcopenia diagnosed using the AWGS 2019 consensus criteria. We applied the Delong method to compare AUCs of the four instruments.

Results: There were 230 participants, mean age 67.2 (±7.4) years, 92% Chinese and 73% female. Participants were healthy, mean Lawton's score 22.7 (±0.5). 3.9% were frail using the modified Fried phenotypic criteria.

MSRA5 and MSRA7 demonstrated poor diagnostic performance, with AUCs of 0.511 (95%CI: 0.433,0.589) and 0.526 (95%CI: 0.445,0.606) respectively, compared to SARC-CalF 0.739 (95%CI: 0.671,0.808) and SARC-F 0.564 (95%CI: 0.591,0.636). SARC-CalF demonstrated significantly superior discriminatory ability compared to SARC-F, MSRA5 and MSRA7 (all $p<0.01$). MSRA5 demonstrated lower specificity (0.597) and sensitivity (0.464) than SARC-CalF (Sn=0.661;Sp=0.738); while MSRA7 traded higher specificity (0.887) for lower sensitivity (0.145).

Conclusions: The poor diagnostic performance of MSRA5 and MSRA7 in our study suggests the limitations of self-report questionnaires assessing general and dietary risk factors for sarcopenia case detection in healthy and culturally diverse community-dwelling older adults. More studies in different populations are needed to ascertain the utility of MSRA for community case-detection of sarcopenia.

B195 Student Presentation

Caring for Dementia Caregivers and their Loved Ones via the HOMeCARE Exercise and Mindfulness for Health Program (HOMeCARE): A Randomised, Single-blind, Controlled Trial

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Background: Informal dementia caregivers may experience significant stress and burden when caring for their loved ones, contributing to higher risk of transition to residential aged care. Our objective was to investigate the effects of a combined intervention of mindfulness-based stress reduction (MBSR) for dementia family caregivers and robust home-based progressive resistance training (PRT) and balance training for their loved ones.

Methods: This was a two arm, randomized, controlled, single-blinded, parallel-group trial of dementia dyads. The intervention was conducted in nine Australian dyads' homes. Assessments were conducted in both clinic and home settings.

Dyads were randomised to an intervention group: an 8-week MBSR course for dementia caregivers and high intensty PRT and challenging proressive balance training 3 days/week for 12 weeks for their loved ones or a waiting list control group receiving usual care. Primary outcomes were caregiver mindfulness state (State Mindfulness Scale; SMS) and caregiver burden (Zarit Burden Interview; ZBI) collected at 0, 4, 8 and 12 weeks, and physical performance for their loved one (Short Physical Performance Battery; SPPB) at 0 and 12 weeks.

Results: Thirty-four dyads were screened, nine were eligible [caregivers: median age 75 (40 – 81) years; 5 females, loved ones: 77 (73 – 88) years; 6 females] and randomised. MBSR significantly improved the SMS [relative effect size (95% confidence interval) 1.35 (–0.10, 2.81); P = 0.009], with no significant effects on the ZBI [relative effect size (95% confidence interval) 0.22 (–1.09, 1.54); P = 0.622], and PRT and balance training improved the SPPB [mean difference (95% confidence interval) 1.53 (–3.09, 6.14)] by an amount above the minimal clinically importnt difference of 1.

Conclusion: MBSR significantly improved the dementia caregiver's mindfulness state, with no significant effects on caregiver burden, and PRT and balance training resulted in clinically meaningful improvements in functional mobility for their loved ones. Extension of these findings to large randomized controlled trials with aging in place as an outcome is warranted.

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Vaccination as a protective factor for PASC in Frail, Pre-frail, and Robust Veterans During the Omicron Wave

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Background: Post-Acute Sequelae of SARS CoV-2 Infection (PASC) includes a wide range of symptoms that develop during or following COVID-19 infection and last more than 4 weeks, according to CDC. Studies confirm vaccine effectiveness against PASC. Our objective was to evaluate the association between vaccination and PASC in frail, pre-frail, and robust patients.

Methods: This was a retrospective cohort study using data from the VA COVID-19 Shared Data Resource to identify US Veterans with positive COVID-19 test from 01/01/22 to 02/01/22, without prior positive tests, and who were alive 30 days after infection. Follow-up: from time of positive test to documentation of PASC or Sep 22, 2022. Exclusion: Veterans with non-FDA approved vaccines or missing vaccine information. "Fully vaccinated": 7 days after 2nd dose of BNT162b2 and mRNA-1273 and after 1st dose of Ad26.COV2.S. "Booster receivers": 1 day after any additional vaccine dose. Multivariate logistic regression to assess association between vaccination status and PASC, adjusted for age, BMI, race, ethnicity, smoking, active patient in the past 24 months, and rurality.

Results: We identified 148,700 COVID-19 positive veterans surviving 30 days after infection, 34,118 (22.9%) frail, 41,966 (28.2%) pre-frail, and 72,616 (48.8%) robust. Mean age was 56.3 years (SD=16.2; IQR: 43-71), 127,765 (85.9%) male, 95,807 (68.1%) white. 58,283 (39.2%) were vaccinated without booster and 33,446 (22.5%) had a booster. 4,518 (7.9%) patients had documented PASC. In frail, vaccine and booster shot were associated with 20% (adjusted OR=0.80, 95% CI:0.73-0.87) and 30% (adjusted OR=0.70, 95% CI:0.64-0.77) reduction respectively in the odds of developing PASC. In prefrail, vaccine and booster shot were associated with 20% (adjusted OR=0.80, 95% CI:0.74-0.87) and 35% (adjusted OR=0.65, 95% CI:0.59-0.72) reduction respectively in the odds of developing PASC. In robust, vaccine and booster shot were associated with 14% (adjusted OR=0.86, 95% CI:0.81-0.93) and 26% (adjusted OR=0.74, 95% CI:0.67-0.82) reduction respectively in the odds of developing PASC.

Conclusion: Vaccination was associated with lower incidence of PASC in frail, pre-frail, and robust patients, further decreased by booster. This underlines the importance of vaccination, especially the pre-frail and frail.

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Vaccine Effectiveness Against COVID-19 Infection by Frailty Status among US Veterans

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Background: People with frailty -an age-related state of vulnerability to stressors caused by multisystemic dysfunction- are at increased risk for severe COVID-19 related clinical outcomes. We aimed to determine mRNA vaccine effectiveness against SARS-CoV-2 symptomatic infection according to frailty status, based on the hypothesis that vaccine effectiveness against infection would be lower in patients with frailty.

Methods: We used a test-negative case-control study to assess the variation of vaccine effectiveness against SARS-CoV-2 infection during the Delta wave according to frailty status among U.S. Veterans, using VHA medical centers nationwide data from the VA COVID-19 Shared Data Resource. Veterans 19 years and older, who had at least one COVID-19/Flu like symptoms and received a SARS-CoV-2 PCR or antigen test at VHA medical centers between July 25 to September 30, 2021, were included in this study. Vaccine effectiveness was defined as 1-odds of vaccination in cases/odds of vaccination in controls, where cases were patients who had a COVID-19 test and tested positive for SARS-CoV-2, and controls were those who tested negative. Frailty was measured using the VA frailty index (VA-FI), which is based on the deficit accumulation conceptual framework. Based on the VA-FI, the patients were categorized as robust (0-<0.1), pre-frail (≥0.1-<0.21) and frail (≥0.21).

Results: A total of 58,604 patients (age:58.9±17.0, median:61, IQR:45-72; 87.5%men; 68.1%white; 1.3%African American, 8.3%Hispanic) were included in the study. Of these, 27,733 (47.3%) were robust, 16,276 (27.8%) were prefrail, and 14,595 (24.9%) were frail. mRNA vaccine effectiveness against symptomatic infection was lower in patients with frailty, 62.8 % (95%CI:59.8-65.7), versus prefrail 73.9% (95%CI:72.0-75.7), and robust, 77.0 % (95%CI:75.7-78.3).

Conclusion: This test-negative case control study showed that mRNA vaccine effectiveness against infection was lower in Veterans with frailty. Our research findings have important clinical implications by providing evidence that frailty status should be considered when designing, developing, and evaluating new vaccines.

B198 Student Presentation

Associations of Social Support with Overall Symptom Burden and Mental Health Symptoms After a COVID-19 Hospitalization Among Older Adults

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Background: Little is known about the relationship between social support and symptom burden among older adults after a COVID-19 hospitalization.

Methods: From a prospective cohort of 341 community-living persons aged ≥60 hospitalized with COVID-19 between July 2020-July 2021, we identified 311 participants who had at least 1 follow-up. Baseline social support was self-reported through a 5-item version of the Medical Outcomes Study Social Support Survey (range, 5-25), with low social support defined as a total score in the lowest quartile (score ≤15). Symptom burden was self-reported at baseline and follow-up at 1, 3, and 6 months through an evaluation of 14 symptoms via a modified Edmonton Symptom Assessment System score inclusive of symptoms relevant to COVID-19. Mental health symptoms, defined as a score of ≥3 on the PHQ-2 or GAD-2, were similarly evaluated at baseline and follow-up at 1, 3, and 6 months. Longitudinal associations between social support and physical and mental health symptoms were determined through multivariable regression with negative binomial and logistic regression models, respectively. Models were adjusted for month of follow-up, age, sex, race, ethnicity, baseline symptom count, body mass index, and pre-existing functional disabilities or chronic conditions, with mental health analyses additionally adjusted for the presence of cognitive impairment during the index hospitalization.

Results: In our cohort, the mean age was 71.3 years (standard deviation, 8.5), 163 (52.4%) were female, and 73 (23.5%) were of Black race. 68 patients were identified as experiencing low social support. In multivariable analysis, low social support was associated with a higher symptom burden over 6 months of follow-up (rate ratio, 1.24; 95% confidence interval [CI], 1.02–1.50). However, social support was not associated with mental health symptom burden (odds ratio, 1.35; 95% CI, 0.74–2.43).

Conclusions: In this prospective cohort study, low social support was significantly associated with greater physical, but not mental health, symptom burden among older adults following a COVID-19 hospitalization. Findings suggest a potential need for social support screening and the development of appropriate interventions.

B199 Student Presentation

Examining the independent and interactive association of physical activity and sedentary behaviour with frailty in Chinese community-dwelling older adults

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Background: While physical inactivity or prolonged sitting has been linked to an increased risk of frailty, the interaction between sitting time (ST), physical activity (PA) and frailty is not well understood. The aim of this study was to examine the dose-response relationship between PA, ST and frailty and further to evaluate the interaction effect of PA and ST on frailty in the context of regular COVID-19 epidemic prevention and control in China.

Methods: A cross-sectional analysis was performed on 1458 participants (age ≥ 60) enrolled from a prospective cohort study of frailty in elderly people of Fujian Province. PA and ST levels were assessed using the International Physical Activity Questionnaire. A 40-item frailty index (FI) quantified frailty. Multivariable logistic regression and linear regression models were applied to examine the dose-response relationship between PA or ST and frailty level. Interaction plots were used to visualise the interaction effects of PA and ST on frailty.

Results: Compared with light PA, the odds ratios (ORs) for frailty were significantly lower for moderate PA (OR, 0.609 [95% CI, 0.419, 0.885], P <.001) and vigorous PA (OR, 0.399 [95% CI, 0.236,0.673], P <.001). Comparing subjects with ST < 4 h/day, those with ST ≥ 8 h/day were significantly more likely to be diagnosed with frailty (OR, 3.140 [95% CI, 1.932, 5.106], P <.001), 6-8 h/day (OR, 1.289 [95% CI, 0.835, 1.989], P >0.05), and 4-6 h/day (OR, 1.400 [95% CI, 0.972, 2.018], P >0.05). Each one unit increase in metabolic equivalents (h/day) of PA was related to an average 0.928 (0.887, 0.971) decrease in prevalence of frailty, while each one unit increase in sitting time (h/day) was related to average 1.114 (1.046,1.185) increase in prevalence of frailty. Negative interactive effects of PA and ST on frailty were observed (P < 0.001).

Conclusion: There are nonlinear and linear dose-response relationships between PA, SB and frailty respectively. In addition, excess ST may counteract the beneficial effects of PA on frailty. Interventions that focus on reducing excess ST may be effective strategies to reduce the risk of frailty and should be taken seriously by public health authorities, especially in the context of regular epidemic prevention and control in China.

B200 Encore Presentation

Social Frailty and the Covid-19 Pandemic: Disentangling the Bi-Directional Relationship

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Background: Social frailty (SF) refers to the continuum of social vulnerability whereby resources, activities/behaviors, and abilities that have the potential to fulfil basic social needs may be lacking. This is salient during the COVID-19 pandemic, which has disproportionately affected older persons to exacerbate social inequalities. This study examines the relationship between SF and Covid-19 pandemic control measures by comparing changes in SF status pre- vs post-Covid, and examining the impact on one-year outcomes.

Methods: The 8-item Social Frailty Scale (SFS-8) has a validated 3-factor structure comprising social resources (F1), social activities and financial resource (F2), and social need fulfilment (F3). We applied the SFS-8 to examine the relationship between SF and Covid-19 lockdown measures in 203 healthy community-dwelling older adults from the GeriLABS-2 study. One hundred and fifty-one (74.3%) completed face-to-face assessment prior to enhanced pandemic control measures [termed 'pre-circuit breaker' (pre-CB)], while fifty-two (25.6%) were assessed remotely between July to August 2020 ['post-circuit breaker' (post-CB)] after control measures were lifted. We performed logistic regression adjusted for covariates to ascertain the impact of of baseline SF versus decliners on self-rated health and pre-frailty/frailty at one year.

Results: The post-CB intra-group comparison showed significant increase in social frailty total score (0.73±0.95 vs 1.85±1.16, p<.001), underpinned by an increase in F1 and F2 but not F3. Looking at transitions in SF status, there were 27 (51.9%) decliners in the post-CB compared with 11 (7.3%) in the pre-CB group. Decliners in post-CB group had lower physical activity, lower SRH, and higher SFS-8 scores at one-year (all p<0.05). In regression analysis for 1-year outcomes, baseline SF predicted pre-frailty/frailty (OR:3.49, 1.04-11.76) but not SRH, whereas decliners predicted SRH (OR:3.69, 1.34-10.14) but not pre-frailty/frailty.

Conclusion: Our results suggest a bi-directional relationship whereby the pandemic control measures impact SF, and conversely, SF baseline status and decliners exert a differential impact on outcomes. Taken together, this supports the routine assessment of SF status in the pandemic era to avert adverse outcomes linked to social determinants.

B201 Encore Presentation

Blood Pressure Variability and Intrinsic Capacity in older adults

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Background

Alterations in neurocardiovascular mechanisms occurring with aging lead to impairment in physiological variability patterns, such as those implicated in the regulation of blood pressure (BP). Higher BP variability (BPV) may represent a clinical manifestation of such a dysregulation in homeostatic mechanisms. Most physiopathological mechanisms underlying BPV are implicated in vascular aging, which in turn might contribute to the decline of global functions in older people. Intrinsic Capacity (IC) represents an innovative approach of geriatric medicine and refers to the combination of one's physical and mental abilities. The IC framework comprises cognition, mobility, psychological, vitality, and sensory functions. We aimed to investigate the association of visit-to-visit systolic and diastolic BPV and IC over time in a population of community-dwelling older adults.

Methods

We conducted a secondary analysis of the Multidomain Alzheimer Preventive Trial (MAPT). The study population consisted of community-dwelling participants aged ≥ 70 years, who underwent up to 9 repeated clinical examinations during the 5-year follow-up period. Systolic BPV (SBPV) and diastolic BPV (DBPV) were determined through several indicators including the coefficient of variation (CV%) and taking into account BP change over time, the order of measurements and formulas independent of mean BP levels. Cognition, psychology, locomotion and vitality constituted the four domains evaluated to obtain the outcome measures of IC. Total IC Z-score at each time point resulted from the sum of the four domains Z-scores divided by 4. Linear mixed models were used for the statistical analyses.

Results

1407 participants (median age 75 years, female 64%) were included. Higher SBPV was significantly associated with poorer IC Z-scores in all unadjusted and multivariable-adjusted models [1-SD increase of CV%: β (SE)=−0.010 (0.001), p <0.01]. Similar results were observed with higher DBPV [1-SD increase of CV%: β (SE)=−0.003 (0.001), p=0.02], except ARV and SV which were not associated with poorer capacities.

Conclusions

Both greater SBPV and DBPV were associated with poorer IC. Our findings suggest that BPV might be a potential marker of aging. Further studies are needed to assess whether controlling BP instability could be an effective intervention to preserve IC.

B202

Comparing Medicare Claims-based Frailty Algorithms to Predict and Identify Frail Persons

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Background: Information on frailty risk is critical to improve care and patient outcomes. However, frailty is not routinely assessed and documented. Claims-based frailty algorithms may help to proactively identify frail persons. This study compared a new claims-based algorithm developed by researchers at RAND with two existing claims-based frailty algorithms developed by Kim et al. and by Faurot et al. Using Medicare claims, model performance predicting hospitalizations, nursing home stays and days at home, were compared for the three algorithms and a baseline model using only age and sex.

Methods: The study population included 35 million Medicare FFS beneficiaries with at least 12 months of continuous enrollment during 2014–2016. Predicted frailty scores for each of the three algorithms were generated from an 80% sample for each model. In a 20% validation sample, models were compared based on the model performance to predict the three outcomes using two performance metrics – root mean square error (RMSEA) and Area Under the Curve (AUC). We also evaluated model performance in subgroups of interest – ICD version, race/ethnic group, Area Deprivation Index (decile), age under/over 65 years, post-acute care stay.

Results: Performance statistics show all three algorithms performed similarly and were better than the baseline model, but Kim's frailty model had slightly better performance across the claims-based outcomes for hospitalizations, nursing stay and days at home (AUC: 0.73, 0.88, 0.82, respectively) compared to baseline (AUC: 0.62-0.72), RAND (AUC: 0.66-0.85) and Faurot models (AUC: 0.68-0.81). Subgroup analyses showed algorithms better at predicting an outcome

overall tended to also predict that outcome better across subpopulations. Black beneficiaries generally had the lowest AUC and highest RMSE for both Kim and RAND models across all three outcomes, indicating worse model performance. However, the percentage improvement over the baseline model was similar across racial groups.

Conclusion: This study demonstrates claims-based frailty algorithms can improve our ability to identify frailty and predict poor outcomes among Medicare beneficiaries, compared with age and sex alone. Claims-based algorithms may be useful to target interventions to patients at risk of poor outcomes.

B203

Did Medicare's Transitional Care Management Program Improve Rates of Timely Post-Discharge Follow Up?

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Background: In 2013, the Centers for Medicare & Medicaid Services (CMS) introduced transitional care management (TCM), a billing code designed to incentivize outpatient clinicians to provide timely outpatient follow up and care coordination in the 30 days following hospital discharge to home. Whether the TCM program has led to greater rates of post-discharge primary care follow up is unknown.

Methods: Retrospective cohort study using 100% Medicare fee-for-service claims from 2010 through 2019. The cohort consisted of all patients discharged home following hospitalization or discharged home from a skilled nursing facility following a hospitalization. The primary outcome was receipt of a primary care visit (evaluation and management visit or TCM visit) within 14 days of discharge. Primary care visits included visits to internists, geriatricians, family practice physicians, and advance practice clinicians (APCs) within primary care clinics. An interrupted time-series framework was used to compare timely post-discharge visit rates prior to TCM (2010-2012) and following the introduction of TCM (2014-2019) We conducted subgroup analyses by type of discharge, age, gender, race/ethnicity, Medicaid dual-eligibility, frailty, and Elixhauser readmission risk score.

Results: The cohort included 63,359,849 eligible discharges of which 48,183,010 occurred following the introduction of TCM. In 2010, 36.6% of patients received post-discharge primary care visits within 14 days of discharge. By 2019, 45.5% of eligible patients received post-discharge primary care visits, an absolute increase of 8.9%. Prior to the introduction of TCM, the rate of timely post-discharge visits was increasing by 0.90% (95% CI, 0.83 – 0.97) annually. Following the introduction of TCM, the rate of change of post-discharge visits increased to 1.45% annually (95% CI 0.85 – 2.05). In 2019, TCM visits accounted for 30.5% of post-discharge visits and APCs delivered 30.1% of post-discharge visits. Trends in post-discharge follow up and TCM utilization rates varied significantly across both patient factors and type of discharge.

Conclusions: The introduction of CMS's transitional care management program was associated with a 9% absolute increase in rates of timely post-discharge primary care follow up.

B204

Social Need Patterns and Interventions for a Senior Population

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Background

Up to 80% of health depends on Social Drivers of Health (SDOH) including housing, food, transportation, socialization, and digital connectedness. We examined SDOH patterns specific to urban underserved elders and assessed early interventions.

Methods

Patients were screened for 13 SDOH domains (financial, food, stress, education, housing, partner violence, social isolation, transportation, digital connectivity, utilities, physical activity, and employment) through MyChart, clinics, care coordinators and public events. Early interventions include community health worker outreach, Social Isolation programs (Calls for HOPE), medically tailored meals (Food as Medicine), financial wellness programs (ESOP/LIFEPOP), supplemental internet access/education, and referrals through an e-referral platform to community-based organizations.

Results

Of 82,355 patients screened, 24% were 65+, 29%black, 5%hispanic and 62%female. Seniors rank the highest rates of risk in social isolation 42%, housing stability 34% and lack of physical activity 28% but rank lowest in stress 9%, lack of transportation 7% and partner violence 1%. Compered to younger individuals persons 65+ are more likely to have challenges in digital connectivity (OR: 2.1) and physical activity (OR: 1.4) but less likely to experience partner violence (OR: 0.3) and stress (OR: 0.4). Black seniors are more likely to experience food insecurity (OR: 2.13) and housing instability (OR: 1.4) but less likely to experience stress (OR: 0.6) or social isolation (OR: 0.6). Seniors with limited physical activity or digital connectivity are more likely to have CHF (OR: 2.2) or Dementia (OR: 2.0), and had 2.4x more ED visits and 2.5x more inpatient stays.

Interventions

Over 2,300 seniors had a social needs referral through UNITE Ohio. Seniors are 1.5x more likely than younger patients to have a resolved referral. This resulted in improvements to patients' health, reduction in hospital utilization. One senior housing building was a model for enhanced digital connectivity.

Conclusions

The most significant impediments to health are around economic instability, transportation, loneliness, food insecurity mental health and technological barriers. As we start to analyze the effectiveness of SDOH based intervention, seniors have a different profile than younger persons. Initial results are encouraging with higher rates of social needs resolved referrals.

B205 Encore Presentation

An Area Agency on Aging Community Care Transition Initiative for rural older adults: medication problems from a pharmacist telehealth medication review

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Background

The Michigan Region VII Area Agency on Aging (AAA) implemented a Community Care Transition Initiative (CCTI) program, including a community health worker (CHW) home visit and telehealth pharmacist visit for rural older adults after hospitalization. This study's objectives were to 1) categorize medication therapy problems (MTPs) identified through pharmacist telehealth medication reviews and 2) describe pharmacist recommendations or interventions to address MTPs.

Methods

This was a cross-sectional study. A retrospective chart review was used to abstract data from the AAA electronic medical record (EMR) for CCTI visits and 2) the local hospital EMR for hospitalizations. Eligibility criteria were: 1) Medicare insurance, 2) diagnoses at risk for readmission, 3) LACE score > 4, and 4) discharge to home from January 2018–December 2019. The Pharmacy Quality Alliance Medication Therapy Problem Categories Framework was used to categorize MTPs and their rationale. More than one MTP, rationale, or pharmacist recommendation could be categorized. Descriptive statistics were used.

Results

Of 825 eligible discharges, 477 (57.8%) enrolled and completed a CHW home and telehealth pharmacist visit. About 52% of participants were female, 73% were aged 65-84, and 14% were 85 years or older. The pharmacist identified MTPs in 76% of visits, addressing 773 medication-related needs. MTPs were categorized as adherence (n = 295, 38%), safety (n = 247, 32%), effectiveness (n = 129, 17%), and indication (n = 102, 13%). The most prevalent rationale for the safety MTPs was undesirable effects (n = 178) and that the patient did not understand instructions (n = 190) for the adherence MTPs. The pharmacist provided 1,136 recommendations, with medication-related (n = 487, 42.9%) and care-related (n = 147, 12.9%) patient education being the most common. Medication recommendations included adjusting medication interval (n =112, 9.9%), starting new medication (n = 56, 4.9%), and adjusting dose (n = 39, 3.4%).

Conclusions

Medication problems were common after the care transition home. Community-based strategies, including pharmacist medication reviews after care transitions, are warranted to improve medication use in rural older adults.

B206

Association between hospital quality rating and new central nervous system (CNS)-active prescriptions after discharge in older adults with dementia

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Background: CNS-active medications may lead to poor outcomes in older adults with dementia. Prescribing may be influenced by aspects of hospital quality as measured by Hospital Consumer Assessment of Healthcare Providers and Systems (HCAPHS). The objective was to examine the association between hospital quality measures and new CNS-active medication prescribing after discharge among older adults with dementia.

Methods: This cross-sectional study included hospitalizations in adults ≥ 66 years with diagnosed dementia between 1/2016-8/2019 from a 20% sample of fee-for-service Medicare beneficiaries with Part D coverage. Hospitalizations discharged to skilled nursing or inpatient rehabilitation were excluded. The outcome was new CNS-active medication prescribing after discharge based on the 2019 AGS Beers Criteria. HCAHPS patient experience and communication about medication measures (range 1(lowest) to 5(highest)) were the independent variables. Demographics, health, and hospitalization factors were included. We conducted descriptive statistics and used generalized estimating equations to examine associations accounting for clustering of patients within hospitals.

Results: We identified 368,198 hospitalizations in 294,233 beneficiaries with dementia. Over hospitalizations, the mean age was 83 years (SD 8.0), 63% female, 77% White, 12% Black, and 7% Hispanic. New CNS-active medications after discharge were prescribed in 6% (20,908/368,198) of hospitalizations and opioids were the predominant medication (20,233/20,908). The most common rating for patient experience (55%) and communication about medication (47%) was 3. A high (5) versus low (1) hospital quality score for patient experience or communication about medication were both associated with lower odds of receiving a new CNS-active medication after discharge (OR=0.76 (95% CI: 0.63-0.93), OR=0.73 (95% CI: 0.62-0.85), respectively).

Conclusion: New CNS-active medication prescribing after discharge was common. Hospitals with higher quality ratings had lower new CNS-active medication prescribing. As opioids were highly prescribed, a review of pain management needs and deprescribing opportunities after discharge is warranted.

B207

Incremental Healthcare Costs of Self-Reported Functional Impairments and Phenotypic Frailty in Community-Dwelling Older Adults: A Prospective Cohort Study

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Background: Healthcare systems need better strategies to identify older adults at risk for costly care to select target populations for interventions to reduce healthcare burden. Our objective was to determine whether self-reported functional impairments and phenotypic frailty are associated with incremental healthcare costs after comprehensively accounting for claims-based predictors.

Methods: 8165 community-dwelling fee-for-service Medicare beneficiaries (4318 women, 3847 men) who had index examinations (2002-2011) in four prospective cohort studies linked with Medicare claims. Weighted (CMS Hierarchical Conditions Categories index) and unweighted (count of conditions) multimorbidity and frailty indicators (Kim index) derived from claims. Self-reported functional impairments (difficulty performing four activities of daily living) and frailty phenotype (operationalized using five components) derived from cohort data. Healthcare costs ascertained for 36 months following index examinations.

Results: Average annualized costs (2020 dollars) were $13622 among women and $13532 among men. After accounting for claims-based indicators, average incremental costs incurred by individuals with vs. without functional impairments ranged from $3021 for one impairment to $7306 for four impairments among women, and $2108 for one impairment to $10734 for four impairments among men; average incremental costs were $8390 in frail vs. robust women and $5608 in frail vs. robust men. Mean predicted costs adjusted for claims-based indicators varied by both functional impairments and the frailty phenotype ranging from $7955 among robust women and $11005 among robust men without impairments to $18573 among frail women and $22748 among frail men with four impairments. Compared to the model with claims-derived indicators alone, this model resulted in more accurate cost prediction for individuals with multiple impairments or phenotypic frailty.

Conclusions: Self-reported functional impairments and phenotypic frailty are associated with higher subsequent healthcare expenditures in community-dwelling Medicare beneficiaries after accounting for multiple claims-based indicators of costs.

B208 Student Presentation

High Satisfaction with the Friendship Line among Older Adults Experiencing Chronic Loneliness

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Background: Despite growing interest in loneliness as a modifiable risk factor in clinical outcomes, few studies examine the effectiveness of long-standing, widely available interventions. We used mixed-methods to better understand how the Friendship Line (FL), a nationally available and accredited telephone support service established in 1973, impacts older adults experiencing both occasional and chronic loneliness.

Methods: We conducted baseline and follow-up interviews at 3 and 6 months of older adult FL participants (n=68) between Oct. 1st, 2020 to Apr. 30th, 2021. Participants were categorized as daily versus non-daily callers. We tested the association of call frequency with chronic loneliness, defined as scoring 6+ points on 3-item UCLA

Scale (Range: 3-9 points) at two or more time points. Participants' free text responses in surveys and qualitative interviews of a purposive sample (n=12) were analyzed thematically.

Results: 132 interviews were held with 68 individuals across 20 different states. Participants were on average 69 years old (SD=7), 62% female, 2% Black, 4% Latinx, 3% Native American, 12% married, and 9% widowed. Daily callers were more likely to be chronically lonely than non-daily callers (61% vs 18%, p<0.001). Though daily callers reported high levels of loneliness overall, they described greater satisfaction with FL compared to non-daily callers (90% vs 71%) and that FL improved their mental health (90% vs 38%). In interviews, daily callers described how a longitudinal relationship with FL provided evolving emotional support: "When I first started calling it was more about my experience with mental illness… and now it's like it's excitement about the future." In contrast, non-daily callers frequently described FL as an outlet for acute needs or crises, similar to "going to an urgent care where right now you got to talk to someone."

Conclusion: Older adults calling daily to the Friendship Line were more likely to experience chronic loneliness than non-daily callers. Mixed-methods results suggest the Friendship Line can be an important support for older adults managing chronic loneliness in addition to those experiencing occasional loneliness.

B209

Nursing Home Wildfire Exposure and Preparedness

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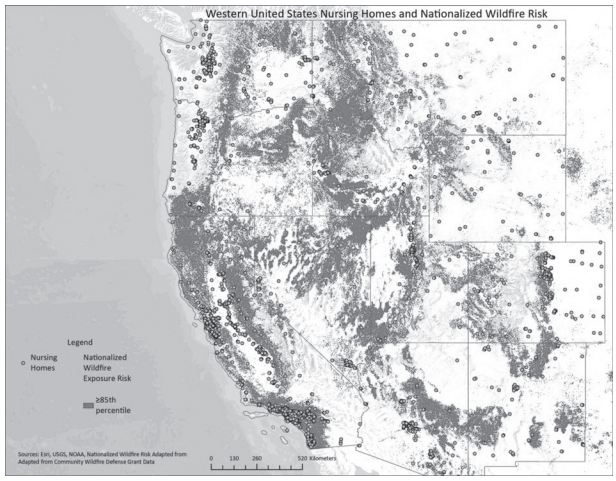
Background: Despite importance to resident outcomes, it is uncertain whether nursing home emergency preparedness is commensurate with surrounding environmental risks.

Methods: We determined the prevalence of nursing homes in the Western United States within 5-kilometers of areas with ≥85th percentile of nationalized wildfire risk, using the Community Wildfire Defense Grant Dataset. We identified critical emergency preparedness deficiencies cited during Centers for Medicare & Medicaid Services (CMS) inspections from January 2017 to December 2019. We used stratified generalized estimating equations to evaluate associations between exposure and the presence and number of deficiencies across four distinct CMS regulatory regions: New Mexico, Mountain West, Pacific/Southwest, and Pacific Northwest. We report odds ratios (OR) and rate ratios (RR) with 95% confidence intervals (CI), adjusted for facility characteristics.

Results: Of the 2,218 nursing homes, 1,219 (54.6%) were exposed (**Figure**) and 1,462 (65.9%) had a critical deficiency. Exposure was positively associated with the presence and number of deficiencies in the Pacific Northwest (OR 1.85, 95% CI 1.58-2.19; RR 1.38, 95% CI 1.05-1.83) and with the presence of deficiencies in the Mountain West (OR 2.09, 95% CI 1.47-2.96). Associations were not statistically significant for New Mexico or the Pacific/Southwest.

Conclusions: There is regional variation in the relationship between wildfire risk and nursing home emergency preparedness, with observed misalignment in the Pacific Northwest and Mountain West. Our findings suggest that there are opportunities to improve the responsiveness of nursing homes to local environmental risks.



B210

Impact of federal initiatives on prescribing among long-term care residents receiving hospice care

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Objective: Nursing homes are an important location for the provision of hospice care and antipsychotics and opioids are a common component of the hospice toolkit. While patients in hospice are generally excluded from more general prescribing recommendations, national policies to improve prescribing, while well intended, can have spillover effects that impact populations not originally intended by these initiatives. We evaluated the impact of an antipsychotic reduction initiative (2015 CMS Five Star Quality Rating System) and revised opioid prescribing guidelines (2016 CDC opioid guidelines for treatment of chronic pain) among patients receiving hospice care.

Methods: Using a 20% sample of Medicare beneficiaries residing in long-term care and enrolled in hospice (n= 61,379), we evaluated the impact of the 2015 CMS Five Star Quality Rating System on antipsychotic prescribing and 2016 CDC revised opioid guidelines on opioid prescribing. Using an interrupted time-series design, the monthly prevalence of antipsychotic and opioid prescribing in hospice from 2014-2018 was evaluated.

Results: Following the 2015 CMS Five Star Quality Rating System, monthly rates of antipsychotic prescribing declined significantly for patients enrolled in hospice overall (antipsychotic prescribing declined from 20.2% to 16.1%; slope change = -0.1%, p=0.04). The greatest rate of decline was observed among those enrolled in hospice for cancer (decreased from 21.3% to 13.4%; slope change= -0.7%, p<0.001). Following the 2016 CDC revised opioid prescribing guidelines for chronic pain, monthly rates of opioid prescribing declined significantly for patients enrolled in hospice overall (opioid prescribing declined from 38.4% to 34.2%; slope change = -0.1%, p=0.003). During this period, prescribing of opioids also decreased significantly among patients enrolled in hospice for cancer (slope= -0.2%, p=0.01).

Conclusions: Declines in antipsychotic and opioid prescribing following federal prescribing initiatives occurred among long-term care residents in hospice, where use may be deemed clinically appropriate. Although patients receiving end-of-life care are not the target of such prescribing initiatives, such policies can impact unintended populations and require cautious monitoring to make sure potentially appropriate use does not also decline.

B211

Hospice Agency Characteristics Associated with Benzodiazepine and Antipsychotic Prescribing

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Objective: Benzodiazepine and antipsychotic medications are routinely prescribed for symptom management in hospice care but have significant risks for older adults. We explored variation in benzodiazepine and antipsychotic use across hospice agencies and the extent to which patient and hospice agency characteristics were associated with their prescribing.

Methods: Cross-sectional analysis of Medicare beneficiaries ≥65 years old receiving hospice care in 2017 (N=1,393,622) across 4,219 hospice agencies. Main outcome was hospice agency benzodiazepine and antipsychotic prescribing rates divided into quintiles. We determined variation in prescribing practices and the association of hospice agency characteristics with benzodiazepine and antipsychotic prescribing rates, accounting for patient characteristics.

Results: In 2017, 59.1% (N=823,077) of hospice beneficiaries had at least one prescription fill for a benzodiazepine and 35.5% (N= 495,202) for an antipsychotic. Hospice agency prescribing rates varied widely: for benzodiazepines ranging from a median of 11.9% (IQR 2.9,7.7) in facilities in the lowest prescribing quintile to 80.0% (IQR 76.9,84.2) in the highest prescribing quintile; for antipsychotics, from 5.5% (IQR 2.9,7.7) to 63.9% (IQR 56.1,72.0). Non-clinical factors such as large hospice agency size (benzodiazepines: adjusted relative risk [ARR] 1.4, 95% CI 1.3-1.4; antipsychotics: ARR 1.4, 95% CI 1.3-1.4) and for-profit status (benzodiazepines: ARR 1.3, 95% CI 1.3-1.4; antipsychotics: ARR 1.3, 95% CI 1.2-1.3) were associated with being in a high vs. low prescribing facility, while the effect of geography exceeded all clinical variables.

Conclusions: Significant variation in benzodiazepine and antipsychotic prescribing rates exist across hospice agencies, with large differences explained by non-clinical characteristics including region, hospice size, and profit status. Future research needs to address this variation in practice patterns and its association with patient outcomes.

B212

Association between Physicians' Geriatric Training and Patterns of End-of-life Care Delivered to Persons with Dementia: A Cross-Sectional Study

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Background: Geriatric training is designed to prepare physicians to meet the needs of older adults. This study compared patterns of end-of-life (EOL) care delivered to persons with dementia between physicians with versus without geriatric training.

Methods: Participants were Medicare fee-for-service beneficiaries with dementia who died in 2016-2018 (n=100,778). We attributed beneficiaries to a physician who had the largest number of primary care visits during the last 6 months of life and determined whether the physician was trained in geriatrics. Our outcome measures included: (i) advance care planning (ACP) and palliative care, and (ii) high-intensity EOL care.

Results: Beneficiaries with dementia under the care of physicians with geriatric training had a higher proportion of ACP, palliative care counseling, and hospice enrollment (Table). Geriatric training was associated with a lower proportion of emergency department visits, hospital admissions, and ICU admissions in the last 30 days of life.

Conclusion: Physicians with geriatric training provided more ACP and palliative care and less intensive EOL care for persons with dementia compared to physicians without geriatric training.

Association between physicians' geriatric training status and patterns of end-of-life care

Outcome	Adjusted proportion, %		Adjusted difference, percentage points [95% CI]	P-value	Adjusted P-value
	Physicians with geriatric training (n=3,817)	Physicians without geriatric training (n=96,961)			
Receipt of advance care planning and palliative care					
Advance care planning	15.5	13.0	+2.5 [+0.9, +4.0]	0.002	0.003
Palliative care counseling	22.7	20.7	+2.0 [+0.3, +3.7]	0.02	0.02
Hospice enrollment during the last 90 days of life	64.5	59.9	+4.5 [+2.9, +6.1]	<0.001	<0.001
Receipt of high-intensity end-of-life care					
Emergency department visits in the last 30 days of life	54.2	58.1	-3.9 [-5.5, -2.3]	<0.001	<0.001
Hospital admissions in the last 30 days of life	49.1	52.3	-3.2 [-4.8, -1.7]	<0.001	<0.001
ICU admissions in the last 30 days of life	24.8	26.8	-2.1 [-3.4, -0.7]	0.002	0.003
Mechanical ventilation in the last 30 days of life	10.9	12.9	-2.0 [-3.0, -1.0]	<0.001	<0.001
Cardiopulmonary resuscitation in the last 30 days of life	2.1	2.4	-0.3 [-0.7, +0.2]	0.26	0.29
Placement of feeding tubes in the last 30 days of life	1.4	1.4	-0.0 [-0.4, +0.3]	0.90	0.90

B213

Association between Physicians' Clinical Experience and Patterns of End-of-life Care Delivered to Persons with Dementia

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Background: Clinical experience may be associated with the quality of end-of-life (EOL) care delivered to persons with dementia. The study compared patterns of EOL care delivered to persons with dementia according to physicians' years of clinical experience.

Methods: Participants were a 20% sample of Medicare fee-for-service beneficiaries aged 66 years and older with dementia who died in 2016-2019. We attributed patients to a physician who had the largest number of primary care visits during the last 6 months of life. Our outcome measures included advance care planning (ACP) and palliative care, and high-intensity EOL care.

Results: Among the 287,514 beneficiaries with dementia who died in 2016-2019, beneficiaries with dementia under the care of physicians with less clinical experience had a higher proportion of ACP, palliative care counseling, and hospice enrollment compared to those under the care of physicians with more clinical experience (Table). Clinical experience was also associated with a lower proportion of and use of mechanical ventilation or cardiopulmonary resuscitation in the last 30 days of life, although there was no evidence that use of emergency department visits, hospital admissions, or ICU admissions in the last 30 days of life is associated with physicians' clinical experience.

Conclusion: Physicians with less clinical experience provided more ACP and palliative care and less intensive EOL care for persons with dementia compared to physicians with more clinical experience.

Association between physicians' clinical experience and patterns of end-of-life care

Outcome	Adjusted proportion by physicians' clinical experience, %				P-for-trend	Adjusted P-for-trend
	1-10 years	11-20 years	21-30 years	>30 years		
Receipt of advance care planning and palliative care						
Advance care planning	18.6%	17.7%	16.7%	15.4%	<0.001	<0.001
Palliative care counseling	24.4%	23.3%	22.4%	21.7%	<0.001	<0.001
Hospice enrollment during the last 90 days of life	60.0%	59.6%	58.5%	57.5%	<0.001	<0.001
Receipt of high-intensity end-of-life care						
Emergency department visits in the last 30 days of life	53.8%	53.2%	53.5%	54.0%	0.14	0.19
Hospital admissions in the last 30 days of life	47.3%	47.0%	47.2%	47.6%	0.09	0.13
ICU admissions in the last 30 days of life	24.0%	24.1%	24.3%	24.3%	0.24	0.27
Mechanical ventilation in the last 30 days of life	10.1%	10.7%	10.9%	11.0%	<0.001	<0.001
Cardiopulmonary resuscitation in the last 30 days of life	1.7%	1.8%	1.9%	1.9%	0.02	0.03
Placement of feeding tubes in the last 30 days of life	1.2%	1.2%	1.3%	1.3%	0.29	0.29

B214

High-risk medication use among community-dwelling older adults with dementia living alone

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Background: One-third of older people with dementia (PWD) live alone. PWD living alone are more likely to lack support for medication management than PWD living with others. Despite their high risk of medication-related harms, little is known about the frequency and types of high-risk medications used by this group.

Methods: Using merged National Health and Aging Trends Study (NHATS) and Medicare claims data, we performed a cross-sectional analysis of community-dwelling PWD living alone in the US from 2015-2017. We excluded PWD in nursing homes or assisted living. Dementia status was ascertained with a validated NHATS algorithm. We determined medication use from Part D claims, defining high-risk medications as those with adverse cognitive effects or low tolerance of misuse, placing people at high risk of adverse effects from taking not as prescribed (eg., anticoagulants, hypoglycemics, and opioid medications). We compared high-risk medication use among PWD living alone to PWD living with others using chi-squared tests and generalized linear (Poisson) models adjusted for age, sex, comorbidity count, possible vs. probable dementia, and self vs. proxy report.

Results: The unweighted sample included 491 PWD living alone, representing 2 million PWD. The mean age was 79.9 years, 66% were female, and 14% and 11% identified as Black and Hispanic, respectively. PWD living alone used a median of 5 prescription drugs (IQR, 3-8), 16% took ≥10 prescription drugs, and 46% took at least one high-risk medication. High-risk medication use included use of at least one: anticholinergic and/or sedating drug in 24%, anticoagulant in 10% (incl. 7% taking warfarin), insulin in 9%, sulfonylurea in 10%, and opioid in 13%. Compared to PWD living with others, use across categories of high-risk drugs was similar (p>0.05 for all). In aggregate, PWD living with others took a clinically similar number of high-risk medications compared to those living alone (adj. incident rate ratio=1.1, 95%CI 0.39-1.3, p=0.37). Among PWD living alone, almost two-thirds (64%) reported managing medications on their own without difficulty, 14% reported managing medications on their own with difficulty, and 18% received help with medication management.

Conclusion: Community-dwelling older adults with dementia who live alone commonly use many medications including some that are high-risk, putting them at risk of adverse drug events.

B215 Encore Presentation

Quality of Care and Quality of Life in GeriPACT: A Comparative Effectiveness Study

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Background

Geriatric Patient Aligned Care Teams (GeriPACTs) combine primary care with specialty expertise for older Veterans in order to promote independence and quality of life (QOL). To guide VA's optimal investment in GeriPACTs, it is essential to understand how GeriPACT differs from VA's traditional primary care medical home (PACT). In this study we examine how quality of care (QOC) and QOL measures change when a patient moves from usual care (PACT) to GeriPACT.

Methods

We used matching in this prospective cohort study to enroll similar GeriPACT-PACT dyads across 57 VA's. Matching variables were derived from EHR data in the period prior to potential GeriPACT exposure and selected based on relevance to entry into GeriPACT. QOC measures were rates of completed advance directives, falls screening, incontinence screening, and functional assessment within 18 months of the first GeriPACT or PACT visit during the exposure period. Logistic regression models estimated the effect of GeriPACT on QOC outcomes, adjusting for variables from pre-exposure EHR data, and baseline survey data. QOL measure was home time defined as days not in an ED, hospital, or short-term nursing facility. Home time was assessed using a negative binomial model, adjusting for similar control variables and patient-level clustering to account for repeated measures.

Results

We enrolled 568 participants; standardized mean differences were < 0.2 among most baseline variables, indicating excellent balance in characteristics such as age (mean 81 GeriPACT; 79 PACT), race (12.4% Black race both groups), medical complexity (mean Care Assessment Need scores 49.4 GeriPACT; 53.1 PACT), and frailty (mean Jen Frailty Index 4.0 GeriPACT; 3.9 PACT). In adjusted models for QOC, GeriPACT was associated with higher odds of assessment for falls (OR 2.9; 1.6,5), incontinence (OR 2.7; 1.7-4.4), function (OR 4; 2.4,6.9) and modestly associated with higher odds of completed advance directive (OR 2.1; 0.96-4.6). In adjusted models for QOL, there were no differences in rate of home time among GeriPACT vs PACT patients (RR 0.99; 0.6-1.6).

Conclusions

Older Veterans who transitioned to a specialized geriatrics primary care clinic experienced improved QOC metrics, but no improvements in the QOL metric of home time. Further investment in GeriPACTs can be expected to improve QOC for older adults.

B216 Student Presentation

Validation of the Electronic Veterans Affairs Frailty Index Against Clinician Frailty Assessment

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Background

The Veterans Affairs Frailty Index (VA-FI) is an electronic frailty index that has demonstrated predictive validity in determining risk of morbidity and mortality among U.S. Veterans. However, the degree to

which the VA-FI is associated with a clinician's frailty assessment is unknown. We sought to validate the VA-FI against a clinician-derived frailty index based on a comprehensive geriatric assessment (CGA-FI) and other clinical measures of frailty.

Methods

In this cross-sectional study, older veterans underwent comprehensive geriatric assessments between 1/31/2019 and 6/6/2022 at VA Boston. A VA-FI and CGA-FI were calculated for each patient. The VA-FI is an electronic frailty index measured by diagnostic and procedural codes. The CGA-FI is a frailty index based on clinician-measured deficits. Clinicians also assessed patients on the Clinical Frailty Scale (CFS), activities of daily living (ADLs), and instrumental activities of daily living (IADLs).

Results

132 veterans were evaluated with median age = 81.4 years (IQR = 75.8-88.7 years). Across increasing levels of VA-FI (<0.2; 0.2-0.4; >0.4), mean CGA-FI increased (0.24; 0.30; 0.40). The VA-FI was moderately correlated with the CGA-FI ($r = 0.45$, $p < 0.001$) and was associated with the CGA-FI (linear regression: beta = 0.05, 95% Confidence Interval [CI] = 0.03-0.07), adjusting for age and race. The VA-FI was also associated with the Clinical Frailty Scale (ordinal regression: odds ratio [OR] = 1.69, 95% CI = 1.24-2.30), ADL dependency (logistic regression: OR = 1.59, 95% CI = 1.20-2.11), and IADL dependency (logistic regression: OR = 1.68, 95% CI = 1.23-2.30).

Conclusion

Our findings demonstrate the construct validity of the VA-FI through its association with clinician-derived CGA-FI, CFS, and functional dependency. This work reinforces the use of the VA-FI to measure frailty in large retrospective studies and lays the foundation for its implementation to prospectively identify frail veterans seen in VA clinics.

B217 Encore Presentation

Frailty Index at the Beginning of Elderhood and Healthcare costs and Utilization Over 10 years

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Background: We assessed whether the frailty index at the same chronologic age in early elderhood can predict healthcare costs and utilization over 10 years in a nationwide Korean population.

Methods: This retrospective cohort study included 215,887 Koreans who attended the National Screening Program for Transitional Ages at the age 66 years in 2007-2009. Frailty status was defined based on a 39-item frailty index: robust (<0.15), pre-frail (0.15 to <0.25), frail (≥0.25). Generalized estimating equations with gamma distribution and identity link function was used to examine the changes in healthcare costs and utilization across the frailty category over the next 10 years. Our interesting variable was an interaction term between the time and frailty categories. The primary outcome was total healthcare costs. Secondary outcomes were inpatient healthcare costs, inpatient length of days, outpatient healthcare costs, and the number of outpatient visits.

Results: The mean frailty index was 0.13 ± 0.07, and 10% were frail. In the frail group, the cumulative total healthcare costs per beneficiary was about $25,366 dollars over 10 years. The total healthcare costs per-beneficiary-per-year increased $1,627 to $3,757, $1,123 to $2,989, $753 to $2,330 in frail, pre-frail, robust group, respectively over 10 years. After adjusting for frailty category and sociodemographic characteristics, frailty was associated with increased total healthcare costs per-beneficiary-per-year (time * robust vs. time * frail: $\beta = 86.3$, $SE = 3.9$, $P < .0001$) and inpatient healthcare costs per-beneficiary-per-year (time * robust vs. time * frail: $\beta = 66.6$, $SE = 3.5$, $P < .0001$). Pre-frailty was more likely to increase in outpatient healthcare costs per-beneficiary-per-year (time * robust vs. time * pre-frail: $\beta = 4.6$, $SE = 0.4$, $P < .0.001$). Higher frailty was significantly associated with the greater increase in inpatient length of days per beneficiary. The number of outpatient visits per beneficiary increased more in the pre-frail group than in the robust group.

Conclusions: Our study adds insights into the long term economic impact of frailty on healthcare costs and utilization. These findings suggest that assessment of frailty may improve the identification of older adults at risk of the high cost to facilitate better targeting of interventions. It may also provide useful information for rational decision making in regard to frailty mitigation.

B218 Encore Presentation

Communication participation in primary care visits: the physician, patient, caregiver triad

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Background: Family caregivers often accompany older patients to medical visits. To optimize care, it is important to understand communication during these triadic visits. In this study we examine the presence of a caregiver on the amount of biomedical and psychosocial-emotional talk during primary care visits.

Methods: We leveraged a dataset of audiotaped primary care visits with 189 older ethnically Chinese and Latino/a patients. We classified each visit according to a family caregiver's presence ('accompanied') or absence ('unaccompanied'). We used the Roter Interaction Analysis System to analyze the audiotapes, identifying and comparing frequency of biomedical and psychosocial-emotional communication elements between accompanied and unaccompanied visits. For accompanied visits, we first excluded and then included caregiver talk.

Results: Of the 189 visits, 60 (32%) were accompanied. Patients who were accompanied were on average older (77.5 vs. 67.2; p<.001), and more often had limited English proficiency (87% vs 62%; p<.001). Half (n=96) of all visits were fully, and 15 partially, language concordant in Chinese, English or Spanish; 66 visits had a professional interpreter present. For 11 (18%) accompanied visits, caregivers acted as interpreters. Doctors did not vary the frequency of biomedical or psychosocial-emotional talk between accompanied and unaccompanied visits. Patients in accompanied visits had less of every talk element compared with patients in unaccompanied visits, including medical information, medical questions, psychosocial and lifestyle information, psychosocial questions, and emotional talk (all p <.02). When adding caregiver talk, there was no longer a difference between accompanied and unaccompanied visits for any element except medical questions which was higher for accompanied visits (p=.02).

Discussion: Having a caregiver present did not change measured physician communication behavior. Caregivers were active participants for both biomedical and psychosocial-emotional communication. It remains unclear the best ways to elicit patients' communication preferences and to balance communication with patients and their caregivers during visits.

B219

Barriers and Facilitators to Unlicensed Assistive Personnel's Involvement in Delirium Care on Acute Care Units: A Multi-Method Study

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Background: Avoiding delirium and decreasing its impact relies on non-pharmacological interventions in prevention and management. Unlicensed Assistive Personnel (UAPs) could increase the use of these

interventions. Still, the nature of their involvement and the factors that could facilitate or prevent it are currently unknown in acute care. This project aimed to describe the involvement of UAPs in acute care medical and surgical settings and highlight the barriers and facilitators to their involvement.

Methods: In a multi-method study in two university-affiliated hospitals, the initial quantitative phase consisted of a survey of 20 items answered on a four-point Likert scale, allowing UAPs to describe their involvement in delirium care. The qualitative phase consisted of recorded, semi-structured, individual interviews with UAPs to better understand the survey results and highlight the barriers and facilitators to this involvement. Descriptive statistics were used to report the survey results, and thematic analysis was performed on the qualitative data.

Results: Of the 72 UAPs, 23% (n=16) identified as male and the average age was 46 years (standard deviation (SD) ±12) with an average of 9 years (SD±7) of experience. Most (76%) worked on medical units. The majority had received delirium training (n=45, 63%), often during their initial UAP education (n=23, 33%), but wanted more information (n=46, 64%). Once delirium was present, most UAPs asked the family to be at the bedside (n=57, 79%) and half reported changing how they communicate with patients. One-third of UAPs reported that the care team (e.g., nurses, physicians) never communicated with them about delirium, while the majority felt this exchange was essential (n=40, 56%). Barriers and facilitators related to role identity and communication issues between UAPs and the rest of the healthcare team. UAPs felt their role was misunderstood by other care team members and expressed the need for better delirium communication with the team.

Conclusion: Results of this study highlight the need to clarify the role of UAPs regarding delirium care and provide educational support to increase their assertiveness and involvement in delirium care.

B220

Impact of Accountable Care Organizations on Post-Acute Skilled Nursing Facility Length of Stay Among Individuals with Dementia

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Background: Accountable care organizations (ACOs) focus on delivering high-quality care and reducing healthcare spending. Post-acute care, particularly in skilled nursing facilities (SNF), is an interest for ACOs as ACO participation has been associated with lower readmission rates, SNF length of stay (LOS), and Medicare SNF spending. However, people with Alzheimer's disease and related dementias (ADRD) have unique needs and patterns of healthcare use that may be negatively impacted by ACO influences to reduce costs in the SNF setting.

Methods: We used a 20% national random sample of Medicare beneficiaries (2013-2017) to identify beneficiaries with a SNF admission within 1-day of an index hospitalization and a clinical diagnosis consistent with ADRD within 365 days up to the index hospitalization (n=263,676). Our primary covariate of interest was ACO (n=66,842) and non-ACO (n=196,834) attribution. Hospital readmission and death were measured for 3 time periods (≤30, 31-90, and 91-180 days) following hospital discharge. Subsequent analysis used least-squares regression to predict LOS as a function of ACO attribution, and patient and facility characteristics.

Results: ACO-attributed ADRD patients have shorter SNF LOS than their non-ACO counterparts (31.7 v. 32.8 days; $p<0.001$). Hospital readmission rates for ACO v. non-ACO differed at ≤30 days (13.9% v. 14.6%; $p<0.001$) but were similar at 31-90 days and 91-180 days. No significant difference was observed in mortality post-hospital discharge for ACO v. non-ACO at ≤30 days, however higher mortality was observed at 31-90 days (8.4% v. 8.8%; $p=0.002$) and 91-180 days (7.6% v. 7.9%; $p=0.011$). No significant association was found between LOS and readmission/mortality after adjusting for facility-fixed effects.

Conclusion: Being an ACO-attributed patient is associated with shorter SNF LOS but is not associated with changes in readmission or mortality after controlling for other factors. Policies that shorten LOS may not have adverse effects on outcomes for people living with dementia.

B221

Life care planning and end-of-life care in decedents with dementia

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Background: While advance (or life) care planning (LCP) is intended to help providers treat patients in ways consistent with their wishes and may also reduce unnecessary health care use, its value has been the subject of fierce debate recently. The purpose of this study was to examine associations between three domains of LCP with high intensity end-of-life (EOL) care in decedents with dementia.

Methods: Data from 65 and older decedents from 2018-2019 with at least one dementia were included (n=13,845). LCP included: timing of the recorded advance directive (AD) or physician order for life sustaining treatment (POLST) forms in the electronic health records (EMR) and timing of the first LCP conversation with a care team member before death (none, 30-89, 90-179, and 180+ days) and code status before the last 30 days. High intensity EOL care was defined as a hospital stay in the last 30 days of life. LCP, health care utilization, timing of the first dementia code, clinical and sociodemographics were obtained from the EMR. We used robust multivariable log-Poisson regression models to assess the association between the LCP domains and high intensity EOL care.

Results: The cohort included 41% decedents of color and 56% women; 43% had a hospitalization in the last 30 days. Three-quarters of the decedents had a recorded AD/POLST form in the 6 months before death (74%), 3% (90-179 days), 4% (30-89 days) and 18% (none). For those with a recorded LCP conversation (n=3094), the distribution were: 30-89 days (35%), 90-179 days (26%), and 180+ days (39%). Over half of the decedents were full code. Multivariable models showed no associations between timing of when an AD/POLST form was recorded and the first LCP conversation with high intensity EOL care; however, full code status was associated with 11% higher risk of high intensity EOL care (RR: 1.11, 95% 1.07-1.16). Enrollment in palliative care or hospice and earlier coding of dementia were significantly associated with lower risk of high intensity EOL care.

Conclusions: Patient/family decisions about aggressive versus comfort care and earlier coding of dementia, not the timing of when AD/POLST forms are recorded in the EMR nor timing of the first LCP conversation is more associated with the intensity of EOL care.

B222 Student Presentation

Clinical Circumstances Underlying Gaps in Dispensing: Understanding Medication Discontinuations and Deprescribing

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Background

Accurately identifying medication discontinuations in electronic health records (EHR) is important for developing evidence about deprescribing. Gaps in dispensing are often used as proxies for discontinuations but clinical circumstances associated with dispensing gaps are not well described. Misclassification of discontinuations may bias study results.

Methods

We created a retrospective cohort of older adults who experienced a 90-day gap in dispensing for long-term oral diabetes medications, proton pump inhibitors, statins, drugs with anticholinergic effects, anticoagulants, antiplatelet drugs, or antihypertensives. Approximately 50% of records were selected to have no further refills after the gap. Chart reviewers classified dispensing gaps as true discontinuations (clinically intended) and non-discontinuations (no evidence of intent to discontinue) and further described clinical circumstances associated with gaps in each category.

Results

Of N = 1,318 records, 754 (57%) reflected true discontinuations. True discontinuations included provider intent to discontinue, intentional substitutions, intentional stops and restarts, and agreeing with a colleague's or patient's decision to discontinue. Non-discontinuations included low adherence, dose changes, substitutions due to pharmacy formulary changes, and drug formulation changes. Many non-discontinuations had no explanatory documentation suggesting either low adherence or other intermittent use such as temporary holds. True discontinuations were more common when a gap was not followed by subsequent fills.

Conclusions

Gaps in dispensing may over-estimate medication discontinuations, biasing outcome assessments in deprescribing studies. Understanding circumstances associated with dispensing gaps can inform development of data-based methods to identify discontinuations within EHRs.

B223

Examining Emergency Department Length of Stay for Persons Living with Dementia

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Background: Persons living with dementia (PLWD) have frequent emergency department (ED) visits. Given the challenges of caring for PLWD in the ED, PLWD may be at risk for prolonged ED length of stay (LOS), which is associated with risk of medication errors, delirium and mortality. We examined the differences in ED LOS by dementia status and factors associated with prolonged ED LOS for PLWD.

Methods: We used data from the 2014-2018 Healthcare Cost and Utilization Project State ED Database, which includes ED visits that did not result in hospital admission statewide. We focus on data from 4 states: Arkansas (AR), Arizona (AZ), Florida (FL) and Massachusetts (MA) which report LOS. We limited analysis to visits by persons >64 years and matched visits by PLWD to visits by persons without dementia on age, race, sex, reason for visit and state. We define prolonged LOS as >90th percentile. We used mixed multilevel logistic regression to examine differences in risk of prolonged ED LOS for PLWD.

Results: We included ED visits by 541,841 PLWD who were matched to 544,444 persons without dementia. Mean age was 76 years, 9% of visits were by persons of black race, 13% by persons of Hispanic ethnicity. PLWD had a mean LOS of 12.2 hours compared to 7.8 hours for persons without dementia. Twenty percent of PLWD had a prolonged ED LOS (i.e. LOS >22 hours), compared to 10% of persons without dementia. The risk of prolonged LOS varied by state (aORs: 6.9 FL, 2.9 AZ, 1.1 MA versus AR reference group, p<0.001), and was greater in EDs in metropolitan (aOR 1.8) and micropolitan (aOR 1.5) than rural areas (p<0.001), for persons from minority backgrounds (aORs: Hispanic 1.8, African American 1.5, Other 1.4 versus white non-Hispanic, p<0.001), persons with Medicaid and Medicare sources of payment (aORs: Medicaid 1.2, private 0.66 versus Medicare, p<0.001), persons with more chronic conditions (aOR: 1.3, p<0.001) and persons discharged to destinations other than home (e.g. nursing facility) (aOR 1.1, p<0.001).

Conclusions: In this study, PLWD had longer ED LOS and greater risk of prolonged ED LOS than matched older adults with similar reasons for ED visit. Personal and regional factors were associated with risk of prolonged ED LOS, highlighting a need for a deeper understanding of the causes of disparities in the prolonged ED LOS among PLWD.

B224

What Impacts Older Adult Planning for Post-Hospitalization Discharge Needs?

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Background: Hospitalizations are a frequent cause of facility placement for older adults and adversely impact the ability to age-in-place. While the older adult is hospitalized, families/friends consider skilled nursing facility placement, hiring caregivers, or becoming a caregiver themselves. We sought to identify what variables impact older adults' post-hospitalization planning.

Methods: We surveyed a cohort of non-hospitalized patients age 65 and older who have had longitudinal assessment of their cognition, health literacy, and functional skills over the past 15 years. Participants complete baseline surveys, were offered PlanYourLifespan.org (PYL) - an online tool to help older adults plan for their post-hospitalization needs, and then completed follow-up surveys at one month and every 6 months thereafter. Surveys inquire about their post-discharge plans if they would ever be hospitalized, specifically rehabilitation/caregiver preferences. Multivariate logistic regression models were conducted, adjusting for baseline hospitalization decision-making, sex, race, age, number of chronic conditions, participant clinical study site, self-efficacy, living status, cognitive impairment, and PYL use.

Results: A total of 293 subjects were enrolled (mean 73.5 yrs, 40.4% non-white;12 mo retention rate 94.5%). When asked about plans made if hospitalized in future and required post-discharge rehabilitation, subjects were more likely to have made plans if they had increased chronic conditions (OR 1.23;p>0.05,1.02-1.47), increased medications (OR 1.15;p<0.01,1.07-1.25), power of attorney (OR 1.84 ;p<0.05,1.01-3.38), and used PYL (OR 2.61;p<0.01,1.45-4.72). When asked about plans made if hospitalized in future and required help in the home, subjects were more likely to have made plans if they had higher medical complexity (OR 1.13 [p<0.05, 1.03-1.24]), limited health literacy (OR 3.13 [p<0.05, 1.25-7.81]), and used the PYL website (OR 1.72 [P<0.05,1.00-2.93]).

Conclusion: Older adults with higher medical complexity were more likely to plan in advance for their post-hospital discharge needs. Subjects with limited health literacy were also more likely to plan, which may reflect a desire to be better prepared for the health system.

PlanYourLifespan.org planning tool was shown to be effective in assisting older adults plan for their post-hospital discharge needs.

B225 Student Presentation

Social factors associated with uptake and satisfaction with a post-hospitalization home-delivered meals benefit in Medicare Advantage

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Background:

Since January 1, 2021, Kaiser Permanente Southern California has offered a 4-week supplemental benefit of 2-3 home-delivered meals per day to Medicare Advantage members after discharge from a hospitalization for congestive heart failure or other medical conditions. We sought to determine the associations between the level of neighborhood deprivation and food insecurity with patient uptake of and satisfaction with the home-delivered meals.

Methods:

We used a mixed methods approach with survey and electronic medical record (EMR) data for members referred for the meals benefit (n=6169) that was linked to a hospitalization encounter (n=2,254) between January and December 2021. Uptake was assessed using records from the meals vendor; the neighborhood deprivation index (NDI) was calculated based on geocoding. Members who received at least one meal shipment (n=2,943) were invited to complete an email or phone survey about their satisfaction with the meals and food insecurity. Multivariable logistic regression models were used to examine the associations between NDI with meals uptake and food insecurity with satisfaction.

Results:

Over half of the hospitalized patients (mean age: 79±9, 56% nonwhite adults, 35% heart failure admission) referred for the benefit accepted the meals. While we found no significant relationship between NDI and meal uptake (OR: 0.95, 95%CI: 0.84-1.07), we did find that patients who received prior medical financial assistance from the health plan had 32% higher odds of accepting the meals (OR: 1.32, 95% CI: 1.08-1.62). Meals were reported to be very or extremely helpful by 69% of patients who completed the survey (23% response rate). Patients with food insecurity (30% of survey respondents) were twice as likely as patients who were food secure to report that the meals were helpful for their recovery (OR: 2.23, 95%CI: 1.42-3.50).

Conclusions:

The home-delivered meals appeared to be particularly accepted by patients with greater financial strain and helpful to patients with food insecurity, suggesting that supplemental benefits could be more targeted towards addressing unmet needs for vulnerable adults.

B226

Older Adult Indecision about Aging-in-Place with Assistance or Moving into Long Term Care.

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Background: Deciding when to add help to age-in-place (AIP), live with family/friends, or move into a long-term-care (LTC) setting can be complicated. We sought to longitudinally characterize AIP/LTC decision making among a cohort of older adults, as their cognition worsens.

Method: With the PlanYourLifespan (PYL)-LitCog study, we are examining the longitudinal AIP/LTC decision making process among a cohort of older adults age 65+, who have bi-annual cognitive assessments. PYL is a planning tool that has been shown effective in helping older adults with AIP/LTC decision making. Subjects were surveyed at baseline (BL), administered PYL, and then followed with surveys every 6 months. Questions were asked whether they had contemplated or made AIP/LTC decisions in the event of worsening cognition and to describe the decisions. Responses were analyzed using a mixed-methods approach with open-ended responses coded by three coders using constant comparative analysis.

Results: Of the 293 subjects surveyed, mean age was 73.0 years, 72.7% (213) female, 40.4% (118) under-represented minority. Between baseline to 18 months, 66.5% of subjects changed their AIP/LTC plans (28.7% one change, 24.23% two changes, 9.2% three changes) At 1 and 6 mos., the proportion of respondents who change their decision from their prior report is around 44% of total collected responses. By 12 mos., this proportion has declined to 39%, and by 18 mos., the proportion is at around 34 %. Indecision (Yes-No-Yes-No) were seen with changes in family caregivers (e.g., planned to live with daughter who is now in poor health; planned to live with son but dislikes new wife), timing around COVID-19 (e.g., few wished to enter a LTC facility in early stages but more opting in later stages), and personal health. Decision permanence increased at 12- and 18-month time points.

Conclusion: AIP/LTC decision making fluctuates between 6-month periods. However, over time, the decisions progress from circling to permanent. At the beginning (1 & 6 mos.), a sizeable portion of subjects are still 'circling'- making a decision, changing the decision, contemplating/reevaluating on their decision - but later (12 & 18 mos), plannng becomes more permanent. This fluctuation is longitudinally important to study as AIP/LTC decisions should be revisited every 6-12 months in clinical practice.

B227

Messaging for reducing over-screening of breast cancer in older women

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Background: Many older women are screened for breast cancer beyond guideline recommend thresholds. One contributor is pro-screening messaging from healthcare professionals, media, and family members/friends. We aimed to develop messaging to reduce over-screening for older women and evaluate perceptions of these messages.

Methods: We surveyed women ages 65+ using a nationally representative online panel. We developed 8 messages; all mentioned that, for some older women, harms of screening may outweigh benefits and stopping screening should be considered. Messages varied in reasons for stopping screening, including guideline recommendations, shifting patient health priorities, harm of false positives or overdiagnosis, or diminishing screening benefits due to competing mortality risks. Messages also varied in presenting factual statements or an anecdote. Each participant was randomized to 4 of 8 messages. We also randomized the message source to be a clinician, family member, or news story. Primary outcomes were whether the message would make one 1) "think carefully" and 2) "want to find out more information" about the pros and cons of getting a mammogram. We also assessed the potential unintended consequence of evoking worry. Outcomes were measured on 5-point Likert scales.

Results: 790 women without breast cancer history participated (response rate=68%). Mean age was 73.5 years; 25.8% were non-White. 46.5% agreed that the messages would make them think carefully (range across messages=36.7-50.7%), 73.0% agreed that the messages would make them seek more information (range=64.2-78.2%). Top-ranked messages mentioned guidelines, false positive anecdotes,

and overdiagnosis facts. Only 27.9% reported that the messages made them feel worried. Ratings were similar for messages from clinician and news story but lower for messages from family member.

Conclusions: This is the first national study to evaluate messages for reducing breast cancer over-screening. The messages demonstrated moderately strong effects on careful deliberation and information seeking intentions. Message referring to overdiagnosis, previously shown as a difficult concept to communicate, was ranked highly. Combining the top-ranked messages into effective messaging interventions may be a viable and novel approach to reduce over-screening among older women.

B228 Student Presentation

Antidepressants and the Risk of Fall-related Injury in Older Adults with Incident Depression in the United States: A Comparative Safety Analysis

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Background. Fifteen percent of older adults report depressive symptoms. Depression is an independent risk factor for falls, and studies have demonstrated an association between certain antidepressants and falls or fall injury. However, little is known about the comparative risk between individual antidepressants for fall injury in older adults with depression. We compared the risk of fall injury among initiators of antidepressants in separate head-to-head comparisons.

Methods. We used the MarketScan® Medicare Supplemental claims data between 2007- 2019 to perform a retrospective cohort study. Individuals were selected based on an incident depression diagnosis (washout in previous continually enrolled year), and index date was the date of the first antidepressant claim after diagnosis. Subjects were followed until the first occurrence of either fall injury, change or discontinuation of antidepressant, or loss of continuous insurance coverage. To reduce confounding, we used inverse probability of treatment weighting using the propensity score. IPTW-weighted Cox proportional hazards models estimated the hazard ratios (HR) and 95% confidence intervals for each antidepressant pairwise comparison and risk of first fall injury. Covariates included in the propensity score regression and Cox model were age at diagnosis, sex, health plan type, region, year of diagnosis, Charlson Comorbidity Index, prior falls, and medical conditions, with the addition use of concomitant medications in the Cox model.

Results. A total of 138,058 individuals were included, with a mean age of 76.6 years. There were more females than males (68% vs. 32%), and most (97%) individuals did not have a prior fall. There were 44.9 fall injuries per 1000 person-years. Overall, a higher risk of fall injury was associated with initiating duloxetine as compared to other individual antidepressants, except paroxetine (HR 1.11-1.29), and with bupropion as compared to fluoxetine and (es) citalopram (HR 1.09-1.14).

Conclusion. In this comparative safety analysis of older adults with incident depression, new use of duloxetine and bupropion was associated with higher risk of fall injury compared to other antidepressants.

B229 Student Presentation

Factors Associated with Disagreement between App-Directed Clinician Ultra-Brief Confusion Assessment Method and Research Reference Standard Delirium Assessments

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Background: Delirium (acute confusion) has a profound impact on patient outcomes, but clinicians fail to recognize more than half of cases in routine care. The Ultra-Brief Confusion Assessment Method (UB-CAM) is a feasible, quick, and accurate tool for clinicians to identify delirium. The aim of this study is to identify factors associated with disagreement between clinicians' UB-CAM assessments and Research Reference Standard Delirium Assessments (RRSDA).

Methods: The Researching Efficient Approaches to Delirium Identification (READI) study was conducted at two hospitals; 527 inpatients ≥70 years old and 289 clinicians (53 hospitalists, 236 nurses) were included in this analysis. Research associates performed RRSDAs, which included patient and proxy interviews and medical record review. The presence of delirium was determined by the long CAM. Clinicians administered the UB-CAM 2-step protocol using the READI app. We determined clinician, patient, and delirium characteristics significantly associated with disagreement about delirium presence between clinician UB-CAMs and RRSDAs, and report the odds ratio estimates and 95% confidence intervals.

Results: In the 527 patients (mean age 80, 57% women, 35% with dementia), 1795 paired clinician UB-CAM and RRSDAs (17% with delirium) were administered, with an overall agreement rate of 88%. Significant factors associated with disagreement (OR [95% CI]) included: presence of dementia (2.6 [1.7-4.0]), high comorbidity (1.5 [1.01-2.3]), and borderline delirium status (5.6 [3.5-8.9]). Significant risk factors for false negatives were age less than 80 (2.1 [1.03-4.1]) and mild delirium (3.2 [1.6-6.5]). Significant risk factors for false positives were the presence of dementia (3.9 [2.3-6.8]) and subsyndromal delirium (4.9 [2.8-8.4]).

Conclusion: The strongest factors associated with disagreement between clinician UB-CAM screens and RRSDAs were the presence of dementia as a risk factor for false positives, and borderline delirium status as a risk factor for both false positives and negatives. These findings identify opportunities to improve accuracy of clinician screens for delirium.

B230 Student Presentation

Neurofibrillary Tangle Distribution in Posterior Cortical Atrophy and Early-Onset Alzheimer's Disease

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Background: Early onset sporadic Alzheimer's disease (AD) sometimes presents with non-memory symptoms attributed to relatively greater neocortical than hippocampal tau neurofibrillary tangle (NFT) density. Posterior cortical atrophy (PCA) is a variant of AD presenting with visuospatial deficits and atrophy of the occipital cortex, yet the pathologic underpinning of this is poorly understood.

Methods: We examined brains of 50 patients with early onset (age<65 y.), autopsy-confirmed AD from the UCSD Alzheimer's Disease Research Center, 13 of whom were clinically diagnosed with PCA. Immunohistochemistry for tau was performed in the hippocampus (HP), midfrontal cortex (MF), and occipital cortex (OC), and the density of NFTs was measured.

Results: PCA and non-PCA patients did not significantly differ in age (69.0±5.5 y. at death), sex (38% female), or ethnicity

(4% Hispanic). The *APOE ε4* allele was much less frequent in PCA (p=0.005). None of the regional NFT densities differed between the groups, but HP density trended lower in PCA patients (p=0.054). On evaluation 6.2±3.4 years before death, PCA patients were less impaired than non-PCA patients on the MMSE (p=0.007) but did not differ on Clinical Dementia Rating sum-of-boxes scores. PCA patients performed worse than non-PCA patients on a visuospatial task (Block Design; p=0.02), but better on a verbal memory task (Logical Memory; $p=1.7x10^{-6}$). Across all participants, poorer Block Design performance was associated with a higher OC:HP tangle ratio (p=0.03), while poorer Logical Memory performance was only associated with HP tangle density (p=0.02). The relationship between Block Design performance and the OC:HP tangle ratio was similar in the two groups (i.e., p=0.03 even when restricted to non-PCA patients).

Conclusions: Despite differences in the predominance of early visuospatial symptoms, PCA and non-PCA patients did not differ in OC tangle density, with some of the highest densities in non-PCA patients. The degree of visuospatial impairment was associated with the relative distribution of OC to HP tangle pathology across both groups. Results suggest that greater memory impairment in the non-PCA patients associated with a higher HP tangle density may moderate the predominance of visuospatial impairment so that they do not receive a formal PCA diagnosis.

B231

Integrated care for patients with dementia and behavioral disorders in the home setting.

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Behavioral symptoms involve suffering and functional worsening of people with dementia, overburden their caregivers and increase emergency department visits, hospitalizations and early institutionalizations.

OBJECTIVES: To evaluate the results of an interdisciplinary intervention to improve the control of behavioral symptoms in elderly people with dementia receiving chronic care at home.

MATERIALS AND METHODS: before-after quasi-experimental study. Inclusion criteria: admission to the Home Medicine section, age older; and major cognitive impairment with behavioral disorders of complex management for the attending physician; or need for adequacy of psychotropic drugs during the transition of care for having suffered an acute confusional syndrome during hospitalization.

INTERVENTION: Provision of care by a health care team coordinated by a geriatrician via telemedicine, the home follow-up physician and a health and social care counselor. The geriatrician agreed on tailored interventions together with the patient's relatives.

The main outcome variable was changes in the score of the behavioral disorders subscale of the NPIq questionnaire. The consumption of psychotropic drugs, standardized by defined daily doses (DDD) according to WHO.

RESULTS: 81 persons were included (72% women), mean age 89.5 years. At baseline, they had the following mean (SD) symptom intensity scores of: delirium 1.1 (2.7), hallucinations 1.3 (2.6), agitation-aggression 2.6 (4.3), depression 0.9 (2.9), anxiety 1.1 (3.0), euphoria-denial 0.1 (1.0), apathy 0.6 (2.3), disinhibition 0.3 (1.7), irritability 1.0 (2.7), motor disturbances 0.9 (2.7), nocturnal behaviors 2.2 (3.8), appetite-ingestion 0.3 (1.6), total intensity 12.5 (13.7). At baseline, 42.0% were taking benzodiazepines, mean DDD 19.9/100 patients.

After the intervention there was an average decrease of -7.6 points in the total NPIq scale (95%CI -10.0 to -5.1; p<0.001) and 50% of those taking benzodiazepines had discontinuation or dose decrease. without significant changes in other psychotropic drugs (only an increase in donepezil and memantine).

CONCLUSIONS: The integrated management of elderly with dementia and behavioral disorders improved behavioral symptoms with decreased doses of BZD after the intervention.

B232 Student Presentation

The Relationship of Diabetes Status to Total and Regional Brain Volumes and Cognitive Function: the GeneSTAR Study

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Background: Diabetes is a chronic disease that is related to energy dysregulation. We aimed to investigate the effect of diabetes on metabolically active regions of the brain, grey matter volume (GMV), and the basal ganglia (BG), as well as its impact on cognitive performance in the aging population.

Methods: 775 participants from the GeneSTAR (Genetic Study of Atherosclerosis Risk) Study who underwent clinical screening and brain magnetic resonance imaging were analyzed. Glycemic status was stratified into no diabetes, prediabetes, and diabetes. Mixed-effects linear regression models were performed to evaluate the relationship of glycemic status to total, regional, and cross-sectional brain volumes (BVs) standardized to intracranial volume (ICV) as well as cognitive measures, accounting for age, sex, race, and education. Interaction by age was tested.

Results: Mean age was 51.05 (range 29–74), 59% were female, and 39% were Black. Mean GMV with cerebellum, GMV without cerebellum, frontal, temporal, parietal, and occipital lobe volumes and insula volume were all significantly different by glycemic status (all p<0.05). Metabolically active regions of the brain also demonstrated significant differences in BV across glycemic categories, including the BG, caudate, thalamus, and putamen (all p<0.05). In general, mean regional BVs were lower in those with diabetes vs prediabetes vs no diabetes; however, globus pallidus volume was higher (p< 0.001). Multivariate linear regression models demonstrated that the relationship of glycemic categories to total GMV (with cerebellum), putamen, globus pallidus and cerebellum remained significant (all p for trend <0.05). There was no significant interaction by age. Cognitive function tests were significantly lower in those with diabetes vs no diabetes in multivariate regression models for the digit span score (β -1.02; 95% CI -1.9, -0.12) and digit substitution score (β -2.14; 95% CI -4.22, -0.07).

Conclusions: Persons with diabetes vs no diabetes have smaller total GMV, regional volumes, cerebellum, and components of the BG. These areas represent metabolically active regions of the brain and are related to lower cognitive function, as well. Our results suggest that brain atrophy and decreased cognitive function are present in people with diabetes, compared to those with no diabetes, regardless of age.

B233

Motor Metabolite Metrics Mark Mentation: Relationship of Brain Neurometabolite Levels in Motor Cortex to Executive Function in Older Adults

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Objective: To investigate the relationship of measures of executive function based with individual differences in levels of gamma-aminobutyric acid (GABA) concentration in older adults as assessed by magnetic resonance spectroscopy (MRS) in sensorimotor cortex during motor skill learning.

Design: The study reports on data from the baseline session of a randomized controlled trial evaluating exercise on measures of upper extremity motor training and cognition in older adults.

Setting: This study involved community dwelling older adults and was performed in a medical center.

Participants: After obtaining informed consentfrom participants, we acquired MR spectra of GABA and Glutamate/Glutamine (Glx) from 17 older adults. The measurements are GABA density, motor skill acquisition and measures of executive function using the Delis-Kaplan Executive Function System (DKEFS).

Outcome Measures: The behavioral measures of executive function included processing speed (Trails A&B, components of Stroop, digit symbol substitution), language function (phonemic verbal fluency, semantic fluency, verbal recall), working memory (n-back, digit span) and general cognitive function (MoCA). The measurements are MRS evaluated GABA and Glx density relative to water across three conditions (rest, entrainment, recall). We acquired motor skill learning data measured by reaction time and accuracy for both entrainment and recall of a motor sequence learning task.

Results: Older adults with higher levels of GABA at baseline exhibited fewer errors and faster entrainment on a motor skill learning task. Greater change between GABA and Glx ratios) during task entrainment were related to measures of processing speed Trails A&B, Digit Symbol substitution.

Conclusions: Changes in GABA/Glx during procedural learning may reflect differences in cortical excitability related to long-term potentiation. The correlation between larger change in neurometabolites and higher executive functions show that neurochemical changes in the sensorimotor cortex during a motor task may be a potential biomarker of individual differences in processing speed in older adults.

B234

Potentially Inappropriate Medication Administration by Dementia Family Caregivers

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Background: In the community setting, family caregivers are responsible for the administration of medications to their care recipients with dementia. Yet, little is known about the daily medication administration practices. Chemical restraint, or the administration of medication to change a behavior for the convenience of the caregiver, is a frequent occurrence in nursing homes. The purpose of this study is to describe frequency of potentially inappropriate medication (PIM) administration over a 21-day period, and associated risk factors.

Methods: Co-residing family caregivers to persons with dementia were recruited nationally. Participants completed an online baseline survey followed by 21-days of brief online daily surveys reporting on daily caregiving events. PIM administration was assessed on the daily surveys with the following yes/no question: Did you give your relative a medication to make them easier to handle or less of a problem? Descriptive statistics, including chi-square and ANOVA, were used to analyze data.

Results: Participants (N=453) represented a diverse sample (51% Non-Hispanic White) who were mainly females (87%) caring for a parent, parent-in-law or step-parent (57%). During the 21-day period 29% (N=132) of participants gave a PIM to their relative with dementia an average of 6 days (SD 6). Among participants who gave a PIM, only half (54.5%) reported that their relative with dementia had a prescribed anxiolytic or antipsychotic medication. There were no significant differences among demographics between those who gave a PIM and those who did not. Participants who gave a PIM reported significantly more days of engaging in neglectful ($p<.001$), psychologically abusive ($p<.001$), and physically abusive ($p<.001$) behaviors towards their relative with dementia.

Discussion: Family caregivers engage in the use of medications with the intent of making care easier with moderate frequency. The use of PIM is associated with other harmful caregiving behaviors such as abuse and neglect, indicating those who use PIMs may represent a high-risk type of caregiving situation. Only half of caregivers who used PIMs had access to a prescribed pro re nata behavior modifying drug. This indicates caregivers may be misusing over-the-counter medications or engaging in drug diversion.

B235 Resident Presentation

"What the eye doesn't see and the mind doesn't know, doesn't exist?" The risks of undiagnosed dementia during hospitalizations

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Background: Hospitalized older adults often have undiagnosed preexisting dementia. However, little attention has been dedicated to these patients' clinical outcomes. We estimated the prevalence and effect of undiagnosed dementia on in-hospital adverse outcomes.

Methods: We used data from the CHANGE Study, an ongoing cohort of adults aged ≥65 years admitted to 15 hospitals throughout Brazil. Participants underwent comprehensive geriatric assessment on admission. Trained physicians completed the Clinical Dementia Rating (CDR) with informants, using the patients' cognitive status 3 months before admission as the reference, avoiding possible effects of acute cognitive impairments. Combining clinical history and CDR scores, we defined patients as: without dementia (negative clinical history + CDR<1), with diagnosed dementia (positive clinical history + CDR≥1), and with undiagnosed dementia (negative clinical history + CDR≥1). We used logistic regression models (adjusted for age, sex, race/ethnicity, education, comorbidities, illness acuity, and hospital) to investigate whether patients with undiagnosed dementia had higher in-hospital mortality.

Results: We included 486 patients (mean age=81 years; women=63%; non-White=42%). We observed that 142 (29%) had diagnosed dementia, but 64 (13%) had undiagnosed dementia, meaning that 31% of patients with preexisting dementia were undiagnosed. Patients with undiagnosed dementia had higher in-hospital mortality than those without dementia (30% vs 14%; adjusted OR [aOR]=2.36; 95%CI=1.19-4.70) and with diagnosed dementia (30% vs 20%; aOR=2.33; 95%CI=1.02-5.34). Patients with undiagnosed dementia had longer median length of stay than those without dementia (14 vs 9 days; p=0.03) and with diagnosed dementia (14 vs 9 days; p=0.01).

Conclusions: One in three hospitalized older adults with dementia had not been diagnosed before admission. Hospital providers should be attentive to identifying patients with undiagnosed dementia and be aware that they might have worse outcomes.

B236

Post Discharge Follow-up Call Found to Decrease 30-Day Pneumonia Readmission Rate.

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Objective: We formed a pneumonia task force with the goal of preventing avoidable hospital readmissions and improving the quality of care provided to patients hospitalized with pneumonia. Analysis of a scripted phone call highlights need for improvement in post discharge phone conversation.

Background: The prospect of reducing hospital readmissions is of increasing interest to researchers and policy makers because of its potential to improve the quality of care and lower health care cost (2).

Methods: Chart review of readmitted patients revealed opportunities for improvement. Monthly meetings occurred to discuss the data and brain-storm ways workflow and processes of care could be refined, to assure compliance with evidence-based guidelines and to effect smooth transitions. Data highlighting opportunities for improvement led to the development of an inpatient pneumonia power plan, the use of the Pneumonia Severity Index, the creation of a pneumonia discharge checklist, and the development of a pneumonia discharge patient education tool. We analyze a timely follow-up phone call within 24-48 hours on discharged pneumonia patients with a scripted template.

Results: 2021 second quarter had 31 pneumonia discharges; 28 (90%) were called. None of 7 patients who received a scripted call was readmitted; 3 of the 24 (12.5 %) who received non-scripted call were readmitted.

Third quarter had 30 discharges; 28 (93%) were called. None of the 10 who received a scripted call was readmitted; 3 of the 20 (15%) patients who received a non-scripted call were readmitted.

Fourth quarter had 29; 23 (79%) were called. None of the 15 patients who received a scripted call was readmitted; 1 of the 14 (7%) patients who received a non-scripted call was readmitted.

There was 0% readmission rate with scripted calls compared to 7-15% with non-scripted calls.

Conclusion: The use of a 24-48-hour post discharge scripted phone call provides a structured method for the nurse to assess a patient's health status and to ensure hospital follow-up visit, leading to a reduction in readmission rates.

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3. Josh P. M et al. Dx and Tx of CAP

B237

POSH Pals: Post-Operative Follow-Up for High-Risk Veterans

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Background: The Durham VA Perioperative Optimization of Senior Health (VA-POSH) program supports high-risk older Veterans undergoing elective surgery. Components of the program include pre-operative care, consisting of a case conference by an interprofessional (IP) team and clinic visits by a geriatrician and other providers, and post-operative IP rounding. However, a gap has existed within POSH to provide post-discharge care. In 2021, a group of medical students and faculty designed a pilot post-operative follow-up intervention. This intervention has two components: 1) provide post-discharge care to Veterans with an emphasis on social determinants of health (SDOH), and 2) educate medical students on SDOH, IP care, and safe transitions.

Methods: This is a pilot study from 2021-2022 in VA-POSH in which medical students screened Veterans for SDOH after observing the IP case conference. One to 3 weeks after hospital discharge, the students, along with a Geriatrics fellow, performed a follow-up call to the Veterans to identify post-operative care discrepancies. The fellow gave clinical recommendations, routed identified needs to PCPs, and consulted social work if needed based on the SDOH screening. Medical students completed a pre/post survey regarding changes in confidence and values on SDOH screening and safe transitions after their involvement with this pilot.

Results: In the pilot, 45 Veterans were screened, and 18 follow-up phone calls were completed. Twenty-five medication discrepancies were reconciled, and 3 medical supply needs and 4 requested referrals were identified. Three patients were reminded of forgotten future appointments, and safe opioid disposal education was provided to all patients. Eight medical students participated, and 4 students fully completed the survey. On the survey, 3/4 (75%) of the students indicated improved confidence in SDOH screening and all four (100%) indicated improved appreciation of the value of the IP team in caring for patients.

Conclusions: This pilot identified numerous care discrepancies for Veterans in the post-operative period and improved students' understanding of SDOH screening and the value of IP care. This year, we are expanding this program with increased enrollment of Veterans and working toward program sustainability.

B238

Implementation of Annual Wellness Visits as a tool to enhance patient-centered geriatric care in underserved communities

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Background: The US geriatric population is growing at an exponential rate, yet health systems and clinicians are not prepared to deliver patient-centered geriatric care. The presenters will share the implementation of a HRSA-funded project integrating Medicare Annual Wellness Visit (AWV) and 4Ms as a tool to enhance geriatric care and advance health equity in underserved populations.

Methods: Setting: Two primary care clinics sites affiliated with an academic institution located in urban underserved areas of Chicago, serving mostly Latinx and Black or African American communities. Baseline data collection: Chart audit of care provision Intervention: Development of an implementation plan to optimize geriatric care, which included creation of a visit template with all aspects of AWV and 4Ms and staff training to ensure engagement and role clarity. Evaluation: Process and outcomes

Results:

Clinic A:

Chart audit: completed N=100 (2021)

Training: Clinic health professionals trained on AWV and 4Ms

Healthcare system integration: AWV template integrated into EPIC EMR system

Patient care outcomes* (Jan-May 2022): 26 AVWs, 22 Falls Screenings, 9 Dementia Screenings, 18 Depression Screenings, 7 Polypharmacy Screenings, 11 Advanced Directives Screenings

* clinics were closed for routine outpatient care due to COVID 19; services were resumed in Jan 2022

Clinic B:

Chart audit: completed N=337 (2022); Staff training and next steps in progress

Conclusions: Located in medically underserved neighborhoods, our primary care clinics are transforming primary care environments into Age-Friendly systems to provide value-based care and increase older adults' access to patient-centered care. These patients are predominantly from minority groups, with most at or below the federal poverty level, and largely from Latinx or Black/African American backgrounds. Integration of AVW and 4Ms in geriatrics care is feasible and requires commitment, system resources, clinical team training as well as patient education and engagement. The growing older adult population makes it imperative for health systems to embrace change and meet the needs of this population and advance health equity.

B239 Student Presentation

An Assessment of Outcomes After Total Laryngectomy in Older and Younger Adults

R. Cheever, J. Blumberg. *The University of North Carolina at Chapel Hill, Chapel Hill, NC.*

Background: Head and neck cancers are the 6th most common cancer worldwide and affect a diverse range of subsites within the upper aerodigestive tract, with the larynx being a frequently affected site. Chronic use of alcohol and tobacco places susceptible older adults at particular risk of developing head and neck cancer, which has an average onset age of 60. There is currently a lack of research on the success of surgical procedures for head and neck cancers in older adults over the age of 65. It is therefore imperative to expand research on evidence-based surgical interventions for older adults with head and neck cancers, like laryngeal cancer, to not only prolong survival but also optimize quality of life following treatment.

Methods: The present study is a retrospective chart review of post-surgical complications in younger patients (less than or equal to 64) and older patients (greater than or equal to 65) undergoing total laryngectomy or total pharyngolaryngectomy for laryngeal cancer at UNC Medical Center from 2014 to 2021. Rates of post-surgical complications in older and younger adults were determined for pharyngocutaneous fistula (PCF), wound breakdown and dehiscence, infection, esophageal stricture, failure to achieve tracheoesophageal voice prosthesis (TEP) fluency, prolonged times to clear swallow study, prolonged hospital stays, rehospitalizations, emergency department (ED) encounters, and operating room (OR) procedures. Charts were reviewed from the time of procedure to 3 months post-discharge. TEP fluency was assessed to 9 months post-discharge.

Results: There were no statistically or clinically significant differences between older and younger patients in any post-surgical complications, including failure to achieve vocal fluency via TEP-assisted speech within 9 months of discharge from total laryngectomy. The use of specific free flap tissues for pharyngeal repair resulted in no clinically meaningful differences in rates of post-surgical complications between older and younger patients.

Conclusions: Older adults do not experience more post-laryngectomy complications than younger adults. Concern about the ability to achieve TEP fluency should not prevent surgeons from offering TEP to older adult patients. In addition to offering TEP, age should not prevent surgeons from offering laryngectomy to older patients.

B240

Activity Blankets: A Nonpharmacological Approach to Hospital Dementia Care

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Background: Persons living with dementia (PLWD) have two times more hospitalizations than persons without cognitive impairment. For PLWD, the unfamiliar environment of the hospital setting results in behavioral and psychological symptoms of dementia (BPSD). The objective of this quality improvement project was to evaluate the potential role of activity blankets as a nonpharmacologic intervention for the management of BPSD and its effect on resource utilization and hospital caregiver (HCG) experience.

Method: We conducted a retrospective chart review of older adults (65+) with a documented history of dementia, admitted to one medicine unit at a large academic hospital in the Northeast. Activity blankets were distributed to patients who were deemed to be at risk for BPSD or delirium, and could still engage with diversionary activities. In-depth chart reviews were completed to collect information regarding demographics, dementia severity (based on the Functional Assessment Scale, FAST), and clinical management of BPSD. In addition, surveys were distributed to HCGs regarding their experience with the activity blankets.

Results: A total of 23 hospitalized PLWD received an activity blanket. The mean age of participants was 84.2 years old. All participants (n=23) had at least moderate dementia (FAST stage 6C and higher). Over half (56.5%, n=13) of participants displayed BPSD prior to receiving the blanket. 26.1% (n=6) of patients received constant observation and 4.4% (n=1) required use of restraints prior to activity blanket use, which were not required by any patients following the use of the blankets. Following activity blanket receipt, the use of psychoactive medications decreased (pre vs. post activity blanket use): antipsychotics (47.8%, n=11 vs. 17.4%, n=4); benzodiazepines (34.8%, n=8 vs. 8.7%, n=2); and diphenhydramine (13%, n=3 vs. 4.4%, n=1). With regard to HCG (n=8) experience with activity blankets, staff reported high levels of: satisfaction—always (62.5%), sometimes (25%), and neutral (12.5%); frequency of use–always (37.5%) and sometimes (62.5%); helpfulness—always (25%) and sometimes (75%); and enjoyment for patients—always (12.5%) and sometimes (87.5%).

Conclusion: There is an urgent need to improve the provision of care for hospitalized PLWD. Activity blankets are an innovative nonpharmacologic strategy to prevent and manage BPSD.

B241

Geriatric Consultation and Co-management in an Emergency Department Observation Unit

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Background: The growing geriatric population is challenging our over-taxed emergency departments. The delivery of prompt, high quality, and effective care to patients presenting with geriatric syndromes is challenging in the ED, and innovative partnerships between ED clinicians and geriatric specialists are needed. We piloted a consult-based co-management model involving close collaboration between the ED observation unit and inpatient geriatric consultants in a large academic medical center. We provided comprehensive evaluation and management of elderly patients who necessitated a brief observation stay for the purposes of stabilization through intradisciplinary teamwork. Our intradisciplinary team included clinicians, social work, case management, pharmacy, and therapy services.

Methods: Single center retrospective study. Patients treated between April 1, 2022-September 30, 2022. Data collected included diagnoses, medication changes, lengths of stay, rates of discharge to SNF, conversion to inpatient status, and re-admission as compared to an age-matched control group.

Results: 222 patients were co-managed over a six-month period, with a mean patient age of 80. Thirty percent of patients were repeat ED visitors, 52% presented with a fall, 55% with polypharmacy, 38% on potentially inappropriate medications, 39% had adverse medication effects. Following a co-managed observation stay, 20% required SNF placement. The average length of stay was 41 hours. Medications were deprescribed in 51% of patients. The average reduction in length of stay was 22 hours when comparing co-managed patients versus control, with no increase in rates of re-admission or conversion to inpatient status.

Conclusion:

Close partnership between geriatric consultants and emergency medicine providers during a brief observation stay can provide an excellent opportunity to stabilize, assess and guide the care of patients with complex geriatric syndromes. Through this partnership, we have effectively provided comprehensive geriatric care, reduced lengths of stay, reduced polypharmacy, and established a fruitful and collaborative partnership to improve the care of elders presenting to the emergency department.

B242 Student Presentation

Antipsychotic Use in Nursing Homes Increased Nationally During the COVID-19 Pandemic

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Background: Antipsychotic (AP) medications are often used inappropriately to manage behavioral and psychological problems among nursing home residents. The COVID-19 pandemic has brought unprecedented challenges to nursing homes. This study analyzes the changes in national antipsychotic prescribing rates within short- and long-term nursing homes during the COVID-19 pandemic.

Methods: National data were retrieved from the Minimum Data Set 3.0 Public Reports of the Center for Medicare and Medicaid Services (CMS). Time periods were defined as *Pre-COVID* (2018 Q3-2020 Q1), *Early-COVID* (2020 Q1-2020 Q4), and *Late-COVID* (2020 Q4-2022 Q2). Pharmaceutical variables of interest included prescription rates of APs, antianxiety, antidepressants, and hypnotics. Diagnostic rates of Alzheimer's, dementia, psychotic disorder, schizophrenia, Tourette's, and Huntington's were also included. Linear regression *t*-test analysis was performed.

Results: The rate of AP usage accelerated significantly during *Early-COVID* compared to *Pre-* and *Late-COVID* times (both $p<0.0005$). There was not a significant difference in the declining rates of AP prescriptions in the *Pre-COVID* and *Late-COVID* periods. Compared to *Pre-COVID* rates, the *Early-COVID* rates of hypnotic usage and schizophrenia diagnoses significantly increased (both $p<0.02$). Compared to *Late-COVID*, the *Early-COVID* period showed significant increases in the rates of hypnotic prescriptions, reported psychosis-related hallucinations, Huntington's disease, and schizophrenia (all $p<0.05$). There were no significant differences in the rates of Tourette's, dementia, Alzheimer's, psychotic disorders, or delusions across any of the three timepoints. There were no significant differences in rates of prescribing antianxiety or antidepressant medications.

Conclusion: Across the United States, nursing home residents were prescribed antipsychotics more frequently during the height of the COVID-19 pandemic response than before the pandemic or during late pandemic times. Although data suggest a current downward trend in antipsychotic usage, there is no indication of a rate correction that would rapidly return prescription rates to pre-pandemic levels. Results from this study may inform future policies or funding allocations to nursing homes to improve residents' quality of care.

B243

Effectiveness of a delirium reduction workflow on adult inpatient outcomes

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Background: Implementation of non-pharmacologic bundled interventions to prevent and treat hospital-acquired delirium in older adults can be challenging to sustain especially in presence of COVID-19. Developing workflows with a smaller sub-set of components may hold promise. Therefore, we aimed to 1) determine the effectiveness of a 5-item daytime and nighttime delirium reduction workflow on delirium rates and length of stay and 2) determine the impact of COVID-19 on this workflow and outcomes.

Methods: All patients admitted between 06/01/17 and 05/30/22 to the Acute Care for Elders Unit at an academic medical center were eligible. We developed a nurse-driven evidence-based five daytime and nighttime workflow. To evaluate the workflow and impact of COVID-19, we measured compliance with workflow elements during daily leader rounds. We then conducted an interrupted time series analyses to determine change in the trends of the unit's delirium rate (i.e., delirium days) and average length of stay (aLOS) for patients with delirium.

Results: There were 4925 patients admitted in the pre-workflow period (Months 0-29), 1640 patients in the post-workflow period (Months 30-39) and 4071 patients in the post-workflow/COVID period (Months 40-66). Compliance with daytime workflow elements remained high across both post-workflow time periods. However, adoption of nighttime workflow elements decreased during the post-intervention/COVID period. Following the launch of the workflow, delirium rates significantly decreased at a rate of 12.2 days per month (95% CI = [-11.4, -0.44] and this trend was significantly different than the pre-intervention trend ($p<0.01$). This significant decrease in delirium rates was not sustained once COVID-19 started. After launch of the workflow, there was no significant changes in aLOS for patients with delirium at any time.

Conclusion: Integration of a 5-item daytime and nighttime nurse-driven delirium reduction workflow is feasible to deliver, monitor and positively impacts delirium reduction but not aLOS. Future efforts should focus on improving workflow compliance that considers the impact of COVID-19.

B244

Addressing Frailty in Primary Care: Polypharmacy and Deprescribing

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Background: Frailty is associated with increased mortality, health costs, and polypharmacy. Providers face barriers to screening and intervention including lack of time, standardized definitions, and low community prevalence. The Clinical Frailty Scale (CFS) is a highly specific, brief scale that correlates with other frailty assessments and can be easily used in the ambulatory setting. Its use may identify those with frailty and benefit from interventions such as deprescribing.

Methods: Patients at two ambulatory geriatric clinics (average age 81) were assessed for frailty using the CFS during select visits. Frailty was defined as CFS score ≥5. Data was abstracted from records regarding number of medications, high-risk medications, and use of supplements. High-risk medications and their indications were investigated using the Beers Criteria to identify targets for deprescribing. Supplements without clear indication were also identified. Frail individuals with polypharmacy will be offered a targeted deprescribing intervention as part of a quality improvement initiative.

Results: Data suggest greater use of supplements among non-frail older adults. There are increased rates of polypharmacy among frail adults once supplements are excluded. Frail adults averaged 1.2 medications that should be deprescribed according to Beers Criteria and 2.6 medications for deprescribing overall. The most common medications identified by Beers Criteria were proton pump inhibitors.

Conclusions: CFS scores ≥5 appear to correlate with polypharmacy and high-risk medication use. The CFS may be a useful tool to identify community-dwelling patients with frailty and meaningfully target deprescribing toward this population.

B245

4AT Fatigue: Is Attention Really Tested in 4AT Delirium Screening by Bedside Nurses?

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Background

4AT has been validated as a delirium assessment tool with sensitivity over 80%. At an urban, academic hospital setting, hospitalized patients over 70 years old undergo a modified 4AT by nurses at least

every 12 hours. A 2021 vs 2019 internal review revealed a doubling of documented patient inability or refusal to complete attention testing among negative screens, prompting additional auditing.

Methods

Nursing education leaders with specific 4AT training were designated as expert assessors and audited 65 patients (57% Male, 43% Female, 81% White, 8% Hispanic, 6% Black) across 15 units in June and October 2022 by performing their own independent 4AT assessment during the hospitalization. Same day nursing and expert assessments were then compared. Experts also asked patients if they recalled being previously tested for attention by days of the week backwards by nursing staff.

Results

Of the 65 expert patient assessments, 5 were positive screens, compared to only 2 by nursing assessment (7.7% positive by experts, nursing sensitivity 62.5%). The remaining 60 negative expert screens correlated with a negative nursing screen (Specificity 100%, PPV 100%, NPV 97%). 19 of the 38 patients (50%) assessed for attention testing recall denied recall of testing prior to the expert assessment. There were 4 patients with negative nursing screens with documentated inability or refusal to complete attention testing. All 4 patients completed attention testing with an expert within the following 6 hours. 3 of those 4 patients (75%) denied recall of prior attention testing. Only 18 of 34 patients (53%) with normal attention assessments reported recall of prior attention testing.

Conclusions

This study with single evaluations of acute care patients over age 70 demonstrated a lower positive rate compared to documented rates of patients ever having a positive 4AT screen in the last 3 years (7.7% vs 24%) underscoring the importance of serial assessments. Patients had limited recall of prior attention testing by nursing assessment. While variation in cognition is characteristic of delirium, low recall rates of past attention testing in patients with normal screens are concerning for nurses assuming patient performance instead of formally testing, lowering the sensitivity of delirium assessments.

B246

Improving Shingles vaccination rates in an outpatient Geriatrics clinic in New York City

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BACKGROUND

According to the Centers for Disease Control and Prevention (CDC), almost 1 out of 3 people in the United States will develop shingles in their lifetime, and 10-18 % of these individuals will develop Post-herpetic Neuralgia (PHN). Among adults aged ≥ 60 years in the US from 2016 to 2018, approximately 33.4% had completed recommended shingles immunization (SI) schedule. Although the SI schedule is recommended for all adults ≥ 50 years of age, and it has been shown to reduce the risk of herpes zoster and PHN by approximately 90%, vaccination rates have remained low nationwide compared to other immunization schedules. We aim to establish our baseline SI rate at our outpatient geriatrics clinic, explore barriers to SI, and implement quality improvement (QI) measures to improve our baseline rates.

METHODS

We conducted a retrospective chart review on 100 patients, randomly selected, seen at Martha Stewart Center for Living Geriatrics Clinic, in September 2021 to establish our baseline data. Our project was considered a quality project by the QI Committee in the Department of Geriatrics and Palliative Medicine at Mount Sinai Hospital, and thus an IRB submission was not needed. A process chart and a fishbone diagram have been designed to identify barriers to SI. A set of stepwise interventions have been designed and applied from September 2021 through September 2022, including educational resources. Periodic chart reviews to be conducted on a quarterly base, starting September 2022.

RESULTS

In September 2021, 33 out of 100 patients (33%) reviewed had completed the recommended SI schedule. Patient's unfamiliarity with shingles vaccine was identified as a major barrier to SI, and educational pamphlets were created and distributed in the clinic, as well as direct patient education by physicians. Post-intervention, our SI rate increased to 40.2% in September 2022. This is an ongoing project, and future updates will follow.

CONCLUSIONS

Patient education was paramount to achieve positive results in our QI project. Starting January 2023, adult vaccines recommended by the Advisory Committee on Immunization Practices (ACIP), including shingles, will be available with no deductible, nor cost-sharing to people with Medicare Part-D. We believe this new CMS change will contribute to further improve our SI rates.

B247

Impact of a Collaboration Focused Intervention to Prevent Urinary Tract Infections before and during the COVID-19 Pandemic

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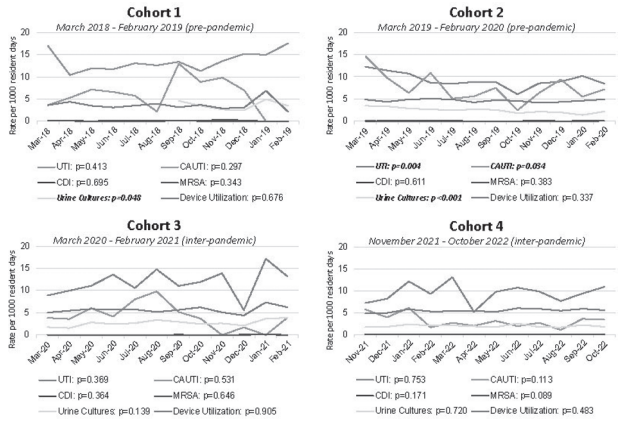
BACKGROUND: Nursing home (NH) – hospital alignment is encouraged by Accountable Care Organizations. We tested a model of collaboration between hospitals and NHs to reduce urinary tract infections (UTI) including catheter-associated UTI (CAUTI).

METHODS: We recruited 80 NHs and 15 hospitals over 4 cohorts, each participating for 12 months (2018-22). The intervention included meetings, site visits and coaching. Education focused on UTI/CAUTI prevention, practices to reduce transmission, and effective communication between hospitals and NHs. NHs submitted data on UTI, CAUTI, *C. difficile,* MRSA, catheter use and urine cultures using REDCap®. We assessed change over time using multilevel negative binomial regression by cohort. T-tests were used to compare outcomes during pre-COVID vs. COVID periods.

RESULTS: We led 37 meetings and 34 site visits. 63 NHs submitted surveys and at least 1 month of outcome data. There were significant reductions in UTI and CAUTI in cohort 2 (C2), and urine culture rates (C1, C2), (**Figure)**. Mean incidence of CAUTI, *C. difficile,* and urine cultures were higher pre-COVID compared to during COVID, while device utilization was higher during COVID vs. pre-COVID (5.5 vs 4.4) Infections were declining pre-COVID (2.16 to 1.13) but the effect was not sustained during the pandemic.

CONCLUSION: Our intervention showed decreases in UTI, CAUTI, and urine cultures before and during the pandemic. Higher device utilization during the pandemic suggests increased risk of infection. Funding: AHRQ R01HS25451



B248 Student Presentation

Results from a provider survey informing adaptation of the KAER Toolkit to aid community-based early diagnosis of dementia in Asian Americans

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Background: The rapidly increasing Asian American older adult population is under-researched & vulnerable to dementia. To improve early detection & diagnosis of dementia, the Gerontological Society of America developed the Kickstart-Assess-Evaluate-Refer (KAER) Toolkit for primary care providers (PCPs). This study aims to: examine connections between providers & community-based organizations (CBOs) serving patients with cognitive impairment (CI) and Alzheimer's Disease & related dementias (ADRD); identify opportunities for information exchange with CBOs; & get provider feedback to adapt the KAER toolkit for use by CBOs serving Chinese, Korean & Bangladeshi older adults.

Methods: REDCap was used to survey PCPs serving Asian Americans. The survey used a convenience sample across these domains: 1) Demographics (7 questions); 2) Dementia diagnosis strategies (15 questions); & 3) (Optional) Input on 6 tools from the KAER Toolkit & CBO Provider Referral Form developed by the study team. Surveys were complete if sections 1 & 2 were answered.

Results: 63 surveys were collected from 12/2021-10/2022; 32 complete surveys, of which 17 surveys included toolkit feedback. Complete survey data represented providers mainly in Geriatrics, Internal Medicine & Family Medicine. 9.4% of providers received CBO reports of concern regarding patients with dementia or CI & 59.4% were somewhat confident or less in connecting patients to CBOs. 84.4% seek more local patient education resources. Provider feedback on usefulness, cultural appropriateness & translatability of the tools resulted in an overall ranking from high to low as follows: Dementia Identification Checklist, CBO Provider Referral, Cognitive Aging Key Messages, Brain Health Pamphlet, Expanded Brain Health Pamphlet & Communication Recommendations.

Conclusion: Providers are aware of the benefit of leveraging community setting to increase detection of patients with ADRD; but, there is a clear gap in communication between CBOs & providers. Providers reported support for leveraging CBOs to aid in CI detection & for patient referral to community-based services. Adapting the KAER toolkit for community settings & fostering community-clinical linkages can aid in early detection & diagnosis of ADRD.

B249

An Intervention to Increase Diabetic A1C Control Rates and Retinal Screening for Accountable Care Organization (ACO) Patients in an Urban Safety Net Primary Care Clinic

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Background: Early detection of diabetic retinopathy is imperative for preserving vision in patients with diabetes mellitus (DM). A large number of patients in our New York City safety net clinic have uncontrolled diabetes which puts them at increased risk of retinal disease due to lack of regular retinal exams.

Methods: In October 2021, we implemented a 12-month quality improvement project in Bellevue Hospital primary care clinic in collaboration with the Emergency Department (ED). Our team ensured that any ACO patient with diagnosis of diabetes who was seen in the ED received appointments for retinal screening and a point of care Hemoglobin A1C test. Patient Care Associates received training in teleretinal screening. Care coordinators utilized care transition reports to identify diabetic patients who had ED visits, and then scheduled primary care appointments for A1C and retinal screening. We implemented physician and nursing oversight to ensure consistent workflow for retinal screening. Primary care physicians managed any diabetic medication changes.

Results: Of the ACO patients with ED visits, 165 had DM. After this one-year intervention, retinal screening rates improved from 15% to 71.5%, and A1C control rates (goal A1C < 8.0) increased from 52% to 78%.

Conclusion: Partnership between the outpatient clinic staff and an ED care management team can improve diabetic control and retinal monitoring in patients who rely on a safety net clinic. Targeting other high-risk patients for these interventions will further improve the health of this population.

B250 Student Presentation

The Last Mile: Getting Patients' Advance Directives into the Electronic Medical Record

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Background:

People with an Advance Directive (AD) in their Electronic Medical Record (EMR) are more likely to receive health care that aligns with their values, goals, and wishes at the end of life. While 63% of patients 65 and older of 4 participating physicians from 2 primary care clinics engaged in Advance Care Planning (ACP) discussions, only 15% of patients filed ADs in the EMR. This project aims to 1) increase AD upload and 2) identify patient-perceived barriers to completing ADs from May 16th to July 25th, 2022.

Methods:

We conducted an eight-week Quality Improvement study with 119 patients 65 years old and older. They are patients of three family physicians and one geriatrician who completed the ACP discussion but did not have an AD filed in the EMR. Two medical scribes and a Medical Assistant (MA) sent patients surveys assessing barriers to AD completion. Before Annual Wellness visit appointments, MA reminded patients about incomplete ADs in pre-visit calls. Finally, physicians discussed ACP with patients without an AD in their EMR. We provided instructions for patients with upload difficulty by calling or messaging them. We defined completed AD as AD filed in the EMR.

Results:

In eight weeks, 14 more Advance Directives were uploaded to the EMR. 26% (31 of 119) responded to the survey. Of those, 42% believed they had already completed it, 52% wanted to do it in the

future, and 3% had never thought about it, and 3% skipped the question. The most common response related to upload misunderstanding (i.e., did not know they must upload ADs to the EMR), followed by lack of time (i.e., still need witness signature) and lack of knowledge of what an AD is.

Conclusions:

Our study identified that the last mile of getting AD into EMR had multiple barriers to overcome. The survey, pre-visit phone calls, and physicians' discussion at clinic visits might have reminded patients to share their ADs with their physicians, and we increased 14 more ADs filed into the EMR. ACP discussion alone is insufficient. We still must follow up with patients to ensure their AD is accessible by their healthcare team so that their wishes regarding end-of-life care can be honored.

B251

Dissecting Delirium: A Review of Current Practices of Assessment and Management in a Large Academic Medical Center

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2. Massachusetts General Hospital, Boston, MA.

Background: A diagnosis of delirium during hospitalization is associated with increased risk of short and long-term mortality, as well as an increase in hospital length of stay. Prevention, early identification, and appropriate management is known to result in improved patient and institutional outcomes. From data collected at Massachusetts General Hospital between 10/1/2021 and 9/30/2022, 99.68% of adult hospitalized patients were screened for delirium using the Confusion Assessment Method (CAM). Of those discharged from medical and oncology services, 19,581 patients were CAM-screened; 12% (2,337) were flagged as CAM positive. Over half of these patients received chemical and/or physical restraints. Our aim was to assess the use of the CAM as a tool for the identification of delirium and to further assess restraint use and other strategies for delirium management.

Methods: Of those screened CAM positive, 14% were 65 and older and from that sample, 32 non-ICU patients were randomly selected for an in-depth chart review of their hospitalization. Items assessed included documentation of delirium in the provider notes, appearance of delirium on the problem list, use of chemical and physical restraints, and use of nonpharmacologic therapeutic interventions.

Results: 75% of the 32 chart-reviewed patients had documentation of delirium in their chart; however, delirium only appeared on the problem list 47% of the time. Restraints were used in 88% of cases. Of the patients who underwent restraint, all received chemical restraints and 11% also received physical restraints. Therapeutic interventions were noted only 53% of the time.

Conclusion: The CAM appears to be a practical tool for identifying hyperactive delirium in hospitalized patients. However, the number of patients with a positive CAM (12%) was much smaller than expected. This suggests that its sensitivity for identifying hypoactive delirium may be low. Additionally, restraint use remains prevalent while the use of therapeutic strategies is underutilized. Next steps include educating front line providers around delirium prevention and management via the creation of a condensed, standardized curriculum that can be distributed hospital-wide. Ultimately, the goal is to increase the use of therapeutic interventions (e.g. increasing mobility) and reduce the use of restraints.

B252

Educating Geriatric Fellows on Motivational Interviewing

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Background

Geriatric patients present with multimorbidity, psychosocial issues and various values that impact their adherence to treatment plans. Physician training is often lacking in applying a biopsychosocial approach to the patients care. This project was designed to improve geriatric fellows' communication skills and comfort level with using motivational interviewing, with a focus on what matters most and mobility in the 4Ms Age Friendly initiative.

Methods

Literature was reviewed for motivational interviewing content and framework was identified for teaching fellows. Geriatric fellows were given a workshop on motivational interviewing which included a PowerPoint presentation followed by organized role play activity. An observation checklist using the framework was created to evaluate fellow performance during the role play. Each fellow was able to role play as the provider and the patient, while other fellows observed using the checklist. Each role play session was allocated a few minutes, followed by dedicated time for feedback and discussion. Data was compiled from the observation checklists to study the application of motivational interviewing strategies by fellows. The fellows also had the opportunity to rate their comfort level with motivational interviewing before and after the workshop.

Results

During the workshop there were 9 role play sessions and 25 observation checklists were collected. Data showed 100% of the time fellows asked open ended questions, 92% expressed curiosity while eliciting patient's preferences, 72% validated patient's emotions, and 80% used reflective statements appropriately. Only 52% of the fellows set a measurable goal. Furthermore, 56 % participants were not able to reach a goal for both what matters most and mobility within the allotted time. After the workshop there was a 20%-30% increase in the fellows' confidence level in using the motivational interviewing tactics.

Conclusions

Geriatric fellows were trained on using motivational interviewing during a workshop with role play in order to improve discussions with patients about what matters most and mobility in the 4Ms Age Friendly initiative. This data shows that practicing through role play and allowing opportunity to provide and receive feedback is an instrumental in learning motivational interviewing techniques.

B253 Resident Presentation

Improving medication adherence amongst independent older adults

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Background: Medication adherence remains a challenge in the treatment of older adults. Non-adherence is associated with poorer health outcomes and increased healthcare costs. A baseline study carried out between August and September 2021 at an inpatient geriatric ward identified that only 25% of independent older adults were adherent to their medications. The most commonly cited reasons for poor adherence were forgetfulness, lack of immediate consequence from missed doses and having too many medications with complex regimen. A range of interventions including de-prescribing, providing an up to date medication list on discharge and a pharmacy outreach programme (POP) were implemented with the aim of improving medication adherence.

Methods: Older adults ≥75 years old admitted under geriatric medicine at an academic medical centre between December 2021 and

March 2022 received formal medication reconciliation. Pharmacists and medical team actively deprescribed medications that were inappropriately prescribed based on the Beer's criteria. On discharge, the patients received a medication list and were counselled on the changes made. Patients were also referred for continued follow up by POP. Patients were followed up via phone call regarding their medication adherence 2 weeks post-discharge. Adherence was measured based on patient response to the question 'over the past 2 weeks, how many days have you not taken your medications as prescribed'.

Results: A total of 44 patients with mean age of 85, 61% females, received formal medication reconciliation. Amongst them, 18 (40.9%) were self-administering medications. The mean number of medications on admission was 8.2. Adherence amongst those who self-administered medications was 33.3%. De-prescribing was done in 29 patients and a total of 50 medications were de-prescribed. Vitamins and cardiovascular drugs formed the majority of drugs that were de-prescribed. Nineteen (43.1%) patients were referred for POP. 2 weeks post-discharge adherence improved to 77.7% amongst the independent older adults.

Conclusions: Independent older patients who self-administer medications had improved medication adherence with deprescribing, medication counselling and pharmacy outreach programme. Implementing these interventions on a larger scale may improve overall health outcomes and reduce healthcare costs.

B254 Student Presentation

In-network transition of care from hospital to SNF: effects on rehospitalization

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Background: Transition of care from an acute hospital to community is a vulnerable period for geriatric patients. Previous research identified issues with transitions to home and few methods to prevent miscommunication and promote smooth transition. However, there are not as many studies focused on transitions from acute hospital to skilled nursing home. UCSF and San Francisco Center of Jewish Living (SFCJL), a skilled nursing home started a new collaboration in July 2021. The main objective is to improve the care of UCSF patients at the SFCJL and to decrease number of hospital/emergency room (ER) transfer from the SFCJL. The hypothesis is that UCSF geriatricians, who has access to UCSF electronic medical record and easy access to consultants at UCSF, would be able to manage patients from UCSF hospitals.

Methods: Careport database tracks every UCSF patient discharged from UCSF hospitals to care facilities including SFCJL. This dashboard provides data of UCSF patients transferred back to the ER or any hospitals from SFCJL. SFCJL nurse managers names and medical reasons of all patients at the SFCJL who transfer to any ER or hospitals. Both databases were used to obtain rates of transfers to the hospital or ER. Chart review of patient who were transferred were reviewed to determine their Charlson Comorbidity index scores. Comparison of Hospital re-admissions of UCSF patients between July 2022-June 2021 and July 2021-June 2022 were obtained. Inclusion Criteria were UCSF patients transferred to SFCJL between July 2020-July 2022. Excluded UCSF patients who transferred back to UCSF for scheduled procedures.

Results: Preliminary analysis of rate of hospital transfers from SFCJL between July 2020-June 2021 and July 2021-June 2022 was not significantly different. Paired T test with P=0.0712. Further statistical analysis with risk adjustment based on Charlson Comorbidity Index scores for each study population and clinical indication for transfers are pending. UCSF physicians were able to decrease ED or hospital readmission rate from 30% in July 2021 to 3.3% in June 2022.

Conclusion: UCSF physicians were able to reduce the number of transfers to ER or hospital due to improved communication with inpatient team and consultants and to have access to inpatient EMR. UCSF physicians are on site at the SFCJL and able to evaluate patients more frequently.

B255

Fall risk predicts healthcare utilization costs in the outpatient population

R. Raj,[1] A. Adaramola,[3] G. E. Taffet,[2] K. S. Agarwal.[4] *1. Baylor College of Medicine, Houston, TX; 2. Geriatrics/Cardiovascular Research, Baylor College of Medicine, Houston, TX; 3. College of Medicine, Texas A&M University System, College Station, TX; 4. Houston Methodist Hospital, Houston, TX.*

Background: Falls are a major health concern for older adults. Annual outpatient screening for fall risk is a quality metric utilized by our accountable care organization (ACO) using the CDC STEADI fall risk algorithm. Despite excellent screening compliance, we have never used fall risk data to examine ACO patients from a population health perspective. The aim of our study is to examine the characteristics of patients identified with fall risk currently and analyze how that correlates with other risk stratification tools used with the goal of providing greater support through chronic care management.

Methods: Administrative database of ACO patients screened for fall risk was queried. We examined de-identified data of 23,743 patients age ≥ 65 who had fall risk screening from November 2021-October 2022. Patients were stratified into "minimal", "moderate", or "severe" fall risk categories based on patient responses to questions in the CDC STEADI algorithm built into EMR. Each category was examined to characterize associations with demographics and three proprietary ACO risk stratification measures: complex care risk, readmission risk, and emergency department (ED) utilization.

Results: 72% of cohort are minimal fall risk, 23% moderate fall risk, and 5% severe fall risk. Average age and female sex of patients increased from 74 years and 60% female in minimal fall risk to 80 years and 72% female in severe fall risk. Of the predominantly Caucasian population (78%), the proportion of patients in each fall risk category is relatively constant. Patients identified as minimal fall risk have the lowest risk profile in which only 1.2% required high complex care, 5.8% had readmissions, and 0.4% required ED visits. Among moderate fall risk patients, the respective proportion of risk increased to 6.3%, 17.4% and 2.7%, and among severe fall risk patients, the respective proportion of risk increased to 13.9%, 26.9% and 7.1%.

Conclusion: Identifying patients at high risk for falls in the outpatient setting may help recognize patients at greater risk for untoward outcomes. Fall risk may be a marker for impending homeostatic failure predicting patients at higher future risk for increased care needs and prompting earlier institution of supportive care management interventions.

B256

Increasing Follow-Up with Primary Care After Emergency Department Visits

S. Romanelli, V. Rivera. *Brookdale Department of Geriatrics and Palliative Care, Mount Sinai Health System, New York, NY.*

Background

Many emergency department (ED) visits are avoidable and have a multifactorial etiology. ED visits can lead to complications for older adults and increased costs for the healthcare system. In a geriatrics primary care practice there was no workflow to follow up geriatric patients after an ED discharge, often leading to poor continuity of care and increased ED utilization. The goal of this quality improvement project was to increase ED follow-up rates from 38% to 70% over a 12-month period.

Methods

Baseline data was gathered by retrospectively reviewing charts of patients who were discharged from the ED from May 2020-April

2021. From July 2021-January 2022 (phase 1), real time chart reviews were conducted of ED discharges and follow-up calls were initiated. From January 2022 – April 2022 (phase 2), the ED report was automated. Starting in April 2022 (phase 3), registered nurses (RNs) began reviewing the report biweekly and making follow-up calls to ED-discahrged patients, offering appointments, and providing pertinent nursing education.

Results

From 75 charts reviewed in phase 1, the most common reason for ED visits was falls-related. Pre-intervention, only 38% of patients had follow-up contact with the PCP office after an ED visit. In phase 1, we increased follow-up calls to 80% through chart reviews and phone calls done by a nurse practitioner. Of the patients outreached to in phase 3, 48% of patients already had follow-up arranged, and RNs added appointments for an additional 28%. In total, 76% of patients had follow up within 72 hours, which is an increase from 38% in phase 1. 15% of patients were not reachable by phone for follow up and 7% declined a follow up appointment. The most prevalent nursing education given in ED follow-up calls was related to falls.

Conclusions

Primary care follow-ups after ED discharges increased from 38% to 76% over a six-month period with the new nurse-led workflow, which increased care coordination and patient communication. Nurses provided education about chronic conditions and reiterated discharge instructions that might have been unclear to patients in the ED. They are also advised about appropriate ED utilization and use of the clinic for urgent issues. This intervention is replicable and scalable to other ambulatory practice settings and helps improve patient outcomes. Future directions may include more analysis of reasons for ED utilization and targeted interventions.

B257 Student Presentation

Exploring Pneumonia, Influenza, and Shingles Vaccination Rates in Community-Dwelling Minority Older Adults.

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Background: Studies have shown that minorities have higher rates of severe influenza and lower vaccination rates than non-Hispanic whites.[1] To explore and increase vaccination rates for pneumonia, influenza, and shingles in the minority geriatric population, the University of Kansas Medical Center participated in the five-year, "Improving Adult Immunization Rates Among Racial and Ethnic Minority Population Project" funded by the American Academy of Family Physicians. This poster aims to identify demographic immunization correlations found in year 1 and share strategies for improving vaccination rates in minority older adults.

Methods: Intervention site was an outpatient academic geriatrics clinic in Kansas City, KS providing primary and specialty care to adults over 65. Strategies used to increase vaccination rates included immunization awareness, reminder systems, culturally competent vaccination materials, linking outside immunizations, patient focus groups and monthly interprofessional team meetings. Patient data from August 2021-July 2022 was analyzed using the Epic EMR system. Descriptive analysis and homoscedastic T-tests were performed. Minority was defined as African American, Hispanic, Asian or Native American.

Results: Of the 533 patients seen from August 2021-July 2022, 213 (40%) were of minority heritage. African Americans comprised 69%, Hispanics 14%, Asians 8%, Native Americans 0%. The highest vaccination changes between the first and final 6 months were for influenza (62% to 75%, P=0.054), followed by pneumonia (74% to 80%, p=0.41), and zoster (20% to 21%, p=0.92).

Conclusion: The initiation of these interventions increased minority vaccination rates for influenza and pneumonia at our clinic. Focused strategies to eliminate disparities in vaccination rates will be shared and further developed.

[1]Black CL et al. Vital Signs: Influenza Hospitalizations and Vaccination Coverage by Race and Ethnicity-United States, 2009-10 Through 2021-22 Influenza Seasons. MMWR Morb Mortal Wkly Rep. 2022;71(43):1366-1373. Published 2022 Oct 28. doi:10.15585/mmwr.mm7143e1PMC9620569.

B258

Integration of Palliative Care in ambulatory oncology in Older Adults for better access to End of Life Care

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Background:

Hospice is essential in care for patients with advanced malignancy. The purpose of this study is to establish whether there is a benefit in incorporating palliative care for older adults with primary malignant lung or colorectal cancer in outpatient settings to facilitate appropriate hospice referral for end of life care.

Methods:

Data was collected from patients with primary malignancy lung or colorectal cancers in ambulatory clinics at John Theurer Cancer Center, Hackensack Meridian Health between 2017 and 2022. Palliative care was added to the standard of care in the outpatient oncology setting in 2019. We compared data from patients pre (Control group {CG} 2017-2019) and post (Intervention group {IG} 2020-2022) integration of palliative care. Data was collected for demographics (age, race, ethnicity, gender and religion) and primary outcomes were hospice referrals and length of stay on hospice.

Results:

This retrospective study included 7,024 patients in the IG and 3,244 patients in the CG. Out of all participants, the majority were white (74.8% CG, 78.8% IG), not Spanish/Hispanic/Latino (87.1% CG, 86% IG) and of Christian faith (77.4% CG, 79.2% IG). IG had a statistically significant higher hospice referral rate (1,325/7,024 = 18.9%) than those in the CG (62/3,244 = 1.9%), chi-square test p-value <0.0001. Those in the IG had a statistically significantly shorter length of stay (median=6 days) compared to those in the CG (median = 8 days), Wilcoxon rank sum test p-value =0.0413. Patients with lung cancer had higher referral rates in the IG than patients with colon cancer (941/1,325 = 71% compared to 363/3,244 = 27.4%).

Conclusion:

Our study indicates that introducing palliative care in the ambulatory oncology setting for older adults improved hospice referral. Furthermore, this study helped showcase implementing standardized hospice referral protocol for advanced cancer stages noted to increase referral rates when comparing lung and colorectal cancers. No improvement was noted in length of stay when comparing intervention and control groups. Having easy access to palliative and hospice care in ambulatory oncology settings and adopting standardized protocols for hospice referrals may improve provision of timely end of life care.

B259

Increasing Serious Illness Conversations in Patients with High Risk of One-Year Mortality: Data from First PDSA Cycle

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1. Internal Medicine, Eastern Virginia Medical School, Norfolk, VA; 2. Geriatric Medicine, Eastern Virginia Medical School, Norfolk, VA; 3. Family Medicine, Eastern Virginia Medical School, Norfolk, VA.

Background:

Mortality review meetings at our hospital identified multiple opportunities for earlier serious illness conversations(SIC), Advance Care Planning (ACP), & earlier hospice referral. Studies have shown

early SIC are associated with better quality of life, enhanced goal-consistent care, positive family outcomes, & reduced costs. The updated Charlson Comorbidity Index (CCI) predicts one-year mortality through the electronic medical record (EPIC).

Methods:

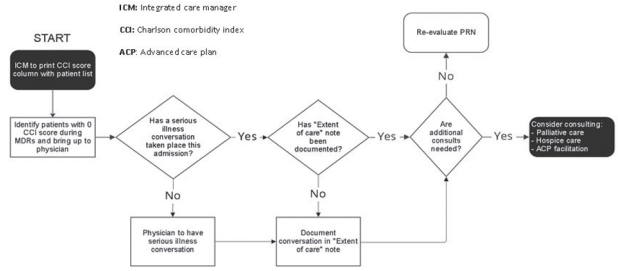
In August 2022, a Quality Improvement (QI) committee consisting of Geriatricians, Internists, QI coordinators, & Integrated care manager(ICM) director was formed. This committee focused on increasing SIC in patients with high CCI scores admitted to medical/surgical & step-down floors on hospitalist services by 25% by December 2022. ICMs used the CCI tool during multidisciplinary rounds to identify patients with 0% chance of one-year survival. ICMs would then encourage hospitalists to have SIC with these patients and document them in "Extent Of Care"(EOC) note type. Intervention was piloted on 1 out of 6 non-ICU floors, & ICM in charge of the floor collected data for 5 weeks over 3 months.

Results:

62 patients data with high CCI scores were collected, out of which 15 had EOC notes documented. Patients with EOC notes had higher likelihood of having ACP(62.5% vs. 28.3%), palliative care consult(56.3% vs. 17.4%), hospice consult(31.3% vs. 6.5%), & DNR code status(37.5% vs. 15.2%). Patients with 0% chance of survival over next 1 year per CCI also had, on average, 4.8 admissions since January 2020.

Conclusion:

Our QI intervention's first PDSA cycle showed that patients with SIC documented in EOC note increased the likelihood of ACP, Palliative care consults, hospice consults, & DNR code status.



Process Map

B260

Fall Risk Assessment of Geriatric Population in Primary Care Office

Y. Shin, A. Hussain. *Geriatric Medicine, Temple University Hospital, Philadelphia, PA.*

Background

30% to 40% of community-dwelling elderly persons report falls each year leading to severe injuries including fractures or a head injury. CDC's STEADI (Stopping Elderly Accidents, Deaths & Injuries) initiative recommends annual fall risk screening in the elderly population and provides a comprehensive care plan for fall prevention. Using the STEADI algorithm, we assessed the current fall risk screening and care plan implementation in an academic geriatric office.

Methods

Our study was a cross-sectional, retrospective study conducted at an academic geriatric office. Our chart review consisted of 142 patients aged 65 years and older who underwent annual wellness office visits (AWV) between March and August 2022. Data collection included responses from the visit intake form (Have you fallen 2 or more times in the past year? Are you worried you might fall?) and the Timed Up & Go Test (TUG). Answering yes to either question or a positive TUG test (≥ 12 seconds) was considered a fall risk.

Results

Among the total sample size of 142 patients, 106 patients (75%) had completed intake form and 115 patients (81%) had completed TUG test. Out of 59 patients marked as fall risk (42%), 21 patients (36%) had known fall risk diagnosis or were participating in physical therapy. Out of fall risk population, 12 patients (20%) were offered an intervention (referral for physical, occupational therapy) and 47 patients (80%) were not given any intervention.

Conclusions

Our study indicated several barriers to fall risk screening and recognition in our geriatric patients. Several discussions with the members of care team identified these barriers: transition to the new electronic medical record system, lack of time allocated to AWV, lack of education on recognizing fall risk patients, and lack of communication between staff and providers. Identification of these barriers gave an opportunity for a quality improvement project that included a standardized workflow process including revision of the visit intake form, staff to provider notification system upon identification of fall risk, and a preloaded checklist in the electronic medical system for documentation and implementation of recommended care plan as listed per STEADI algorithm.

B261

A Primary Care Intervention to Increase Clinician Comfort with Deprescribing in Older Adults

S. Supoyo,[1] M. Cook,[2] V. Chan,[2] N. C. Leviste,[2] K. Trang,[2] K. R. Wisse,[2] B. Z. Harper,[1] C. B. Rubenstein.[1] *1. Family Medicine, Swedish Medical Center, Seattle, WA; 2. Pharmacy, Swedish Medical Center, Seattle, WA.*

Background: Polypharmacy and adverse drug effects cause significant harm in older adults, accounting for nearly 100,000 hospitalizations yearly. However, deprescribing remains a challenge for many clinicians. We describe an intervention to improve primary care clinician comfort with deprescribing through education, resources, and clinical support.

Methods: Clinicians at a family medicine residency in Seattle, WA, were emailed a multiple-choice, anonymous survey in early September 2022 assessing the primary outcomes of 1) comfort discussing deprescribing with patients and 2) familiarity with deprescribing resources. A secondary outcome was identifying barriers to deprescribing. We offered one live and one virtual talk on polypharmacy, high-risk medications, deprescribing, and motivational interviewing. All clinicians were given: 1) a tip-sheet for discussing deprescribing, written by a geriatrics fellow with addiction medicine training, with links to existing online resources, 2) six months of individual and clinic-wide prescribing data for high-risk medications in patients age 63+, and 3) optional sessions with pharmacists for deprescribing support. 21 clinicians answered the initial survey, and 18 answered a post-intervention survey two months later.

Results: Improvement was seen in all primary outcomes: 62% of clinicians were at least somewhat comfortable discussing deprescribing pre-intervention and 82% post-intervention. 10% were very familiar with high-risk medications pre-intervention and 50% were post-intervention. Post-intervention, 100% reported being at least somewhat likely to discuss deprescribing with patients in the near future. Identified barriers to deprescribing included: "More pressing health issues to address" (76%), "Don't feel I have time to discuss adequately" (71%), and "Worry patient is chemically dependent" (57%).

Conclusions: Offering clinicians education on polypharmacy and deprescribing principles, data on prescribing practices, and access to pharmacy and addiction medicine specialist support may be effective ways to promote deprescribing high-risk medications in older adults. Future studies may assess for changes in prescribing practices.

	Familiarity with Which Medications are Considered High-Risk in Older Adults			Familiarity with Available Materials to Help Discussions Around Deprescribing			Comfort with Discussing Deprescribing with Patients		
	Very	Somewhat	Neutral	Very	Somewhat	Neutral	Very	Somewhat	Neutral
Pre-Intervention	10%	76%	0%	0%	24%	0%	0%	62%	14%
Post-Intervention	50%	44%	6%	13%	75%	0%	19%	63%	13%

B262

Results of a Team-Based Remote Monitoring Program Serving Patients with Hypertension

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Background:

Though documented to be effective in improving hypertension control, telemonitoring is not yet standard work in most clinical practices. P1000 is a team-based telemonitoring project implemented to serve patients with previously poorly managed hypertension. In P1000, primary care physicians (PCP) refer patients by placing an order in the EHR. Patients chose to participate are provided a Bluetooth-enabled digital blood pressure device that automatically transmits blood pressure (BP) to the EHR. Enrollees are supported by a digital health specialist on technological issues. Care managers review a daily dashboard and make treat-to-target adjustments per protocol. The objective of the study is to examine P1000's effectiveness while assessing heterogeneity in adoption and adherence among patients in high versus low resource areas measured by the Healthy Place Index (HPI) and across age and racial groups.

Methods:

Observational study in an academic health system, using an event study design which assesses how outcomes after PCP referrals deviate from the baseline trend prior to the referral.

Results:

During 2020-2022, 53% of 2,512 patients referred by PCPs enrolled. Older patients are 10% less likely to enroll, as are those in low HPI (39%) compared to high HPI (56%). Adherence drops to 45% among older vs 32% among younger adults at 6-month after enrollment. Systolic BPs declined 11 mmHg on a baseline of 134 mmHg. Patients display an 11 percentage points increase in the propensity to reach normal SBP levels on a baseline of 24 percentage points. Average SBP reductions (standard errors) are -7.03 (.6891) among white, -4.89 (1.5770) among black, and -4.24 (1.1277) among Hispanic patients.

Conclusions:

Team-based telemonitoring is associated with significant improvement in clinical outcomes across age, racial, and socioeconomic groups. Patient engagement and retention are areas for improvement. Scaling up this program can improvement population health, reduce cardiovascular risks, and enhance health system performance.

B263 Resident Presentation

Creating an Electronic Health Record Tool to Optimize Geriatric Care

N. K. Tran, J. Logarbo, E. Diaz-Narvaez, K. Carstarphen. *Ochsner Health, New Orleans, LA.*

Background: Older adults have unique medical needs, and most large hospital systems do not have a standardized way of addressing them. MedVantage Clinic (MVC) at Ochsner Health (OH) was developed to improve healthcare for medically and socially complex geriatric patients.$_2$ These clinics use the 4Ms model (What Matters, Mentation, Medication, and Mobility)$_1$. This project uses Plan-Do-Act-Study rapid cycle improvement to develop a tool that will help integrate the 4M framework across specialties at OH.

Methods: An interdisciplinary team of physicians, midlevel providers, pharmacists, epic analysts, GWEP (Geriatric Workforce Enhancement Project) fellows, and administrators at OH was created. Data for Mobility and Mentation were derived from the Enhanced Annual Wellness Visits (eAWV). High-risk Medications were identified by pharmacists and reconciled with Beer's criteria. For What Matters, the Palliative & Geriatrics team optimized Advance Care Planning (ACP) documentation. The team collaborated with IT & Epic analysts to create a smart phrase consolidating the 4M data.

Results: By evaluating data from the AWV, medication lists, and ACP documents, our interdisciplinary team was able to create an electronic health record EHR smart phrase tool called .4M that optimizes retrieval of 4M data. When providers type .4m in a patient's note in the EMR relevant 4m data auto populates. While creating this tool, we identified barriers to data collection such as unreconciled medications and incomplete ACP documentation.

Conclusion: To become an age-friendly health system, the 4M data needs to be easily and accurately retrieved from a patient's chart which may be achieved via a standardized EHR tool. Effective scrutiny for 4M data from an EHR requires the assistance of an interdisciplinary team. Obscurity of 4M data in the EHR allowed us to address discrepancies and refine how to document this information. Our goal for the second PDSA is to introduce the .4M tool to providers and collect data for improvement of this tool.

References: 1. Institute for Healthcare Improvement. (2020, July). Age-Friendly Health Systems: Measures Guide. Retrieved from IHI Initiatives (ihi.org) 2. Carstarphen, K.J., Estrade, M., Mehdizadeh, R., Viteri, X., Nelson, S. (2022, August) One patient's journey with memory loss forges the path for 4M model integration at Ochsner Health. Geriatrics Care Online.

B264 Resident Presentation

Using the Electronic Medical Record to Improve Geriatric Care Provided by Medicine Residents

N. K. Tran, K. Carstarphen, M. Estrade, E. Diaz-Narvaez. *Ochsner Health, New Orleans, LA.*

Background: U.S. Census Bureau reports over 50 million older adults are living in the U.S.$_2$ In response to the growing, medically complex geriatric population, Ochsner Health is on the way to obtaining the Institute of Healthcare Improvement (IHI) "Age-Friendly Health System" designation.$_3$ Striving to reliably provide high-quality care, based on the "4M framework: What Matters, Medications, Mobility, and Mentation," $_1$ an interdisciplinary team created a smart phrase (.4m) that consolidates 4M data gathered during the Medicare Annual Wellness Visit into a patient's Epic electronic medical record (EMR).$_3$ Providers can type ".4M" within a patient's note and the 4M data will auto-populate. This QI project aims to improve geriatric patient care delivered by internal medicine (IM) residents by introducing and helping them implement this tool. This abstract reflects the results of the 1st Plan-Do-Study-Act (PDSA) cycle.

Methods: The .4M was introduced to the 70 IM residents during in-person lectures along with education about the 4M framework. This was followed by e-mails with a slide deck exemplifying the use of .4M. Reminders were then sent via a group messaging app. The PDSA team members obtained data on the .4M utilization and provider satisfaction via REDCap survey. Verbal feedback was also collected by the author.

Results: 10 IM residents utilized the .4M EMR tool with each resident using it 1-2 times. 50% of the utilization was in the in-patient setting. Users found the .4M to be helpful with relevant information consolidation and real-time decision-making aid. 100% of the users answered they will use .4M in clinical practice. Verbal feedback revealed unawareness of the 4M framework, and this tool helped improve their knowledge.

Conclusion: Our data favor the .4M as an efficient tool for IM residents to improve geriatric care as it consolidates information and helps in real-time medical decision making. In the next PSDA, we will introduce .4M across other medical residencies, assess usefulness based on clinical setting and improvement in clinical geriatric knowledge.

References: 1. Institute for Healthcare Improvement. (2020, July). Age-Friendly Health Systems: Measures Guide. 2. U.S. Census Bureau. (n.d.). Explore Census Data. 3. Carstarphen, et al 2022, August) One patient's journey with memory loss forges the path for 4M model integration at Ochsner Health. Geriatrics Care Online.

B265

High fall risk categorization may inappropriately limit hospital patient mobility

D. L. Young,[1,2] C. Capo-Lugo,[3] M. Friedman,[1] E. H. Hoyer.[1]
1. Physical Medicine & Rehabilitation, Johns Hopkins Medicine, Baltimore, MD; 2. Physical Therapy, University of Nevada Las Vegas, Las Vegas, NV; 3. Physical Therapy, The University of Alabama at Birmingham School of Health Professions, Birmingham, AL.

Background: Nurses play a critical role in assessing patient risk for falls in the hospital as part of routine care. Using an inpatient fall risk assessment tool helps categorize patients into risk groups whom can then be targeted with fall prevention strategies. While potentially important in preventing patient injury, fall risk assessment may unintentionally lead to reduced mobility among hospitalized patients. Here we examined the relationship between fall risk assessment and ambulatory status among hospitalized patients.

Methods: We conducted a retrospective cohort study of consecutively admitted adult patients (n=48,271) to a quaternary urban hospital that provides care for patients of broad socioeconomic and demographic backgrounds. Non-ambulatory status, the primary outcome, was defined as a median Johns Hopkins Highest Level of Mobility <6 (i.e., patient walks less than 10 steps) throughout hospitalization. The primary exposure variable was the Johns Hopkins Fall Risk Assessment Tool (JHFRAT) category (Low, Moderate, High). The capacity to ambulate was assessed using the Activity Measure for Post-Acute Care (AM-PAC). Multivariable regression analysis controlled for clinical demographics, JHFRAT items, AM-PAC, comorbidity count, and length of stay.

Results: 8% of patients at low risk for falls were non-ambulatory, compared to 25% and 54% of patients at moderate and high risk for falls, respectively. Patients categorized as high risk and moderate risk for falls were 4.6 (95% CI: 3.9-5.5) and 2.6 (95% CI: 2.4-2.9) times more likely to be non-ambulatory compared to patients categorized as low risk, respectively. For patients with high ambulatory potential (AM-PAC 18-24), those categorized as high risk for falls were 4.3 (95% CI: 3.5-5.3) times more likely to be non-ambulatory compared to patients categorized as low risk.

Conclusions: Patients categorized into higher fall risk groups had decreased mobility throughout their hospitalization, even when they had the functional capacity to ambulate.

POSTER SESSION C

Friday, May 5
12:30 pm – 1:30 pm

C1

Lead Intoxication after long exposure in an indoor fire range

L. Andrade,[1] J. Alamo,[2] D. Smith,[1] A. Francisco.[1] *1. Family Medicine, Texas Tech, Odessa, TX; 2. Family Medicine, MCH Procare, Odessa, TX.*

Background:

The World Health Organization has identified lead as one of 10 chemicals of major public health concerns.

People who shoot for work or leisure are at risk of lead intoxication. Exposure to lead from bullets, airborne particles pose a health risk.

This report describes a case of a 76 year-old white male with medical history pertinent for hypertension, hyperlipidemia, and insomnia, who presented to the clinic complaining of several months of fatigue and concerned of heavy metal intoxication since he was drinking water from the water well. Full blood analysis showed elevated blood lead level (BLL) of 10 ug/dL. Patient was advised to have pipes and water well inspected and avoid drinking water from it. Three months later, BLL was found to be 19 ug/dL. Wife was also tested and her BLL <1 ug/dL. Subsequently patient reported that he has been shooting in an enclosed fire range on daily basis.

Methods: Case Report

Discussion:

Lead in blood is a reflection of the lead content of most soft tissues. BLLs above 5 µg/dL cause adverse health effects in adults like hypertension.

Neurocognitive deficits occur if the BLL is above 10 µg/dL. Clinical neurological deficits, above 30 µg/dL; anemia, above 40 µg/dL; and nephropathy and encephalopathy above 80 µg/dL.

Approximately 35%-40% of inhaled lead is absorbed into the bloodstream. Once lead enters the body, it is distributed to organs such as the brain, kidneys, liver, and gets stores in the teeth and bones, where it accumulates over time.

Central nervous system symptoms include headache, dizziness, fatigue, weakness, nervousness, hyperirritability, and sleep disturbances.

Conclusion:

The first step in the management of lead intoxication is identifying and eliminating the sources of overexposure.

Chelating agents decrease lead concentration in the blood and certain tissue. Chelation in adults should be reserved for BLL >50 µg/dL with symptoms or with BLL >80 µg/dL.

In this case, the patient's highest BLL was 19 µg/dL. No disorders were confirmed in the target organs, such as the kidneys, nervous system, and red blood cells.

Lead dust exposure and possible intoxication needs to be considered in people who use weapons at work or for recreational shooting.

C2

When driving retirement means actual retirement: a unique case of a patient with moderate severity dementia who drives for a ride-sharing company

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Introduction: Many individuals with dementia are active drivers, though studies suggest a higher risk of motor vehicle accidents in this population. In any case of driving cessation for those with dementia, the ethical values of autonomy and non-maleficence can conflict, posing a challenge for public officials, physicians, patients, and caregivers.

Case Description: A 70-year-old woman with a history of dementia presented to the emergency department with chest pain. An initial workup did not reveal any apparent explanation for this pain, but she was noted to have an elevated TSH level of 94.5, previously 1.84. Despite her report of appropriately managing her levothyroxine, many of her prescriptions had not been filled for months. Due to concern for driving safety in the setting of worsening functional status, Geriatric Medicine was consulted. Though her outpatient providers had expressed concerns about her driving, particularly as the patient was driving for a ride-sharing company to earn supplemental income, the patient felt her driving was safe—citing excellent customer reviews. After an extensive conversation with the patient, her family, and her outpatient providers, the patient agreed to have her condition reported to the DMV and to stop driving until a formal driving safety evaluation was performed. This would limit liability and harm and honor the patient's preference to demonstrate the quality of her driving.

Discussion: In this unique case, driving cessation impacts the independence and financial security of a patient who drove for supplemental income. However, allowing a patient with worsening cognitive impairment to continue driving would place the patient, other drivers, and the passengers unaware of her diagnosis at risk. While we are unaware of other cases of driving cessation in those with dementia who financially benefit or depend on their ongoing ability to drive, we anticipate more cases like this as older adults continue to utilize new technologies. Policy from public officials and ride-sharing companies may help guide providers in these decisions.

C3

Effective Communication Is Key to Successful Deprescribing

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Background

Polypharmacy in the old leads to drug interactions and adverse drug events (ADEs) such as falls and delirium and nonadherence. Deprescribing (DeP) refers to a planned, supervised reduction in number and/or dose of medications, aiming to address polypharmacy, improve outcomes and reduce ADEs. Presented is a case of successful DeP.

Case description

83-year-old female was transferred to the long-term care, following left cerebral infarct and right hemiparesis, dysphagia and PEG insertion. History included advanced dementia, chronic obstructive pulmonary disease, hypertension, atrial fibrillation, hyperlipidemia, diabetes mellitus, peripheral vascular disease (and right below knee amputee), past breast cancer. Based on comorbidity, her initial regimen was 24 medications with questionable benefits of armodafinil, gabapentin and oxycodone, as patient was bedridden and nonverbal for 10 months. After caregiver discussions and review of medical records, we identified prior diagnosis of sleep-wake cycle disorder, not narcolepsy as erroneously considered. Armodafinil was now tapered, with plan to discontinue in weeks. Gabapentin use was controversial; after slow taper she became alert and minimally communicative, demonstrating to family the benefits of DeP. The proxy was not yet comfortable with oxycodone taper. We will DeP meclizine and memantine next; currently she is on 19 medications.

Discussion

Strategies for DeP involve counseling and effective communication with patients and/or caregivers to reach informed decisions regarding revision of regimens. DeP is a planned process, with follow-up for recurrence of disease and/ or adverse drug withdrawal events, in which case the drug is re-instituted. DeP has a role in older adults with co-morbidity and polypharmacy. A multidisciplinary approach is more successful. Goals of DeP are to reduce ADEs, improve adherence, reduce hospitalizations / costs, and improve quality of life. Communication at all levels is a primordial element of efficient DeP. Properly instituted, DeP is accepted in practice by most adults.

Lesson learnt

DeP in older multimorbid patients may be a laborious, extended process, yet is possible.

Effective communication with patient / caregiver plays a significant role in successful DeP and reducing polypharmacy in patient-centered care.

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C4

Accidental Ingestion of a Belladonna-Opium Suppository in an Older Adult Female

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Introduction

Toxic ingestions and drug poisonings, including accidental ingestions, account for more than 1 million emergency department visits yearly, more than a quarter of which require hospitalization. Opioid analgesics accounted for 14% of drug poisonings. This vignette presents a case of accidental poisoning due to belladonna-opium ingestion in a community-dwelling older adult.

Case Presentation

An 89-year-old female with proctalgia fugax, mild cognitive impairment, chronic constipation, and hoarding disorder was brought to the emergency department by her neighbor after accidental ingestion of a belladonna-opium suppository. She had experienced abdominal pain and thought she was constipated. She searched her medicine cabinet for a laxative and instead ingested a suppository. Poison Control Center recommended observation of the patient for 8-12 hours post-ingestion for the development of an opioid or anticholinergic toxidrome. At hour 7 post-ingestion, the patient developed hypertension, tachycardia and altered mental status. She became febrile. Poison Control Center recommended admission with cardiac monitoring. She was treated with Tylenol, IV fluids and monitored with cardiac telemetry. Her hospital course was complicated by concerns for acute cholangitis for which she received IV antibiotics and underwent ERCP with evidence of an ampullary lesion. She was dismissed to an acute rehabilitation facility after a 7-day hospital stay and then enrolled in a home visit program.

Discussion

Accidental ingestions in individuals older than 66 account for approximately 5-6% of reported poisonings, based on the Toxicology Investigators Consortium Case Registry. Prior studies suggest that cognitive impairment increases the risk of accidental ingestions in elderly patients. Polypharmacy and sensory impairment may also elevate this population's risk of toxic ingestions. Our patient lived in a cluttered home environment with disorganization of her medications noted on a home visit, which we believe also increased her risk for accidental ingestion. A home visit assessment allows a review of key home safety issues for older adults with cognitive impairment, including medication management and prevention of accidental ingestions.

C5

Delirium with Psychosis in an Elderly Woman with Autoimmune Encephalitis

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Introduction: Delirium is very common in elderly patients with acute illnesses. Patients can display a broad array of symptoms ranging from lethargy to severe behavioral abnormality (1). Antipsychotics were used in a case of delirium that turned out to be due to autoimmune encephalitis.

Case description: An elderly female in her 80's with history of hypertension, and hypothyroidism first presented to another facility with confusion and was treated for urinary tract infection. She returned with fluctuating mental status. Workup was negative except for EEG showing seizure activity, and she was given 1g of IV Levetiracetam. She was discharged on Valproic acid 4 days later.

She presented to our facility 3 weeks later with visual hallucinations, compulsivity, and insomnia. Her private physician had initiated a workup for mild cognitive impairment. Her exam was normal except that she could not do serial sevens. Repeated workup

was normal. Neurology suggested a 5-day course of 1 gram IV methylprednisolone daily, with no improvement.

Psychiatry recommended antipsychotics with no response. She developed akathisia with Haloperidol and was given Benztropine. Later, she was given 5 days of IV immunoglobulin, her symptoms improved, and she was presumed to have autoimmune encephalitis. Her antipsychotic regimen was tapered off before discharge.

Discussion: Acute illness in an older individual with cognitive impairment is a predisposing factor for delirium. The etiology is not always obvious. Risk mitigation and prompt treatment therefore rely on a sophisticated strategy to address the contributing factors (1). A systematic review of 26 randomized controlled trials and observational studies, evaluating 5607 adult inpatients with delirium, does not support routine use of Haloperidol or second-generation anti-psychotics for treating delirium in adult inpatients (2). This case illustrates how polypharmacy can occur, and adversely affect outcome. Refraining from initiating medications for which there is a lack of clear indication for their use, may be an easier task than deprescribing.

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C6

IADL status in patients with dementia and caregiver mental health

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Background: Nearly 90% of persons with dementia (PWD) rely on informal caregivers (e.g. family) for help with instrumental activities of daily living (IADL). While research has established a link between PWD's IADL dependence and caregiver depression, research has yet to investigate the relationship between PWD's functional status and other mental health outcomes in caregivers. This pilot study aimed to address this gap by assessing for relationships between PWD's functional status and caregiver mental health. We hypothesized that greater IADL dependence would be associated with higher anxiety and depression among caregivers.

Methods: Informal caregivers of PWD (N=26) with comorbid pain at a long-term care organization in New York City completed a survey evaluating their sociodemographic characteristics, mental health (GAD-7 and PHQ-8), and views of care recipient functional status (Lawton-Brody IADL Scale). GAD and PHQ questions asked about caregivers' behaviors/thoughts on a 4-point Likert scale; responses were summed to create a total score for each measure (GAD: 0-21, PHQ: 0-21). The Lawton-Brody Scale, a measure assessing functional impairment, was used to gauge participants' capacity to perform functions (IADL: 0-8), with higher scores indicating greater dependence. Univariate analyses evaluated if demographics were associated with mental health outcomes.

Results: Participants had a mean age of 58.6 and were mostly female (84%). The sample was highly diverse: 27% Black, 31% Hispanic, and 34% white. Participants had mild anxiety (m=5.84, sd=5.10) and depression (m=5.32, sd=4.96) and reported PWD to have low physical function (m=1.0, sd=2.42). Two multivariable linear regression models, adjusting for caregiver and care recipient sociodemographic characteristics, evaluated IADL dependence as a predictor of each outcome variable, caregiver anxiety and depression. In these adjusted models, care recipient IADL dependence was significantly associated with caregiver anxiety (p=0.01), but not depression.

Conclusion: Preliminary findings suggest that more functional impairment among PWD is independently associated with higher levels of caregiver anxiety. The study is limited by its cross-sectional nature and sample size; longitudinal research is needed to confirm directionality of findings and assess change over time.

C7

Ekbom's Syndrome -an outpatient nightmare!!

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Introduction

Ekbom's syndrome (ES) also known as delusional parasitosis is a fixed belief that the skin and body is infested by parasites although there is no medical or microbiological evidence forcing them to physician shopping without ever having an actual diagnosis discussion. We are presenting a case of ES prompting hard sensitive discussion and a multidisciplinary approach for communicating the diagnosis and understanding the need for neuroleptics for the treatment.

Case

A 78-year-old woman with a past medical history of long-standing anxiety, panic attacks (since she was a teenager), and depression reported red lesions on her face and upper back due to picking on the skin and digging "white bugs with tails" using tweezers, that bothered her since last 4 years requiring multiple dermatological evaluations. She also reported psychosocial stressors involving the distraught relationship with her sister and niece. Physical exam revealed excoriated and scabbed erythematous papules to the chin/mandible and a few to her upper chest. She previously underwent treatment with antibiotics and laser therapy without any significant improvement. She had multiple visits to several specialties with extensive complex workup and inconclusive diagnosis as physicians themselves are hesitant to discuss probable diagnoses of ES and suggest treatment. After lengthy empathetic discussions with her physicians including her psychiatrist, she was amenable to treatment with neuroleptics.

Discussion:

ES is a severe neuropsychiatric disorder with a somatic presentation that can be secondary to primary psychotic/depressive disorder or other organic diseases, requiring a multidisciplinary approach. Early recognition, open discussion, good rapport, and an empathetic approach are the cornerstone for managing such complicated resolute beliefs. After engaging our patient in a collaborative discussion and providing her with a suitable diagnostic explanation, along with reassurance towards the absence of organic cause, she was agreeable to the treatment with antipsychotics which begs the point of an attempt to remove the taboo and encourage a multidisciplinary approach.

C8

Not So Swell: A Tale of Atypical Presentation and Mistaken Identity of Giant Cell Arteritis

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Background:

Giant Cell Arteritis (GCA) is a common systemic vasculitis affecting primarily older adults 50 and above, women, and those of Scandinavian descent. The global pooled incidence is about 10 per 100,000 people. This disease commonly affects medium and large sized arteries and is closely associated with polymyalgia rheumatica (PMR). GCA commonly presents with headache, jaw claudication, and fever with evidence of elevated inflammatory markers. We present an atypical case of GCA.

Case Presentation

An 84-year-old female with hypertension, chronic hyponatremia, and anxiety presented to the hospital with a history of intermittent and bilateral occipital headaches. She recently completed antibiotic

treatments for both tooth and urinary tract infections. Diagnostic workup revealed facial and neck swelling with mild leukocytosis. She was discharged home. On her outpatient follow up, she endorsed improved headaches, sinus congestion, and intermittent blurring of vision. These were attributed to stress and managed conservatively. A week later, the symptoms persisted necessitating another visit to urgent care. She was assessed to have atypical migraine with minimal relief from a trial of sumatriptan. She was advised hospital admission with possible stroke following left monocular visual loss and gait instability. Subsequent workup revealed high inflammatory markers and biopsy-confirmed GCA. High dose methylprednisolone was initiated and later discharged on tapering prednisone with close follow up. Unfortunately, she never regained vision on the affected eye. The lag time was three weeks from initial presentation to diagnosis and treatment.

Discussion

This case illustrates an atypical presentation of GCA. Her symptomatology and disease course did not fit its natural trajectory thereby causing a diagnostic dilemma and delay in treatment that resulted in catastrophic visual loss. A high index of suspicion on its atypical clinical presentation and Immediate management with high dose intravenous steroids when vision is threatened are integral to timely management and prevention of complications.

C9

Improved Hospital Care for Older Adults via Early Geriatric Co-management in the Emergency Room

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Background: Older adults with frailty can present to the emergency department (ED) atypically requiring a multidisciplinary approach to evaluation and care planning. Geriatric syndromes develop when there is collective impairment in various organ systems, and should be assessed via a comprehensive geriatric assessment (CGA). The Mount Sinai Hospital geriatric consult service oversees inpatient care of geriatrics ambulatory patients and often influences their care trajectory after initial presentation to the hospital.

Case: 84 yo male with history of high blood pressure, DM2, peripheral artery disease, and prostate CA presented to ED with falls. After evaluation, he was admitted to observation while awaiting rehab discharge planning. He was seen in the ED by the geriatric consultation team as part of co-management care for established clinic patients, last seen one year prior. A CGA revealed impairments in multiple domains. Although living independently, his worsening cognition caused poor nutritional intake and mismanagement of medications (noted with severe HTN in the ED), and he had been taking diphenhydramine nightly. He reported symptoms of orthostasis and regular use of alcohol and tobacco. Labs showed elevated HgbA1C. Physical exam revealed cool dusky extremities with near complete distal sensory loss. MRI of brain revealed a left parietal infarct. Recommendation was made by the geriatrics consult team to admit to the hospital and his family was approached about need for home support. Hypertension and diabetes medications were optimized and he was discharged to SAR where he made functional progress. His admission allowed social work to help arrange for rehabilitation and a safer home health plan.

Discussion: There is substantial evidence demonstrating benefits of geriatric co-management with various sub-specialty services in regard to morbidity and mortality. Presentations to ED due to falls constitute a significant portion of fatal and nonfatal injury in older adults and result in significant morbidity and mortality, as well loss of independence. A CGA allows for a holistic assessment of risk as well as the opportunity for improved treatment and discharge planning. Because ER personnel may lack the resources or skill necessary for a detailed investigation of geriatric syndromes, geriatric co-management upon presentation to hospital can be beneficial.

C10

Transient global amnesia: A rare differential not to be forgotten

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Background: Transient global amnesia (TGA) presents as sudden onset of confusion in an otherwise alert person that resolves within 24 hours. During an episode of TGA, a person is not able to create new memories. Events surrounding the episode are immediately forgotten, and a person may continue to repeat questions. The condition most often affects people in middle age but is rarely seen past the seventh decade of life.

Case presentation:

This is a case of a 78-year-old Caucasian female with a history of anxiety, depression, migraines and prior transient global amnesia who was admitted to the hospital after a ground level fall at home. She was found to have multiple rib fractures. Brain imaging did not show any acute intracranial abnormality or large vessel occlusion. EEG did not suggest seizure activity. On initial presentation, the patient was amnestic to events surrounding her fall. During her first hospital day, the patient was confused, repeated the same questions throughout the day, and exhibited severe anxiety. By hospital day two, the patient began to slowly regain memories related to her fall. She was able to recall that she called 911 herself from a room in her home that she usually does not enter. She also noted extreme stress related to her sister's cancer diagnosis one week prior to the incident. Family noted multiple items around the home that were out of place and indicative of bizarre behavior for the patient. By hospital day three, the patient had returned to baseline memory and cognition but expressed emotional distress and fear of future episodes of TGA that could lead to additional falls and injury.

Discussion:

Transient global amnesia is a rare condition that most often occurs in mid to late life. The precipitating factors remain unclear, however, commonly cited related events include vigorous exercise, extreme temperature changes, and emotionally traumatic or stressful events. Though rare, the diagnosis of TGA should be considered in the differential for older adults who are amnestic to events surrounding falls as well as in patients with sudden onset of confusion and memory loss. Transient epileptic amnesia, an ischemic event, and transient ischemic attack should be excluded prior to making the diagnosis of TGA. It is important for clinicians to recognize TGA to provide reassurance to patients that episodes of TGA do not affect morbidity and mortality.

C11

Transitional Care Management of Antipsychotics

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Background: Antipsychotics are frequently used as adjunct therapy for management of delirium. A retrospective study found that 1.3% of patients with dementia not previously on antipsychotics were started on one during hospitalization [1]. Other studies show that patients are often discharged from the hospital with antipsychotic medications without instructions for discontinuation. This case highlights the importance of detailed medication reconciliation after discharge from the hospital to minimize polypharmacy.

Case Description: An 87-year-old female with past medical history of type 2 diabetes mellitus with neuropathy, hypertension and degenerative joint disease presented for a transitional care management visit four days after hospital discharge. The patient was hospitalized for sepsis secondary to urinary tract infection. Hospital course was complicated by delirium and she was started on olanzapine. She was discharged home with oral cefuroxime and olanzapine. Since hospital discharge, the patient finished her course of antibiotics with resolution of delirium but reported gait instability and intermittent dizziness. She was not hypotensive. A thorough medication reconciliation was

completed. The patient was advised to discontinue olanzapine. One month later, the patient returned to the office. Since discontinuation of olanzapine, the patient reported resolution of dizziness and improved gait instability. She was at her baseline cognitive function and independent in activities of daily living except for transfers, which requires one-person assist.

Conclusions: This case highlights the importance of prompt transitional care with medication reconciliation after hospitalization. New medications can cause iatrogenic symptoms, leading to unnecessary and invasive testing. This case highlights the common practice of continuing patients on antipsychotics at hospital discharge despite resolution of delirium symptoms. Due to poor communication during transition of care, patients may be continued on antipsychotics indefinitely without a clear indication, which may lead to adverse health outcomes.

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C12

Culturally competent approach to discharge planning and transfer to care

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Background: Culturally competent discharge planning and transfer of care does not have an established standardization. [1,2] We present a case where these problems led to misunderstanding medications and re-admission with later adherence to treatment.

Case Report (Methods/Results): A 74-year-old Hispanic Spanish-speaking male with history of end-stage renal disease, gout, and polypharmacy presented to the hospital with worsening kidney function due to a misunderstanding of medications. During his first hospitalization, medications were discontinued, and atrial fibrillation was diagnosed. At discharge, instructions on new medications, dosages, and frequency were given in English. The patient was re-admitted due to gout flare. He was taking 'everything as prescribed' including discontinued medication and prior doses. He was discharged again with medication instructions in English. After this, medication reconciliation was done one-day post discharge over the phone with a Spanish-speaking provider and on a follow-up appointment one week later, it was noted that the patient was taking medications as prescribed.

Discussion: Understanding patients' barriers to healthcare, cultural values, and experiences; also, translating materials into the language of origin, adapting them to the level of literacy and education, and addressing barriers to care aids in adherence to treatment and better health outcomes.[3] In our case, a Spanish speaker older adult with multiple comorbidities was initially considered non-adherent to medications. After hospital admissions and encounters with a Spanish-speaking provider, it was clear that a cultural gap exposed the patient to various threats to safety leading to exacerbation of previous conditions and readmission.

Conclusion: By appropriately acknowledging cultural differences in the immediate discharge planning and transition of care, our patient achieved a better health outcome.

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C13

Elder Neglect Masquerading as Recurrent Falls

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Introduction: Elder mistreatment may take several forms including caregiver neglect, self-neglect, and caregiver abuse. Caregiver neglect is failure to execute obligations resulting in harm. This can be intentional, where basic needs are actively withheld, or unintentional, where a caregiver has inadequate skills/resources, or medical knowledge, to fulfill duties. Self-neglect occurs when one does not perform or refuses to perform essential self-care. Caregiver abuse can be physical, emotional, sexual, or financial and result in intentional harm. There has been growing emphasis for providers to achieve greater proficiency in diagnosing and reporting neglect, unfortunately many cases go unrecognized and underreported.

Case: An elderly woman with dementia and history of recurrent falls presented to the emergency department with her daughter (her primary caregiver) after sustaining an unwitnessed left leg injury. X-ray of the left leg was negative for acute fracture, and laboratory workup was unremarkable. On visual inspection, the patient had severe xerosis, appeared malnourished and disengaged. Her hair was matted with extensive fungal infection across the scalp. She had skin sloughing with scattered ecchymosis and full thickness skin avulsion to subcutaneous tissue on several limbs. She was admitted as a vulnerable adult with concern for self-neglect vs. caregiver neglect/abuse. The patient deferred therapies and became more debilitated during hospitalization. A care conference was held with the patient and her family to discuss her goals of care. Ultimately, she was transitioned to hospice on discharge and passed away at home.

Discussion: Early intervention in vulnerable adults can prevent escalation of harm, as well as death. Providers should be proficient in differentiating between common forms of elder mistreatment and respond appropriately. An initial approach includes a clinical assessment of the patient and caregiver interactions, including a full physical exam, basic labs, imaging of suspicious physical findings or use of screening tools such as the elder abuse suspicion index. Accurate detection of neglect or abuse and ensuring immediate safety could improve the well-being of victims. If mistreatment is suspected, a vulnerable adult report should be filed. In our case, the geriatrics team concluded this was likely due to a combination of elder neglect (secondary to inadequate medical knowledge and caregiving skills) and self-neglect.

C14

Calcific Tendonitis of the Rotator Cuff: A Rare Case Treated with Extracorpeal Shockwave Therapy

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Background

Calcific tendinitis is a painful condition of the shoulder impacting between 2 to 20% of the population.[1] Oftentimes unilateral, but up to 20% of cases are bilateral.[1] Commonly, found in patients aged 30 to 50 years old with only 50% of patients actually becoming symptomatic.[1] The incidence is not known in those older than 70 years but is quite rare.[2] Typically it involves either single or multiple calcium hydroxyapatite deposits within the rotator cuff tendons.[1] The pathogenesis is not well understood but is believed to be from chronic inflammation of the tendon.[2] Management strategies range from physical therapy, steroid injections, needle barbatoge, extracorpeal shockwave therapy, and surgery.

Case Presentation

83-year-old male with a PMH of hypertension, hyperlipidemia, and hypothyroidism presented to clinic with right shoulder pain for the past 11 months. Previously he was seen by orthopedics and given a

subacromial bursa corticosteroid injection without relief. A sharp anterior pain was described and rated a 6/10. Denies any radiculopathy, instability, swelling, or trauma. X-ray revealed an osseous calcification with age appropriate amounts of glenohumeral joint arthritis. On further work-up with musculoskeletal ultrasound, a calcification in the supraspinatous tendon measured 0.76cm x 0.52cm x 0.19 cm. The patient underwent three weekly treatments with extracorpeal shockwave therapy which significantly relieved his pain. He completed physical therapy for six consecutive weeks and returned to baseline functional status.

Discussion

This case demonstrates a rare case of calcific tendinopathy of the rotator cuff in an elderly patient. With about 70% of patients becoming asymptomatic at 1 year, those patients who remain symptomatic can present difficulty for clinicians. Extracorpeal shockwave is a non-invasive treatment modality with minimal side effects which should be considered as an option for those patients whom remain symptomatic.

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C15

Advanced Care Planning for Physician Patients

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Background:

Based on physician surveys, a common misconception is that physicians, when patients themselves, choose less-aggressive care at the end of life, with the assumption that they fully understand the treatment options available.[1] We report an end-of-life case for an older adult patient, who is a physician, and discuss the complexities of treatment for medical providers at the end of their lives.

Case:

A 90-year-old man with myelodysplastic syndrome, hypertension, benign prostate hyperplasia, and bilateral hip replacements was admitted to trauma service after a motor vehicle collision. There was no loss of consciousness or intracranial hemorrhage. He was found with multiple rib fractures, a displaced fracture of left C7 transverse process with a large intramuscular hematoma, and fractures from T1 to T6. He was a retired obstetrician and reported he was full code however a discussion of what matters most to him and the optimal way to provide goal-concordant care was not documented. He was admitted to the surgical ICU. His course was complicated by a urinary tract infection, dysphagia and uncontrolled pain leading to respiratory decline. On day 7, the geriatric team was consulted and a comprehensive discussion including prognosis and goal-of-care was held with the patient. At that time his main concern was his pain and he understood his poor prognosis. While he opted to continue to be full code, he was open to discussing further with the palliative care team. Overnight, he decompensated, requiring increased oxygenation. On day 8, after further discussion with palliative care and chaplain, decided to change his code to DNR/DNI while maintaining full care. However, patient's condition continued to worsen in the following two days and on day 10 of hospitalization, he transitioned to hospice with comfort as goal and passed away 2 days later.

Discussion

Because the patient was a physician, providers originally assumed that he fully understood all the available treatment options available to him. This assumption may have led to a delay in exploring further care options with a more detailed goal of care discussion from the onset. This case illustrates the importance of avoiding assumptions when treating physician colleagues, particularly for providing goal-concordant care in end of life.

C16

A little bit of this and a little bit of that: Serotonin toxicity in a patient readmitted to a Geriatric Fracture Co-Management Service.

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Background: The GIFTs (Geriatric In-Patient Fracture Trauma) Service is a geriatric co-management service for older adults with multimorbidity admitted to the Orthopedic Trauma Service with traumatic fractures.

Case Presentation: The patient is a 74 yr. old man readmitted to the Orthopedic Trauma Service twelve days after discharge following a left hemiarthroplasty with mental status changes, low grade fever, hypertension, and diffuse jerking. His PMHx is significant for falls, HLD, remote TIA, untreated hepatitis C infection, depression, and prior polysubstance use disorder. His only medication prior to his initial hospitalization was atorvastatin 10mg.

On physical exam, his pupils are pinpoint, minimally reactive and without nystagmus. His skin is warm and dry. He has hyperreflexia and inducible clonus. He can name the hospital, his age, DOB, and current year. Diagnostic evaluation included an unremarkable head CT, plain films of his hip and pelvis and ECG. Chest CT was unremarkable aside from a hypoattenuating collection in the left psoas muscle. Labs were significant for a WBC of 15.2.

While at rehab he received standing APAP and low dose oxycodone for pain management and was progressing well with PT. The facility NP started him on Mirtazapine 7.5mg for his depression. The dose was increased to 15mg three days prior to admission. The following day the nurse noted that he appeared slightly agitated. That evening he received his first prn dose of Trazodone. The following day he became confused and received another prn dose of Trazodone that evening. The following morning, he was sent to the ED with the above symptoms.

Conclusions: Serotonin syndrome has been described as a concentration-dependent toxicity. Polypharmacy is often a contributing factor and older adults are at increased risk. Multiple medications act as antagonists to various 5-HT receptor subtypes as well as the 5-HT1A receptor classically associated with the syndrome. Additionally, medications that disinhibit serotonin transmission (mirtazapine) or inhibit serotonin reuptake (trazodone) can precipitate the syndrome when taken along with 5-HT antagonists. The syndrome can develop within hours of a dose increase or addition of a medication known to contribute to the syndrome.

C17

Benzodiazepines "not detected": A case report of an unexpected urine drug screen

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Introduction: Prescription medications meant for patients may not always be taken by patients themselves. Caregivers are often responsible for giving medications to patients who are unable to take medications on their own. This is especially prevalent in the geriatric population. This case brings attention to the use of UDS and its capabilities and limitations as a harm reduction strategy, for both patients and caregivers, in the safe prescribing of high-risk medications.

Case Report: An 83 year old female with hypertension, hypothyroidism, moderate dementia, and chronic prescription benzodiazepine use for anxiety, is seen in clinic for follow up. She is dependent for most instrumental activities of daily living including medication administration. The patient is prescribed lorazepam and as part of safe benzodiazepine prescribing, a UDS was ordered to ensure lorazepam was being provided to the patient as prescribed. The UDS was unexpectedly negative for all substances, including benzodiazepines, which raised concern for non-adherence and diversion. The urine sample was sent out for additional testing, a benzodiazepine confirmation test

detects 23 different benzodiazepines and their metabolites. The test confirmed lorazepam metabolites in the patient's urine confirming the intended use of the medication.

Discussion: In the United States, there are millions of older adults who rely on caregivers to administer their medications, including some that have a high potential for misuse by patients and caregivers. Benzodiazepine use is common among older adults, who are more vulnerable to benzodiazepines and drug-related adverse events. The most common source of misused benzodiazepines was from a friend or relative. Therefore, as part of safe prescribing, UDS can monitor for adherence and detect diversion. For our case, it was crucial to recognize that UDS do not reliably detect some benzodiazepines and their metabolites, including lorazepam. UDS interpretation can be challenging and commonly misinterpreted, which can negatively impact decision making and provider-patient relationships. This case illustrates the importance of (1) providers being familiar with their laboratory's UDS capabilities and limitations, (2) the use of UDS as a screening modality that may require confirmatory testing, and (3) the importance of utilizing UDS as a harm reduction strategy, for both patients and caregivers, in the safe prescribing of high-risk medications.

C18

Walking a tight rope: Treating supine hypertension in a patient with neurogenic orthostatic hypotension

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Introduction:

Neurogenic orthostatic hypotension (nOH) increases in prevalence with age, with a subset of older adults also developing supine hypertension (SH).[1] SH is a systolic blood pressure of ≥140 mmHg and/or diastolic blood pressure of ≥90 mmHg measured after at least 5 min of rest in the supine position.[2] Given ambulatory blood pressure (BP) screening often occurs in a sitting position, SH is likely underdiagnosed.

Case presentation:

A 96-year-old rancher was admitted with hypertensive encephalopathy. His daughter found him confused at home, an abrupt change from two hours prior. His BP on arrival to ED was 220/106 and heart rate 74 beats per minute. Clinically patient appeared calm and neurologically intact except for confusion. Investigations were unremarkable. He was admitted to ICU and started on a nicardipine drip. After achieving blood pressure control, the patient returned to his baseline mental status.

During hospital stay, nOH was suspected since due to high variability of supine vs standing BP (179/81vs. 103/74 respectively). No compensatory increase in heart rate noted. His daughter astutely described similar observations at home; chronically elevated BPs at night when lying down and significantly lower BPs when sitting in a chair for prolonged periods (reported 70/50s), unrelated to antihypertensive use; classic features of nOH with SH. We discussed risks and benefits of treatment with patient and family. Goal is to avoid orthostatic BPs, and reduce risk of hypertensive encephalopathy. We recommended effective non-pharmacological strategies, and started him on low dose clonidine prior to hospital discharge.

Discussion:

The management of SH in older adults with autonomic dysfunction is difficult given the increased risk of syncope and falls. It remains a matter of debate given the limited research guidelines. Effective personalized patient approaches includes, avoiding supine position during the daytime, eating carbohydrate rich snack at bedtime to induce postprandial hypotension, and sleeping in a "head up and bed tilt" position. Currently there is no FDA- approved drug but low dose antihypertensive agents with short half-life are used for night- time BP control. Most of these patients are placed on fludrocortisone or midodrine, to avoid orthostatic hypotension. Patient education on timing is critical to avoid adverse outcomes. There is a dire need for longitudinal studies and consensus treatment guidelines.

C19 Encore Presentation

4M's Assessment Defining "What Matters Most" to Our Veterans

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Background

At our VA hospital, a 4M's assessment helps the guide care for older Veterans in the setting of complex or prolonged hospitalizations by identifying "What Matters Most" and connecting them with the right services at the right time.

Case Presentation

Mr. M, a 75 year-old male Veteran, with a history of congestive heart failure was admitted for shortness of breath and lower extremity edema. Initial treatment included titration of cardiac medications and diuresis. A 4M's assessment was completed on hospital day 2 with a focus on "What Matters Most," which to him was being at home and maintaining his independence. An assessment of functional status and home environment revealed that his mobility was most limited by his leg swelling, and the biggest barrier to outpatient appointments was transportation access.

Given the severity of his heart failure, he required hospitalization over a period of 6 weeks, including transfer to the medical intensive care unit for cardiogenic shock and a mitral clip procedure. During this time, he received care from 5 MSICU attendings, 5 medicine attendings, 8 resident physicians, 5 case managers (CMs), 3 physical therapists, 3 occupational therapists and one social worker (SW). PT was reconsulted four times, with continued recommendation for short-stay rehab.

As he recovered from his acute illness, he was eventually able to ambulate 250 feet and became modified independent in his activities of daily living. Based on his 4M's assessment and in collaboration with SW and CM, additional needs at home were identified, including home health services and outpatient referrals for wound care, audiology, optometry, pain clinic, and transportation assistance, and the patient was eventually discharged home.

Conclusions

The geriatric 4M's framework can provide a way for the patient's voice to be heard in a setting where there is frequent turnover of care team members. In this case, the interdisciplinary team was able to align with the patient's goals and identify supports that would allow him to maintain independence in his home. Early 4M's assessments can help facilitate safe discharge planning that is consistent with "What Matters Most" to patients.

C20

It Takes a Team: Maintaining Relationships When Health Dynamics Change

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Background: Primary care relationships may be lost when acute illness requires hospitalization. Using the Interprofessional Care Team as a model, the primary care team can help a patient remain at home with home based primary care, a skilled home health team, willing specialists, and family members in new roles.

Patient Story: OR is an 87-year-old woman with htn, pre-diabetes, MCI, OA of both knees, DDD, atypical Afib/flutter, moderate AS, and HFpEF who developed increasing DOE and edema. She was hospitalized with new HFrEF and severe TR. The patient asked to return home during hospitalization and was sent home on oral diuretics. She

required a second hospitalization 4 days later, was stabilized, and at discharge voiced a strong desire to remain at home and be managed medically there. Medications: acetaminophen, apixaban 5 mg BID, cholecalciferol, mag oxide 400 mg QD, melatonin, metoprolol XL 25 mg QD, KCl 20 MEQ ER QD, KPhos 40 mg QD, torsemide 80 mg QD. Functional Status: *Independent*: Eating, Bed mobility. *Stand by Assistance*: Dressing. Grooming. Showering. *Hands on Assistance*: Transfers to toilet. *Dependent* in IADLs. *Adaptive Equipment*: Walker. Hand-held shower. Shower Bench. *Cognition*: Confusion re: medications, importance of daily weights, low salt diet.

Methods: Home visits by geriatric fellows in video contact with PCP. Home health team visits by RN, PT, OT and SLP (SLP to assess suspected decline in cognition). Findings of MoCA shared. Daughter assisted - now supervises meds due to patient's new dx of dementia.

Results: (New HFrEF, MoCAs 2011 16/30, 2022 12/30). 1) *Cognition:* MCI to dementia, cause unclear. Daughter in new care dynamic guided by encouragement and *Dementia Road Map* - changes from assistant to supervising caregiver. 2) *Medical:* HFpEF to HFrEF treatment addressed by PCP team plus cardiologists who offered a single day of multiple appointments to assess further treatment possibilities – provided patient the grace of her need to be at home. 3) *Interprofessional Team* keeps in frequent contact regarding care.

Conclusions: An aging patient's care can be managed at home with close communication between caregivers who value each team member's role. During dynamic changes in a patient's mind and heart, relationship maintenance is achieved through an Interprofessional Team focused on "What Matters Most" to the patient.

Reference: Dementiaroadmap@dshs.wa.gov

C21

A Case of Zanubrutinib-Induced Dermatologic Toxicity

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Introduction: Novel targeted drug therapies such as tyrosine kinase inhibitors (TKIs) are increasingly used to treat B-cell malignancies. Zanubrutinib, a selective Bruton TKI, is FDA approved for the treatment of mantle cell lymphoma, lymphoplasmacytic lymphoma, and relapsed or refractory marginal zone lymphoma. Zanubrutinib is associated with dermatologic adverse events (AE) such as rash, ecchymoses, hematoma development, and hemorrhage, most commonly seen within one year of treatment initiation. With increasing frequency, therapies like Zanubrutinib are being utilized to treat older adult patients with lymphoma, who are typically at additional risk for AE compared with younger counterparts given baseline medical complexity and frailty. We present a case of a LTC resident who presented with acute diffuse ecchymoses in the setting of Zanubrutinib administration.

Case: A 75 year old male with a medical history notable for Sweet syndrome, Von Willebrand disease, and lymphoplasmacytic lymphoma was evaluated in the LTC setting for acute, diffuse ecchymoses of the bilateral flanks, lower extremities (LE) and left upper extremity, in the absence of pain, dyspnea, or trauma. Physical exam was notable for diffuse ecchymoses and bilateral LE edema. CBC, PT/INR, and aPTT were all within normal limits. Venous dopplers and CT angiography of the LLE were negative for DVT and acute bleeding. In the absence of an alternative explanation and in conjunction with hospital admission and oncology evaluation, the most likely etiology was thought to be a Zanubrutinib-related AE. Following discontinuation of Zanubrutinib and aspirin, the patient's ecchymoses drastically improved.

Discussion: This case highlights the need for Geriatricians to be aware of AE from TKIs and other novel cancer treatments that are rapidly coming into use for older adult patients. This is particularly poignant given that older adults are frequently underrepresented in drug study populations, yet are at increased risk of AE compared with their younger counterparts. Older adults may also have idiosyncratic reactions less likely to be reported in the literature based upon their unique complement of chronic medical conditions and medications. Therefore, it is critical for Geriatricians to maintain a high degree of suspicion for AE in patients on novel therapeutics and to work together through an interdisciplinary approach to implement plans of care.

C22

TOPICAL EYE DROPS CAN CAUSE SEROIUS SYSTEMIC SIDE EFFECTS

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BACKGROUND:

Glaucoma is common in older adults, requiring ocular topical medications. Topical eye-drops have systemic adverse drug effects (ADEs) due to drug-drug or drug-disease interactions that need to be recognized.

CASE:

96-year-old African American female with history of bradycardia s/p pacemaker placement years ago and glaucoma (on timolol eye drops) presented in ED with gradually worsening of dizziness. She was dizzy even when supine. On physical exam the blood pressure (BP) was low with orthostatic hypotension (20 mm Hg BP drop on standing with Heart rate of 105). CT head was non-contributory. Pacemaker was functioning well. Hypotension initially improved with IVF but dizziness persisted. She had an episode of syncope while going to the bathroom. BP was low, with 30 mm Hg orthostatic drop and tachycardia. Patient was evaluated by ophthalmologist for possible ADE of timolol. Timolol was switched to brimonidine. Symptoms improved with stabilization of BP in 2 days.

DISCUSSION:

Lacrimal fluid is drained from conjunctival sac through the nasolacrimal duct and through this route eye drop solution reaches the nasal cavity, where medicine can be absorbed up to 80% into systemic circulation via highly vascularized nasal mucosa. Timolol is a common B-adrenergic blocker for the treatment of open angle glaucoma to reduce intraocular pressure. Common ADEs are blurred vision, double vision, and feeling of having foreign object in the eye, besides systemic effects like nausea, vomiting, lightheadedness and headache. ADEs are usually of short duration but can persist for a long time. Falls and syncope may result. Dizziness can be due to bradycardia or hypotension. Systemic side effects are more common in older adults likely due to the change in pharmacokinetics and pharmacodynamics with aging. The affinity of the B- adrenergic blocking drugs for the receptors increases with age, resulting in systemic side effects like bradycardia and hypotension even with ocular topical eye drops. Some patients may be additionally on oral β blockers for heart failure or atrial fibrillation. It may be best to use low dose timolol with 12 hours interval and close follow up for ADEs.

LESSON LEARNT

Topical eye drops may have altered pharmacodynamics and pharmacokinetics in older adults.

Provider of care must be vigilant in considering drug-drug or drug-disease interactions when patients present with falls, syncope or dizziness.

C23

A Case of Brief Cardiac Pause as the Cause of Recurrent Syncopal Episodes

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Case

An 85-year-old female with history of atrial fibrillation, HFpEF, moderate AS, s/p mitral and tricuspid valve repair, COPD, HTN, hypothyroidism and past recurrent falls & syncopal events presented to the ER after a fall at home. The patient sustained multiple rib fractures and

a superficial skull contusion. She was standing in her kitchen when she had sudden lightheadedness. There was no chest pain, palpitations, nausea, vomiting, diaphoresis, loss of bladder or bowel control. Patient lost consciousness and woke up on the floor with pain in her left shoulder and right lower chest wall. Prior outpatient cardiology workup for syncope had been unrevealing including a 24-hour Holter monitor (HM). The patient had seen a falls specialist who suspected cardiac arrhythmia as the cause for syncope and had ordered a 48-hour monitor. During hospitalization, she had a pre-syncopal episode with telemetry showing an episode of cardiac pause. This prompted further review of her 48-hour event monitor which revealed three episodes of sinus pauses with a max of 10 sec. Patient underwent pacemaker placement prior to discharge which was well-tolerated. Follow up has been every 3 months without recurrent syncope.

Discussion

Older adults (OAs) with syncope have an estimated 2-year mortality rate of 30%. To decrease adverse outcomes, it is important to understand the diagnosis and management of syncope. In OAs with recurrent unexplained falls, syncope should be considered. The most common cause of syncope is vasovagal syncope especially in OAs with extensive atherosclerotic arterial disease. While less common, cardiac syncope has significant associated mortality, mainly from fall injuries. The two main causes of cardiac syncope are organic heart disease and arrhythmias. Arrhythmias are usually detected using EKG, HMs and/or implantable loop recorder monitoring. However, HM for 24 hours has low diagnostic yield (7%). In a patient with likely cardiac syncope, HM should consist of a 24-hour recording followed by a 48-hour recording if the first is negative.

Conclusion

Arrhythmia should be considered as a cause of syncope in OAs with recurrent falls. Geriatricians should recommend longer periods of cardiac event monitoring in OAs with history of recurrent falls to help reduce morbidity and mortality. A pacemaker may be needed to treat cardiac pauses.

C24

Killing a Caregiver with Kindness

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Background:

Caring for the sick patient is a collaborative effort. While it is essential to care for the patient and their mental well-being, caregiver fatigue is an essential consideration. ~43.5 million nationwide provide care to another person. Caregivers bear an increased risk for stress, physical and mental health.

Case Description:

We present a 74-year-old Asian female with Parkinson's (non-decisional due to dementia), ruptured cerebral aneurysm with residual left sided weakness, stage IV sacral decubitus ulcer (associated with debility) and recurrent aspiration pneumonia (s/p G-tube placement) presented to clinic after a subacute rehab course to improve strength. Due to multiple and progressive chronic conditions, palliative medicine input had been sought for the patient. Despite extensive interface with Palliative team regarding a dying patient with Parkinson's disease, poor prognosis was never directly addressed. At the office, there was concern for sepsis associated with the worsening pressure ulcer, she was rehospitalized. Consequently, the caretaker who reportedly provided 20 hrs/day suffered with feelings of guilt and inadequacy causing depression. The patient ultimately required "blunt" intervention by Geriatrics during a family meeting by providing frank prognosis, which had not been directly addressed previously. The caregiver initially had an unrealistic goal for the patient to return to rehab facility despite extreme physical limitation and ability to participate, but ultimately agreed that the patient would be best served with comfort focused care with hospice given end-stage Parkinson's disease complicated by cognitive decline, recurrent aspiration and pressure ulcer. The caregiver was provided adequate support via hospice services and significant burden relief was provided for the patient and caregiver. The patient ultimately passed within 2 months of being transitioned to hospice with recurrent aspiration, but was able to be peacefully attended by spouse when they passed; who expressed his gratitude to the Geriatrician on a condolence call.

Discussion:

This case illustrates the importance of forthrightly addressing prognosis, goals of care and caregiver burden when patients are in better health as to avoid the devastating effects associated with clinical decline. An appropriately timed referral to hospice can provide a superior quality of life not only for patients, but their caregivers, easing the burden of transition for all.

C25

Navigating the Care of a Frail Older Adult with Undocumented Immigration Status

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Background: Some models estimate the number of residents with undocumented immigration status in the U.S. at 16.7 million. Healthcare inequities in this population need to be addressed, especially with our rapidly aging population. The challenges of caring for undocumented older adults are magnified by management of serious illness and end-of-life care. This case illustrates some of the barriers for these patients.

Methods: Ms. P is a 72 year-old, Polish-speaking woman with invasive squamous cell carcinoma of the nasopharynx referred for pain management. She was started on a buprenorphine patch due to its safety profile, lower pill burden, and difficulty managing medications while living alone. However, because Ms. P was on Emergency Medicaid due to her undocumented immigration status, her medications were not covered. This became cost-prohibitive for the patient's friend, who was paying for her medications and also becoming more involved in the patient's care as her functional status declined. Ms. P was converted to a less optimal but affordable as needed morphine regimen that was safer to manage on her own, and it became clear that her undocumented status severely limited the resources that could have mitigated multiple risk factors that compromised her health and well-being.

Results: After recurrent hospitalizations, Ms. P opted for transition to hospice, but died prior to being accepted by a hospice residence under charity care. Multiple barriers prevented Ms. P from receiving adequate end-of-life care including undocumented status, language barriers, mistrust of the healthcare system, limited social support due to fear of deportation, and limited financial assistance.

Conclusion: Providing medical care to undocumented patients is challenging, especially for frail older adults at the end of life. Critical resources are limited for medication coverage, home care, hospice care, mental health care, and primary care. In cases where seriously ill patients are undocumented, an interdisciplinary approach is essential to navigating these healthcare barriers. Ms. P's case demonstrates that further work needs to be done to support those with undocumented immigration status in their access to health care and end-of-life care.

C26

Progression of an Undiagnosed Neurodegenerative Disease: Why the H&P Matters

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Case: A 70-year-old male with a history of T2DM, CKD, CAD, OSA, and HTN was admitted with acute on chronic functional decline and one week of confusion. MRI brain was normal without evidence

of PRES and infectious workup was negative. A detailed history revealed subtle memory impairment dating back six years. He had a significant functional decline five months prior to admission after a hospitalization for generalized weakness. He was then dependent on his wife for nearly all ADLs and IADLs. He required prompting to eat and lost 24 pounds in the preceding 6 months. Family further described cognitive fluctuations and a history of visual hallucinations where he saw small dinosaurs. When his mental status improved, he scored 4/30 on the SLUMS exam. Exam was notable for micrograpahia, flat affect with lack of motivation, reduced blink frequency, and reduction in frequency of rapid alternating finger movements. Cogwheeling was present in both arms and seborrheic keratosis was noted. Given the timeline of cognitive impairment followed by parkinsonism with cognitive fluctuations and hallucinations he met criteria for Lewy Body Dementia.

Discussion: Lewy Body Dementia (LBD) is a neurodegenerative disease and is the second most common cause of dementia after Alzheimer's disease. It can be difficult to distinguish from Parkinson's Disease with dementia, but cognitive impairment pre-dates parkinsonism in LBD as in this patient. LBD is underrecognized in older patients and clinicians should have a high index of suspicion when patients present with cognitive impairment and a careful exam for parkinsonian symptoms should be performed. Cognitive impairment can be insidious and an inciting event such as a hospitalization can exacerbate symptoms and lead to a rapid decline in function. It is important to pay attention to repeated bouts of AMS especially if there are any concerning features for LBD as cognitive fluctuations are a hallmark of LBD.

Case Conclusion: This patient was diagnosed with Lewy Body Dementia. The family was relieved to have this diagnosis as it helped them put his constellation of symptoms together and they no longer felt the need to search for answers. He underwent inpatient rehabilitation and was discharged home, but unfortunately was quickly readmitted. He enrolled in hospice and passed away several weeks later. It is important to diagnose LBD as early as possible in order to educate patients and families on prognosis and expectations.

C27

Gender Affirming Care in Long Term Care Facilities

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Background: More than 5% of residents in long term care facilities identify as LGBTQ+. LGBTQ+ residents face unique challenges in room sharing, bathing, toileting, personal grooming and social gendered interactions. According to a study done by AARP, "more than eight out of ten survey respondents say that would feel more comfortable with providers who are specifically trained in LGBT patient needs (88%), use advertising to highlight LGBT-friendly services (86%), have some staff members who are LGBT themselves (85%) or display LGBT welcoming signs or symbols in facilities and online (82%)."

Case: A 76 year old male Veteran (previously transgender female whose preferred name was Jackie) with dementia, HIV, CVAs and ESRD was transferred to the Community Living Center (CLC- nursing home attached to VA hospital) for long term care. He had lived most of his adult life as a woman and had adopted a son with his male partner. Three years prior he had a short CLC stay. At that time, he identified as a woman, dressed in feminine clothes and was referred to with she/her/hers pronouns. The CLC psychologist provided cultural competence and sensitivity training for staff. With the onset of significant cognitive decline, he started identifying as male again. His ability to speak was limited but when asked what he would like to be called he gave his full legal male name. He no longer recognized the name Jackie.

Conclusion: The case highlights the importance of gender affirming care for LGBTQ+ individuals in long term care facilities. The Long Term Equity Index (LEI) is a national benchmarking tool developed by SAGE (Services and Advocacy for GLBT Elders) and HRCF (Human Right Campaign Foundation). LEI is designed to both assess a facility's current services and assist them in adopting policies that promote culturally competent care. Its goal is to create a network of LTCs across the county that are providing a welcoming home for LGBTQ+ older adults. As American population is aging, there will inevitably be larger number of LGBTQ+ residents living in LTCs. Published report of LEI can help potential LGBTQ+ residents of LTCs to identify LGBTQ+ inclusive communities.

Human Rights Campaign and SAGE Release First Edition of the Long-Term Care Equality Index - Human Rights Campaign (hrc.org)

Https://www.lgbtlongtermcare.org

C28

Think twice: Dormant Sarcoidosis causing PTH-independent Hypercalcemia

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Introduction

Parathyroid hormone(PTH) independent hypercalcemia may be caused by malignancy and non-neoplastic causes inclusive of immobility, hyperthyroidism, and hypervitaminosis D (calcitriol) associated with granulomatous diseases inclusive of fungal infections, inflammatory bowel diseases, and sarcoidosis. We describe a case of non-PTH mediated hypercalcemia as a diagnostic dilemma.

Background

A 71-year-old male admitted for the surgery of newly diagnosed squamous cell carcinoma(SCC) of his right face. He had past history of sarcoidosis based on imaging alone that was treated intermittently with prednisone and was asymptomatic. Post-op was uncomplicated except for his declining level of physical functioning requiring admission to the acute rehabilitation unit. An adjusted for albumin corrected calcium was found to be mildly elevated with a very low PTH. Given his history of SCC of the right face, the initial differential diagnosis included PTH-independent hypercalcemia due to humoral hypercalcemia of malignancy. Further evaluation disclosed a normal 1,25(OH)2D, low normal PTH, elevated inoized calcium, normal PTHrP, and normal angiotensin converting enzyme. Hypercalcemia with a normal PTHrP level implied a non-renal mechanism inclusive of potentially nonmalignant diseases. CT chest disclosed calcified pulmonary nodules in the right apical lobe, multiple calcified mediastinal and hilar lymph nodes without evidence of active fungal infection, concerning for silicosis or sarcoidosis. Biopsy could not be obtained due to the location of the parenchymal nodules in the right apical lobe. The patient had no occupational risk for silicosis. A low PTH with a normal 1,25(OH)2D level was consistent with a extrarenal source of the hormone and a empirical diagnosis of sarcoidosis. Hypercalcemia was treated with moderate dose prednisone resulting in rapid normalization of serum calcium.

Discussion

Hypercalcemia in this case was likely due to sarcoidosis. Calcitriol-mediated hypercalcemia is classically associated with elevated calcitriol level;however this case is one of a few reported cases where patients have "inappropriately high-normal" calcitriol with very low PTH. Thus, physicians should not exclude granulomatous diseases in the investigation of PTH independent hypercalcemia associated with normal calcitriol level.

C29

A giant headache - an atypical presentation of Giant Cell Arteritis

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Background: Headache is most common neurologic symptom. Primary headaches represents about 2/3 of the headaches in our older adults population. Most of the time the diagnosis of primary vs. secondary headache can be made exclusion of the secoondary causes. In our older adults population this is a complex process due to multimorbidy, multicomplexity and polypharmacy involved. Also the secondary headaches can have atypical presentation like in this case report of Giant cell arteritis who presented diplopia.

Methods: A case report is described below using electronic medical records from inpatient hospitalization and outpatient follow-up.

Results: An 82-year-old woman with a history of diabetes mellitus and polymyalgia rheumatica presented to the emergency department (ED) complaining of diplopia for two days, blurry vision, and headache. Exam showed a lack of right eye adduction and right temporal tenderness. Labs were significant for glucose 160, platelets 100, ESR 78, and hemoglobin A1C 7.3. Stroke was ruled out by negative MRI, family medicine inpatient team suspected GCA and started high-dose steroids. Ophthalmology identified an afferent pupillary defect and recommended temporal artery biopsy and bilateral carotid artery ultrasound, which revealed less than 50% stenosis. The left temporal artery biopsy showed that the patient had lymphocytic inflammation surrounding a small vessel in the adventitia. Because the sample was collected after the initiation of steroid therapy, the extent of inflammatory injury was unknown. The patient's headache and visual symptoms improved after the initiation of therapy. On outpatient follow-up 2 weeks after discharge, the patient reported no further episodes of diplopia.

Conclusions: Is important to not forget inclusing GCA for diagnosis of secondary headache due to the risk of vision loss. Diplopia, stroke-like symptoms, and malaise are less common symptoms. Immediate, high-dose steroid treatment can reduce inflammation rapidly. It is imperative to have a broad differential for common complaints in our older adults population due to comorbidities, polypharmacy, social issues. Sometimes atypical presentation for common complaints present is as changes in behaviours, function, falls.

C30

Perfect Storm for a Long-Term Care Resident: Rare Disease with No Specific Findings & Multiple Transitions of Care

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Background: Pyoderma gangrenosum (PG) is a neutrophilic ulcerative dermatosis characterized by progressive ulceration and necrosis. PG is rare, with a world-wide incidence of 3-10 cases / million. While PG is associated with inflammatory bowel disease, rheumatoid arthritis, and hematologic malignancies, there are no specific tests for PG, making it a diagnosis of exclusion. Further, PG can worsen with treatments like sharp debridement. We present one such case of PG in a long-term care resident whose clinical condition worsened in the setting of delayed diagnosis, sharp debridement and multiple transitions of care.

Case Presentation: A 63-year-old long-term care resident presented to the wound care nurse with a right-sided purulent chest wound of unclear etiology. Despite debridement and dressings, the wound worsened, prompting referral to an outside wound clinic who performed sharp debridement and tissue biopsy, which was negative for malignancy. Over the next two months, he was admitted twice to the hospital for unrelated causes. Each time, plastic surgery performed a sharp debridement of the wound, resulting in worsening clinical appearance. This was despite communication from the wound care nurse regarding mounting concerns for a diagnosis of PG and potential for harm with debridement. Consultation with Dermatology finally revealed a formal diagnosis of PG and treatment plan with intralesional steroid injections, resulting in dramatic clinical improvement.

Discussion: This case demonstrates how communication breakdowns between care sites can leave patients at risk for missed diagnoses and iatrogenic harm. While PG is rare and a diagnosis of exclusion, clinical worsening should prompt the astute clinician to seek out alternative diagnoses. Further, this case exemplifies the harm incurred from a procedure repeatedly performed by a hospital team that did not integrate clinical information being given to them from the nursing home wound care nurse. Whenever possible, clinicians ought to mitigate risk for communication breakdowns and iatrogenic harm by expediting formal diagnoses and treatment plans with necessary consultants, and have that information readily available in the EMR across settings. Vulnerable patients with rare diagnoses demand the best of us, both as individuals and as health systems.

C31

Anticoagulation Dilemma in a Geriatric Hip Fracture Patient with Recent DVT and Intracerebral Hemorrhage

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Introduction: Cerebral amyloid angiopathy (CAA) is a common small vessel disease in elderly [1]. It carries an increased risk of spontaneous intracerebral hemorrhage (ICH) and this risk is believed to increase even further with use of anticoagulation [3].

Case: A 93 year old female with history of CAA diagnosed by MRI in 2019 presented with left hip fracture after mechanical fall. Three months earlier she was found to have a DVT and was started on Eliquis 2.5mg twice daily. One month later she sustained an ICH (both subarachnoid and subdural). Eliquis was held for a brief period as a result but resumed after a repeat US showed persistence of clot. Following repair of the present left hip fracture, risk vs. benefit of venous thromboembolism (VTE) prophylaxis and/or resuming DVT treatment was reviewed. Another repeat US at this point showed no remaining clot. Eliquis was ultimately discontinued permanently.

Discussion: This case highlights a difficult clinical scenario where consideration is given to conflicting risks of thrombosis and bleeding. Orthopedic hip surgery has a known increased risk of VTE events which can be reduced by up to 60% with thromboprophylaxis [2]. Conversely, individuals with CAA and history of prior ICH, such as this patient, have an up to 10% risk of a recurrent ICH [3]. Although DOAC's have not been studied for this indication, Warfarin and Aspirin have shown to further increase the risk of ICH [4,5].

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C32

Capacity Evaluation: Chemical Hazards in the Inner Space

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Case Description: A 76-year-old African American female with medical history of hypertension, dementia, and bilateral lower extremity edema presents to the hospital from assisted living facility with worsening lower extremity wounds. Patient follows with wound care but family were concerned about non-adherence with dressing changes due to her advanced dementia.

Patient believes that the wounds are from an allergic reaction to the chemicals from her dollar store socks and makes every attempt not to keep any dressing on. Exam reveals a morbidly obese older woman with bilateral lower extremity lymphedema, cellulitis and large wounds on both lower legs. Lab results show elevated inflammatory markers, blood and wound cultures are positive for Pseudomonas. Case management requested geriatric consult to determine if the patient has capacity to determine discharge disposition. She does not meet criteria for delirium but demonstrates limited understanding of her clinical status, the need to care for her chronic wounds, and the complications that could arise from improper management. The patient is determined to lack capacity and is discharged to the Skilled Nursing Facility on oral antibiotics.

Discussion: Capacity is the ability of individuals to clearly and consistently communicate a choice that validates their independent living. Lack of capacity can lead to harmful decision-making. With the growth of the older adult population, we can expect the increased prevalence of cognitive impairments due to dementia, other geriatric syndromes, or chronic medical conditions. Hence, the need for all members of the health care team to understand the process of capacity assessment. This assessment usually involves a team of multiple disciplines that includes, but is not limited to, a social worker, pharmacist, physical therapist, and physician.

Conclusion: The question of whether or not an individual retains capacity to make medical decisions must be balanced against the four principles of ethics: autonomy, beneficence, non-maleficence, and justice. Consequently, the number of times clinicians face the conflict of balancing patients' wishes and trust with their safety in the setting of capacity assessment will increase as well. To further refine the assessment capacity process at our institution, we plan to administer a survey to discharge planners to determine knowledge gaps regarding capacity and ultimately make improvements to patient care.

C33

Exhuming an Ultra Rapid Cognitive Screen: A Case Study with *The Sweet 16*

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Background: In collaboration with Wilmington VA Community-Based Outpatient Clinic (CBOC) in Vineland, NJ, NJGWEP designed and implemented a program for evidence-based geriatric care and cognitive evaluation. The recently resuscitated 'Cognitive Clinic' at the VA CBOC is a multi-disciplinary, multi-agency endeavor aimed to evaluate veterans aged 60+ who either report or show signs of cognitive impairment.

Methods: A 70-year-old male presented to the VA cognitive clinic after self-reporting forgetfulness to his primary care provider. The veteran had a significant past medical history of obstructive sleep apnea and estimated 10 years of non-adherence to CPAP. High-risk medications were reconciled with the veteran and corroborated with use of the New Jersey prescription monitoring program. Both Alprazolam 2mg and Oxycodone 5mg were consumed the morning prior to the evaluation. He reported self-medicating with marijuana last used during the morning prior to the evaluation. The veteran's primary language is English and identified "ninth grade" as his highest level of education attainment.

Results: The veteran was assessed using *The Sweet 16* with an overall score 12/16 which corresponds to a Mini-Mental Status Exam score 22/30. He scored perfectly in both time and location orientation. He correctly repeated 2 of 3 items given for registration. After correctly repeating 3-digit and 4-digit numbers to the examiner, he was unable to give neither 3 nor 4 digits in backward order. The veteran was able to recall 2/3 items after the digit span distractor.

Although the veteran was able to give the examiner the days of the week backwards, an inattention deficit was substantiated when the veteran incorrectly gave the months of year backwards.

The veteran was encouraged to accept guided gradual dose reduction of both opiates and benzodiazepines.

Conclusion: This case highlights the real-world utility of *The Sweet 16* to rapidly characterize the degree of impairment in patients with low education and demonstrate the impact of high-risk medications on cognition.

C34

The healthy aging formula

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Introduction: What should the healthy aging formula be for the older adults - healthy diet, physical exercise, cognitive exercise, socialization. So then preventitive services for the elderly should include as goals optimization of quality of life, satisfaction with life and maintenance of independence and productivity. Physicans often are focused on acute treatment of the clinical situation and forget about prevention.

Case scenerio: 71 y/o male with cognitive impairment, h/o TIAs, episodic speech disturbances, HTN, urinary incontinence, HLD, gerd, h/o prostate ca presents for evaluation of cognitive impairment with his wife. Memory and word retrieval issues have been noted for the last couple of years and seem to be getting worse. He has baseline anxeity which is now heightened given his cognitive changes.

Medications include: amlodipine 5 mg daily, apixaben 5 mg bid, asa 81 mg daily, atorvastatin 80 mg daily, oxybutynin xl 5 mg, MVI, lisinopril 10 mg daily and famotidine 40 mg daily.

Physical exam: vitals signs stable. MoCA: 25/30, Trails B: 129 sec with 2 errors, GAD 7 - 13 (moderate anxiety), Blood work: B12: 440, RPR:NR, lyme - negative, TSH:2.3

MRI brain with and without contrast: 1. no acute-appearing findings or abnormal enhancement. 2. nonspecific multiple white matter hyperintensities 3. age appropriate mild global atrophy.

Plan: 1. Healthy lifestyle changes - cognitive exercises, physical exercises, healthy diet and socialization were discussed. Keeping the heart healthy which will keep his brain healthy.

2. Therapeutics - donepezil 5 mg daily started as his anxiety was due to his memory changes pt was not treated for anxiety immediately

3. Polypharmacy - oxybutynin deprescribed as it has the potential to reduce anticholinergic burden.

Discussion: In the United States the number of people ages 65 and older expected to increase over time. Physician are often focused on acute treatments. Preventitive health is just as important. Its never too late to start eating healthy, its never too late to start physcial exercises to keep the heart healthy and thereby keeping the brain healthy. Microvascular changes (silent infarcts) in the brain can lead to global changes over time and cognitive impairment. Neuroplasticity should be discussed by recommending cognitive exercises to continuously rewire and rejuvanate the brain.

Summary - In follow up this patient was much clearer and was back at the golf course riding his golf cart which improved his anxeity as well. His speech and thought content were also clearer in follow up.

C35

A lesson in polypharmacy: Improving baseline function by deprescribing

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Background: Polypharmacy is a complex subject to approach. The STOPP/START criteria and BEERS Criteria can help guide management. Physicians may require various approaches to patient polypharmacy based adverse effects and drug to drug interactions.

Case: 80 yo woman from the Nursing home with frontotemporal dementia, atrial fibrillation, rheumatoid arthritis, CAD, insomnia, and depression presented for concerns surrounding cognition and mood. Initially she presented with aphasia, lethargy, hallucinations, and was reliant on a wheelchair. She had suffered a fall in the week prior to her appointment. Her medication list was burdened with polypharmacy. Her medication list included Alprazolam, Lorazepam, Risperidone, Quetiapine, Trazodone, Ziprasidone, Memantine, Paroxetine, Desmopressin, Flecainide, Metoprolol, Rivaroxaban, Rosuvastatin, Mirabegron, and thyroid porcine. Of these medications Lorazepam was discontinued at initial visit, Trazodone was decreased until discontinued due to lethargy. Memantine which is not indicated in FTD was tapered and discontinued. At follow-up appointments Quetiapine and Risperidone were discontinued but Ziprasidone was continued for behavioral disturbances. Uncontrolled depression and anxiety and lack of response and lower side effect profile than paroxetine she was transitioned to Sertraline. After 8 months she did not suffer another fall, was more alert, had clear speech, was ambulatory without the wheelchair, and hallucinations were no longer reported. Overall, the patient initially started with 15 medications and was successfully titrated to 9 medications with significant improvement in neurologic concerns.

Discussion: Polypharmacy can lead to increased risk of morbidity and mortality. One study showed that community dwelling adults with dementia were more likely to have CNS active polypharmacy and women around the age of 79 were more likely to be affected, similar to our patient. Deprescribing can be a tedious process requiring close follow up and frequent adjustments. The approach in this case was to discontinue infrequently used medications. Next taper the medications with the most sedating effects. Finally optimize one antipsychotic medication at the lowest dose necessary to improve behavioral disturbances. Medication reconciliations like these present challenges; multiple studies have shown discrepancies between medication reconciliations in various transitions of care.

C36

Influence of Psychotropic Medications on Mental Capacity, Autonomy and Goals of Care Decisions

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Introduction

A person's capacity to consent is affected by comprehension (ability to understand, retain information), decision-making (ability to weigh information and reach a decision) and communication (ability to communicate the decision made). Psychotropic medications may alter decision-making processes and hinder goals of care decisions.

Case

47 year old Hispanic male with multiple sclerosis, schizophrenia, seizure disorder and hypertension was hospitalized with pneumonia and septicemia. He developed dysphagia, with esophageal swallowing deficit. Gastroenterology consult recommended esophagogastroduodenoscopy and percutaneous endoscopic gastrostomy (PEG). He was counselled regarding PEG insertion but refused. Parenteral nutrition was begun. Clinically, patient was lethargic and drowsy. He was on psychotropic medications (risperidone and fluphenazine) for schizophrenia. The medications were withheld. A psychiatry consult for decision making capacity regarding PEG was considered. Once the psychotropic medications were removed, he became alert, oriented, responsive, and clearer in thoughts and conversation. He was again counselled on PEG placement for dysphagia; he understood the procedure, complications and alternatives clearly. He asked questions about the procedure, long-term aspects of tube placement and removal if he tolerated oral diet in future. After informed consent, he underwent EGD and PEG placement. Post procedure he tolerated feeds via PEG.

Discussion

Respect for autonomy is a key principle in biomedical ethics, requiring consideration in daily health care. Assessing an individual's capacity to consent to or refuse treatment is a demanding task for healthcare professionals, particularly when dealing with patients on medications (e.g., psychotropics) that alter the thought process. It is vital to assess the individual's ability to understand the options available and consequences of making a decision, and to communicate after processing the information to reach a rational outcome. In acute care, we must find the balance between promoting and restoring our patient's health and factor the effects of medications that influence mentation and decision-making capacity.

Key points

Patient autonomy is a vital ethical principle that must be respected

Psychotropics may influence mentation and make decision making difficult.

Ideally, capacity must be assessed after eliminating medication effects

C37

Drug Induced Liver Injury Needs Recognition in elderly population

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Introduction

Nitrofurantoin is a commonly used antibiotic to treat urinary tract infections (UTIs). Despite clinical benefits, its use requires vigilant monitoring, as adverse drug effects (ADEs) from the drug include harm to multiple organs, especially liver and lungs.

Case

An 81 y/o Asian female with hypertension, hypothyroidism, type 2 diabetes mellitus, depression, asthma and gastroesophageal reflex disease presented to hospital with abdominal pain, constipation, vomiting and fever for 10 days. She had a history of recurrent UTI and recently received nitrofurantoin for 7 days. She had stage 2 CKD with eGFR of 63. Antibiotic course was finished 4 days earlier. Her labs revealed elevated alkaline phosphatase over 1800(U/L) along with mildly elevated liver enzymes (AST, ALT and GGT). Investigation for infectious, autoimmune and cholestatic causes of abnormal liver function was negative. CT abdomen ruled out cholelithiasis and biliary pathology. A diagnosis of drug induced liver injury (DILI) was made. She was treated conservatively, by drug withdrawal! Serial alkaline phosphatase and liver enzymes showed a significant drop over a week, with clinical improvement. Alkaline phosphate dropped in days to 613(U/L), along with AST, ALT and GGT as 115(U/L), 109 (U/L) and 48 (U/L) respectively.

Discussion

Nitrofurantoin is currently among the drugs recommended as standard treatment of uncomplicated cystitis and for prophylaxis of recurrent urinary tract infections. DILI presents as acute (3 in 1,000, 000) and chronic (1 in 1500) forms. The spectrum of liver toxicity associated with nitrofurantoin ranges from acute hepatitis, granulomatous reaction, cholestasis, or autoimmune-mediated hepatitis to chronic active hepatitis that may lead to cirrhosis or death. The mechanism of hepatotoxicity is poorly understood, but is believed to be due

to an immunologic process or direct cytotoxic reaction. It is postulated that prolonged exposure to nitrofurantoin, female sex, advanced age, and reduced renal function enhance risk of developing hepatotoxicity. The key is in early recognition and withdrawal of the drug. For severe cases, corticosteroids may be added.

Key Points

Use antibiotics judiciously in elderly with presumed urinary infections.

The old are vulnerable to ADEs of antibiotics (e.g. nitrofurantoin), which are worse than the indication itself (infection).

Drug withdrawal was the answer in our patient with DILI, rather than adding medications

C38

"This time, it is the thyroid!": An Older Adult with Dementia and Poor Social Support.

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Background:

While hypothyroidism is common in older adults, between 1-15% (1), myxedema is quite rare in older adults (0.01%) (2). This case highlights the importance of recognizing myxedema in older adults and the unique social and cognitive barriers that lead to this presentation.

Case Presentation:

Patient is a 69 y/o male with past medical history of iatrogenic hypothyroidism secondary to radioactive iodine ablation from Grave's disease, dementia, hypertension, COPD, iron deficiency anemia who was referred for admission from clinic for falls, confusion and swelling in his hands, feet and eyes. The patient was not a reliable historian. Additional history obtained by son revealed that son was patient's primary caregiver and was frequently out of the house working as a teacher. Son noted that patient had not been taking any of his medications for months. On examination, patient was bradycardic, hypothermic, with coarse skin, puffy facies, enlarged tongue, and cognitive and motor slowing. TSH was noted to be 52.8 with undetectable free T4. The patient was seen by endocrinology, started on IV levothyroxine 37.5 mg daily for 3 days in addition to IV hydrocortisone. He was then begun on 100 mcg of levothyroxine orally. Steroids were stopped when cortisol returned in the normal range. The patient clinically improved and was discharged to subacute rehab where he transitioned to long-term care where he currently resides.

Discussion/Conclusions:

This case is a classic presentation of myxedema, a rare presentation of hypothyroidism in an older adult. It also serves as an unfortunate example of dire results of neglect resulting in precipitous transitions of care.

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C39

Use of Sodium Valproate for Agitation in the Geriatric Population

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Background: Sodium Valproate (Depakote) has been used clinically to manage agitation in a variety of patients, however, literature is lacking to support the efficacy of Depakote use for management of agitation in the geriatric population. Medication choices can be severely limited in this age group due to paradoxical effects that can occur with different psychotropics. Therefore, the efficacy of Depakote as an alternative medications for management of agitation needs to be further assessed.

Methods: Case 1: A 78 yoF with dementia, anxiety, ESRD on HD, hospitalized for altered mental status and new onset behavioral agitation in the setting of recent use of benzodiazepine, Lorazepam for anxiety prior to HD. PRN Lorazepam was stopped, as paradoxical agitation continued. EKG showed prolongated QTc, eliminating antipsychotics as an option. Depakote was started with significant improvement in patient's anxiety and agitation. Depakote was continued nightly for agitation.

Case 2: A 79 yoM with Parkinson's disease and dementia was hospitalized from memory care unit for altered mental status, found to have sepsis, CAP and UTI. His behavior was agitated, punched a nurse during hospitalization, prompting requirement of PRN medications. Patient was taking Quietiapine nightly for sleep and BID dosing was initiated in an attempt to better manage agitation. But they did not significantly improve. Given history of Parkinson's, Haldol was avoided, and Depakote was initiated for agitation. Behaviors improved and patient was found to be more conversational, calm, and recognized wife.

Conclusions: A variety of psychotropics exist that can aid in management of agitation. However, limitations may exist from patient to patient in the Geriatric population, making benzodiazepines and antipsychotics poor choices, prompting the need for alternatives. Depakote appears to be a viable and effective option based off limited case reports and clinical practice. Thus, further large-scale trials should be pursued to assess the efficacy of Depakote in management of agitation in the Geriatric population.

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C40

The imitation game: Alzheimer's Disease or Hippocampal Sclerosis

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Introduction:

Hippocampal Sclerosis of aging (HS) mimics presentation of Alzheimer's disease(AD), affecting up to 25% of the "oldest-old" and is often misdiagnosed. Life expectancy after diagnosis is much longer when compared to AD. Thus, differentiating various causes of dementia is necessary for prognosis and emerging AD treatments. Here we describe a case of probable HS that mimics AD but has more insidious clinical course.

Case:

A female patient in her 90s with medical history of hypothyroidism presented to our memory clinic with 3-year history of short-term memory loss. There was a family history of AD in her father. She had dependency in part of instrumental activities of daily living. Physical and neurological exams were unremarkable. Her Mini-mental State Exam score was 23/30. Neuropsychological testing showed impairment in verbal memory and language domains. She was diagnosed with mild stage of dementia.

Brain MRI with volumetric studies showed moderate white matter disease and chronic pontine lacunar infarcts. There was severe hippocampal and entorhinal cortex atrophy with increased FLAIR signal on the left side. There was no entorhinal cortex atrophy on the right side. Brain amyloid PET imaging was performed to rule out AD, which showed sparse to no neuritic plaques in the cortices, significantly reducing the likelihood of AD. Patient was finally diagnosed with probable HS.

Discussion:

Diagnostic hallmarks of HS on imaging include severe volume loss of hippocampus, severe neuronal loss, and reactive gliosis (high FLAIR signal). HS is a neurodegenerative disorder that can be unilateral or bilateral; the primary underlying neuropathology is TDP-43.

Individuals with pure HS tend to have a later disease onset, mean age of 80.6 years, compared to 73 years in AD, older age at death (>90 years), and less cognitive and functional impairment compared to individuals with AD. While no pharmacological treatment is available for HS, there have been significant promising therapeutic advances in AD, including evolution of anti-amyloid Antibodies as a disease-modifying treatment.

Conclusion:

This report highlights the significance of identifying HS as an important differential diagnosis of AD, especially in late life. The disease trajectory and treatment are different in cases of pure HS compared to AD. As clinical presentation could mimic AD, accurate diagnosis is becoming more critical in the era of emerging AD disease-modifying agents.

C41

"To Be or Not to Be": A case of medical treatment over objection in an alert albeit cognitively impaired and delirious older adult

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Background: Caring for patients without medical decision-making capacity is a complicated clinical scenario, to begin with. Moreover, patients who are otherwise verbal and functional, albeit cognitively impaired, delirious, and defiantly refusing necessary medical treatments, are even more challenging to take care of even if they have existing advance care directives in place. We present a case illustrating the complexities faced by treating specialists, including palliative care.

Case Description: An 85-year-old premorbid functional retired lawyer and writer with hypertension, kidney disease, and atrial fibrillation was admitted for the management of a recent stroke with hemorrhagic conversion. He was subsequently found to have a left ventricular thrombus which necessitated warfarin administration. The neurologic sequelae included mild right facial droop, grade 4/5 motor strength on his extremities, mild dysarthria, and aphasia. His course was complicated by agitated delirium during medication administration causing patient refusal despite consistent medical decision incapacity as evaluated by numerous providers. A medical sedation plan using midazolam over treatment objection was carried out, given the emergent need to treat with coumadin as future strokes could be more catastrophic. An interprofessional-driven plan including healthcare proxies, psychiatry, ethics review committee, cardiology, neurology, and legal counsel was adhered to with the goal of obtaining a court order for medical sedation over treatment objection. A court order was subsequently granted. The patient was then able to successfully take his oral medications and agree to essential blood work for monitoring.

Conclusion: A thorough and consistent capacity assessment in cognitively impaired and delirious patients is a necessary step before administering medical sedation to treat patients who object to and refuse necessary medications. A coordinated process involving the healthcare proxies, psychiatry, ethics review committee, institutional legal counsel, and subspecialists is critical to ensure that patient's rights are protected first.

An Interprofessional-driven plan.....was adhered to....medical sedation over treatment objection.

C42

Stroke in an Older Adult with Atrial Fibrillation and Outcome post Endovascular Thrombectomy

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BACKGROUND

Study suggested that almost half of the older persons with atrial fibrillation (AF) do not receive anticoagulants.[1] Endovascular thrombectomy (ET) is of benefit to most patients with acute ischemic stroke caused by large vessel occlusion (LVO).[2]

CASE

80 year old Caucasian female with past medical history of monoclonal B cell lymphocytosis, type 2 diabetes, paroxysmal AF and coronary stenting several years ago was no longer on plavix. In addition, patient/family themselves opted to discontinue dabigatran due to concerns of bleeding risk. She was not frail at that time and was functionally independent. Two years later for the current admission, she presented with slurred speech, acute right sided facial droop and hemiplegia. CT Angiogram of Head showed a L M2 middle cerebral artery segment occlusion. She immediately underwent an ET and was then discharged to Skilled Nursing Facility (SNF) for physical, occupational and speech therapy. New medications included apixaban. In SNF, she made a functional recovery to baseline in a couple of weeks and was discharged with no neurological or cognitive deficits.

DISCUSSION

The prevalence of AF is increasing as the population ages and the treatment-related complications also increase markedly in older adults (≥75 years of age). The older AF population has a high risk of stroke, bleeding, and death. Syncope and fall-related injuries are common reasons for nonprescription of oral anticoagulation (OAC) and risks are higher when OACs are used with antiarrhythmic drugs. Geriatric impairments, particularly cognitive impairment and frailty are also cited as reasons for not prescribing OACs.[3] Beyond rate and rhythm control considerations, stroke prophylaxis is critical to AF management.[4] Reports indicate that for older adults with AF, apixaban is associated with lower rates of adverse events across all frailty levels, whereas dabigatran and rivaroxaban are associated with lower event rates only among nonfrail patients.[5] ET is a highly effective and safe treatment for patients with acute ischemic stroke with LVO and is considered the standard of care. In the USA, rural areas access to this specialized treatment is still lacking.[6]

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C43

The signs are subtle: Recognizing and supporting older veterans experiencing financial abuse

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Background: The annual prevalence of elder abuse is at least 10% in the US. Financial abuse (FA) is a common subtype, referring to theft, misuse, or concealment of funds, property, or assets by a trusted person. Experiencing FA is associated with devastating health consequences, including depression, nursing home placement, and early mortality. Older veterans may be at particularly high risk for FA due to dementia, mental health conditions, and receipt of VA financial benefits, but few studies have explored FA in this population. Assessing for FA in clinical settings may be challenging due to subtle signs and

symptoms, but detection creates important opportunities for intervention. Here we share five cases of FA experienced by community-dwelling older veterans at the Philadelphia VA Medical Center Geriatrics clinic during 2022.

Cases: Veterans' ages ranged from 76 to 100 years old. All had cognitive impairment. Veterans were exploited by family or caregivers, in at least three cases suffering permanent financial losses and significant emotional distress. Cases include an 84-year-old with depression and mild dementia who lost assets by coercion from a caregiver; a 76-year-old with dementia who was financially exploited and abandoned by family; a 78-year-old with traumatic brain injury, blindness, and concerns that a caregiver was inappropriately using VA funds; a 100-year-old with mild cognitive impairment whose funds were depleted by the caregiver's family; and an 88-year-old with mild dementia whose family exaggerated cognitive deficits to obtain financial control. In all cases, assessment and intervention required close communication and collaboration by an interdisciplinary team.

Conclusions: FA presents in varied ways in healthcare settings. While signs may be subtle, research has uncovered multiple risk factors for FA, and provider education and training may improve detection by clinicians. To that end, this case series highlights key learning points for recognition and intervention for FA in older veterans. More research specific to veterans is needed to understand the unique risk factors and presentation of FA in this population.

C44

Diagnostic and Rehabilitation Challenges in an Older Adult with Immune-Mediated Necrotizing Myopathy

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BACKGROUND

Immune-Mediated Necrotizing Myopathy (IMNM) is a rare cause of muscle injury and when recognized and treated appropriately, outcomes are favorable.[1] Undiagnosed neuromuscular disorders may result in failure of rehabilitation.

CASE

72-year-old African American male presented to the hospital with weakness and fall. Assessment showed weakness requiring maximal assistance to get up from bed, dehydration and subdural hematoma. Renal ultrasound and CT abdomen and pelvis were unremarkable. He was sent to the skilled nursing facility for rehabilitation. Further inquiry revealed progressive weakness started 3 years ago with faster decline in last 3 months, 26 lbs. weight loss, inability to climb the stairs, dysphagia and weak cough. Three years ago, Statin was discontinued due to elevated alanine aminotransferase (ALT), aspartate aminotransferase (AST) and Creatinine Kinase (CK) with the diagnosis of rhabdomyolysis. Additional workups found elevated CK (1386 U/L), aldolase, AST/ALT and C-reactive protein (CRP). Anti-3-hydroxy-3-methylglutaryl-coenzyme A reductase (anti-HMGCR) autoantibody was elevated (185 units). Myositis extended antibody panel was negative. Muscle biopsy reported necrotizing myopathy and denervation atrophy with no noticeable lymphocytic inflammation or myoinvasion. Anti-HMGCR IMNM was diagnosed. Treatment started with oral Prednisone and subcutaneous Methotrexate. Rituximab infusion or intravenous immunoglobulin will also be considered. CK, AST/ALT and CRP normalized after a week. He felt better and stronger with resolution of dysphagia and weak cough. His function improved from bed confined status to walking 200 feet with minimal assistance.

DISCUSSION

Three subtypes of IMNMs are recognized: Anti-signal recognition particle (anti-SRP) autoantibody IMNM, anti-HMGCR autoantibody IMNM and Anti-HMGCR/SRP-negative IMNM.[2] Anti-HMGCR IMNM is strongly associated with the exposure to Statins and the class II major histocompatibility complex allele DRB1*11:01 with odds ratios of 25 and 57 in white and black patients.[1] Incidence is 2-3 of every 100,000 patients treated with Statins.[1] It is imperative to recognize IMNM and worth to remember that myositis may be the cause of weakness and fall; elevated CK may be from rhabdomyolysis or myositis; and AST/ALT may be of liver or muscle origin.[3]

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C45 Encore Presentation

SAFETY OF NITROFURANTOIN IN CHRONIC KIDNEY DISEASE (CKD)

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Background

Bacterial infections from antibiotic-resistant isolates are a health concern and hard to treat. Nitrofurantoin has been used for prophylaxis and treatment of urinary tract infections (UTIs) in all ages. The increased emergence of antibiotic resistance renders nitrofurantoin suitable for infections caused by multidrug-resistant pathogens.

Case

63 year old female with dementia, hypertension, diabetes and CKD admitted to subacute rehabilitation after an intracranial hemorrhage. She had severe allergies to penicillin and sulfa drugs. She now developed two episodes of UTIs, causative organism Escherichia coli. The first episode was successfully treated with levofloxacin based on drug sensitivity. Shortly after recovery, she had fever (102*F) and headache. Urinalysis showed bacteriuria and white cells. Levofloxacin was started again, but culture confirmed resistance to quinolones. We were limited by her extensive allergies. Further, her eGFR being ~32, it was a challenge to decide safety of nitrofurantoin use. Based on risk versus benefits, we used a loading dose of 100 mg followed by 50 mg BID for 5 days. We monitored renal parameters/ liver tests. Ultrasonography revealed no etiology. Our patient dramatically responded, to become afebrile and alert. Oral intake improved. Urinalysis normalized.

Discussion

Nitrofurantoin is a first-line antibiotic for uncomplicated UTIs. Therapeutic concentration is achieved only in urine; the drug is eliminated primarily by glomerular filtration, with some secretion via renal tubules. Renal elimination of nitrofurantoin is reduced with low glomerular filtration rates (eGFR), which can increase risk of treatment failure and possibly adverse events from elevated blood drug concentration. Although nitrofurantoin is contraindicated by FDA for use in CKD (eGFR <60ml/min), limited data suggests it is effective for older adults with eGFR >/= 30ml/min and can be considered for treatment; justified because effectiveness of nitrofurantoin is unaffected by reduced eGFR in routine care. Also, risk of treatment failure was low even in CKD. E. coli (not other bacteria) generally exhibits low resistance to nitrofurantoin.

Key Points

A short course (3-7 days) of nitrofurantoin may be safe in patients with eGFR of 30-44ml/min, if risks outweigh benefits

Use of nitrofurantoin in those with CKD may relieve tendency to use quinolones, whose widespread empiric use promotes bacterial resistance

C46

Thiazide Induced Hyponatremia Presenting as a Fall in an Older Adult

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Background:

First line therapy for uncomplicated hypertension includes thiazide diuretics, long-acting calcium channel blockers, and renin-angiotensin system inhibitors. However, there is no clear guidance for selection among these agents for older adults, a population at increased risk of medication-related adverse effects. We present a case report of a fall caused by thiazide induced hyponatremia in an older adult and discuss the risks of thiazide diuretic use in this population as well as risk mitigation strategies.

Methods:

We conducted a retrospective chart review on an older adult who presented to an emergency department after a fall.

Results:

A man in his early 90s with a past medical history of hypertension, hyperlipidemia, and vitamin D deficiency presented to the emergency department after a syncopal episode. His home medications at the time were amlodipine 5mg daily, atorvastatin 40mg daily, ergocalciferol 50,000IU daily. His syncope workup was unremarkable. Due to persistently elevated systolic blood pressure readings during his admission, he was initiated on valsartan 20mg daily and enrolled in remote blood pressure monitoring on discharge. Three weeks later at his primary care follow-up he reported adherence to his anti-hypertensive regimen, yet his blood pressure remained elevated. Review of his remote monitoring data revealed an average blood pressure reading of 179/79 mm Hg over the past week. Labs including a basic metabolic panel were normal and hydrochlorothiazide 25mg daily was initiated. Two weeks later he presented to the emergency department after a fall upon arising from his bed. Labs revealed a sodium of 117 mmol/L and a potassium of 3.2 mmol/L. His hydrochlorothiazide was discontinued and his sodium gradually normalized over the next two weeks.

Conclusions:

Thiazide diuretics are known to cause electrolyte abnormalities and an increased risk of falls in older adults. Despite their recommendation as first line agents for uncomplicated hypertension, the risks of thiazide diuretic use in some older adults may outweigh the benefits. Practitioners should always consider co-morbidities, polypharmacy, and blood pressure goals when managing hypertension in this patient population.

C47 Encore Presentation

Real-World Adherence and Persistence of Vibegron in Patients With Overactive Bladder: A Retrospective Claims Analysis

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Background: Vibegron is a β_3-adrenergic receptor agonist approved in December 2020 for overactive bladder (OAB). Currently there are no data on real-world adherence and persistence with vibegron in the US. This analysis assessed adherence and persistence with vibegron in patients with OAB and evaluated associated demographics and clinical characteristics.

Methods: This retrospective study used the Optum Research Database to identify patients treated with vibegron from April 2021–December 2021 (identification period). Patients were required to have ≥60 days of continuous pharmacy coverage in a commercial or Medicare Advantage health plan following the index fill (follow-up period). Adherence was assessed as proportion of days covered (PDC) from index to end of follow-up and was defined as PDC ≥80%. Persistence was measured as days to discontinuation of therapy (30-day gap) or the end of follow-up. Data for adherence and persistence are presented descriptively. Characteristics associated with adherence and persistence were analyzed using multivariable models among patients with medical and pharmacy benefits during the 90 days before index (baseline).

Results: A total of 3217 patients had a vibegron claim during the identification period and had ≥2 months of follow-up. Mean (SD) age was 74.5 (10.7) years, and 68.0% were female. Mean (SD) PDC was 0.69 (0.32). Median (95% CI) persistence was 162 (149–179) days. Of the 1662 patients with baseline pharmacy and medical benefits, 887 (53.4%) were adherent. Adherent patients were more likely to be White or Asian, have greater baseline medication count, and receive a greater days' supply for the index fill. There were no significant differences in age, gender, or Charlson Comorbidity Index between adherent and nonadherent patients.

Conclusions: This retrospective analysis is the first to analyze real-world adherence and persistence with vibegron in patients with OAB in the US. Patients initiating vibegron had generally good adherence and persistence. Factors associated with adherence were more likely related to demographic characteristics and prescribing practices. Additional analyses comparing adherence and persistence of oral OAB treatments is warranted.

C48 Encore Presentation

"Geriatricizing" Case Management

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Background

The inpatient interdisciplinary Clinical Command Center (C3) includes "Flow" nurse practitioners (NPs) who work closely with case management, social work and primary medical teams to identify and address barriers to care and assist in discharge planning and care coordination. We have created a novel collaboration between a C3 Flow NP and inpatient geriatrics via a 4Ms framework to approach complex case management for high-risk older Veterans.

Methods

Hospitalized patients at a single healthcare system age >=65 are identified based on high-risk admission diagnoses and then screened for appropriateness for a 4Ms assessment, with prioritization of patients with unclear discharge plans. There is an emphasis on the "What Matters Most" and "Mobility" assessments to identify patient goals, clarify the nature and trajectory of functional decline, and identify need for additional services or referrals.

Results

Between March and November 2022, 212 older adult patients (age 65-99) were identified with high-risk admission diagnoses including falls (n=30), failure to thrive (n=28) placement (n=25), and "found down" after a fall (n=6). 30 assessments were completed of the highest risk individuals. Outcomes of the assessments included referrals to audiology, optometry, podiatry, and outpatient cognitive assessment, as well assistance with meals, transportation and caregiver support.

Conclusions

"Geriatricizing case management" via 4Ms assessments is feasible and can be completed in the inpatient setting in a way that is relevant and integrated into the interdisciplinary care of high-risk patients. In particular, identifying "What Matters Most" to patients and connecting them to the right services and referrals at the right time can aid in the care transition after hospitalization. The C3 Flow NP served as a source of continuity and facilitated communication and collaboration amongst case management, social work and primary medical teams.

C49

The impact of post-discharge functional status on long-term mortality in hospitalized patients with congestive heart failure.

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Background: Congestive Heart Failure (CHF) has a high prevalence rate with associated morbidity and mortality. However, the impact of 30-day self-reported post-discharge functional status on long-term mortality in hospitalized adults with CHF has not been well established.

Methods: A cohort of 806 adult patients admitted with CHF was included in the analysis. Upon discharge, participants completed a self-reported 30-day Global Health Status (GHS) score to measure functional status using ten components from the Patient Reported Outcomes Measurement Information System (PROMIS). Two components of Fried's frailty criteria – exhaustion and shrinkage were also assessed using the Center for Epidemiologic Studies Depression scale and 5% weight loss within the past six months, respectively.

Results: The 30-day functional status was associated with mortality, with an estimated 20 percent (95% CI: 1, 35) reduction in the hazard for mortality per 1-point increase in 30-day GHS. Frailty exhaustion was associated with lower 30-day functional status (adjusted mean difference = -0.29, 95% CI: -0.41, -0.18), but shrinking was not associated with decreased 30-day functional status. When we controlled for frailty markers, we observed a 28 percent (95% CI: 11, 41) reduction in the hazard for mortality per 1-point increase in 30-day GHS.

Conclusion: The study findings suggest a correlation between 30-day post-discharge functional status and risk for long-term mortality in hospitalized patients with CHF. Routine screening may be beneficial and help guide targeted interventions.

C50

A Scripted Telephone Intervention to Promote HCP Assignment at a Safety-Net Geriatrics Clinic

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Background: Primary care physicians (PCP) are well-positioned to initiate advance care planning (ACP) discussions with their patients. Nonetheless, health care proxy (HCP) assignment and completion of relevant documentation often remain unaddressed among community-dwelling older adults. Optimal methods for improving HCP assignment in this population remain unclear.

Methods: We developed a phone-based intervention to facilitate ACP discussion and HCP assignment in a safety-net geriatrics clinic. Patients were included if they met the following criteria: (1) English or Spanish speakers; (2) without a cognitive impairment diagnosis; and (3) scheduled for regular follow-up with their PCP. We reviewed records for completion of standard New York State HCP documents. Patients without an assigned HCP received a scripted phone call encouraging HCP assignment at his or her next appointment. We again reviewed records post-visit for completion of HCP documents.

Results: Out of 43 records, 21 (49%) patients had previously completed HCP documents. Of the 22 patients without an assigned HCP, 11 (50%) were contacted by phone. Six of 11 (55%) reported no prior education on HCP completion. One patient had previously been educated on HCP completion. Two patients had already completed HCP documents, unbeknownst to the PCP. The remaining two patients were contacted but declined to participate. Of the 9 patients who participated, 8 (89%) reported finding the intervention useful. Average phone call duration was 6 minutes and 4 seconds. Of the 11 patients contacted by phone, two completed HCP documentation at their next primary care visit.

Conclusion: In a safety-net geriatrics clinic, less than half of community-dwelling older adults have an assigned HCP. Our results suggest that brief scripted phone calls can modestly increase rates of HCP assignment and providing this information is well-received by patients. Our approach is limited by inclusion of only English- and Spanish-speaking patients. Additional work is needed to assess greater inclusivity.

C51

Previous steroid use and severity of COVID-19

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Background:

Steroid use is associated with infection and other adverse events but the association in nursing home residents is not known. This study aims to compare the rate of severe COVID-19 between VA Community Living Center (CLC) (VA operated nursing homes) residents with and without previous steroid exposure.

Methods:

This retrospective cohort study included Veterans living in VA CLCs with laboratory-confirmed SARS-CoV-2 infection between December 13, 2020 to December 13, 2021. We collected age, gender, and race by using the CPRS database (Computerized Patient Record System). We measured exposure to systemic steroids by recorded administration on at least 5 consecutive days within 30 days before positive SARS-CoV-2 test. We used a poisson generalized linear model to determine relative risk and confidence intervals. For age, race, and sex adjustments, these confounders were included in the model. Severity of COVID infection was determined by select ICD 10 codes, hospitalization and death.

Results:

We evaluated 1626 mostly male (96%) subjects with a mean (SD) age of 72 (2) years. Among steroid-exposed residents, 90 (40.36%) had severe COVID-19 whereas in the unexposed group, 485 (34.57%) had severe COVID-19. The adjusted risk ratio (95% CI) was 1.15 (0.91, 1.43) for severe COVID-19 in residents exposed to steroids compared to unexposed.

Conclusion:

This study estimates that risk of severe COVID-19 was 15% higher in veterans exposed to systemic steroids than in unexposed veterans, though our data is also compatible with a small reduction in risk and larger increases in risk. Therefore, the study is inconclusive if steroids are associated with any difference in risk at all. Important unmeasured differences between the two groups most likely cause confounding bias in our estimate. However, our findings suggest that subjects who with higher or prolonged exposure to systemic steroids are at increased risk for severe COVID-19.

Steroid Use	No Hospitalization/Death or Severe	Hospitalization/Death or Severe
No	918 (65.43%)	485 (34.57%)
Yes	133 (59.64%)	90 (40.36%)

C52

Primary Care Detection of Cognitive Impairment in Underserved Communities: The MyCog Strategy

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Background: Early identification of cognitive impairment (CI), including Alzheimer's disease and related dementias is a top public health priority. Yet in primary care settings that manage the health of most community-dwelling older adults, less than half of patients with any CI are detected and/or diagnosed. Among community health centers that serve marginalized patients, rates of detection may be far lower. To address this, we sought to test a primary care-based strategy (MyCog) to improve CI detection as part of an NIH-sponsored consortium (DetectCID).

Methods: The MyCog strategy includes a brief iPad-based, self-administered, electronic health record-linked cognitive assessment that leverages two validated measures from the NIH Toolbox Cognition Battery and has easily interpretable results with turnkey recommendations to enhance clinical decision making. Clinician and practice administrator feedback was sought via interviews and focus groups to ensure the assessment could properly function in typical workflows. Based on the feedback, a self-administered tool was built with a simple interpretable result (yes or no, cognitive impairment detected). It was then validated in one academic geriatrics practice among 111 older adults.

Results: The refined self-administered tool was further validated in a geriatric clinical population, with interviewer and self-administered MyCog versions strongly correlated (Spearman r=0.75) and similar average response time per trial (0.914 sec. vs. 0.958 sec.). Use of the two tests demonstrated acceptable AUC values separately for detecting CI (0.84 and 0.79, respectively). But combined, these measures provide incremental diagnostic utility (AUC=0.95).

Conclusions: The MyCog Trial will launch at a network of primary care centers for older adults on Medicare that will be randomized to MyCog or usual care. Clinics receiving MyCog will utilize a protocol to implement the intervention during Medicare Annual Wellness Visits and whenever a cognitive concern is expressed. Findings from the consortium and MyCog Trial will directly inform future standards in primary care settings, especially those that serve health disparate patient populations.

C53

The Wellbeing Conversation Guide: a tool to center wellbeing in nursing home care

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Background

There is a mismatch between the medical model prevalent in most nursing homes (NHs) and the goals of comfort and quality of life (QOL) that are pre-eminent to residents of NHs. This Wellbeing Conversation Guide (Guide) was developed to help clinicians put wellbeing at the center of NH care in a systemic, scalable fashion.

Methods

In the first phase of work, we tested the Guide for feasibility, acceptability, and perceived utility in 12 focus groups and 3 interviews. Feedback led to iterations in the guide to improve user experience. In the second phase, NH clinicians used the Guide with 1-3 NH residents each, across 8 NHs with a total of 12 NH staff of varying roles (including primary care providers, social workers, rehab staff, and nursing staff), in multiple states (CA, IL, MA, IN, and MN), and across multiple facility types (for-profit, non-profit, and VA). Clinicians were debriefed after using the guide, and feedback was again incorporated into the Guide. We also developed implementation tools to support the use of the Guide based on clinician feedback.

Results

All users of the Guide found it feasible and acceptable and stated that it had real and perceived utility. Notable findings included providers using the Guide feeling more connected to the resident and better understanding the resident. Providers stated that it was a good way to begin goals of care discussions and "de-escalate" from the medical model. As a result of using the Guide, clinicians reported learning of small changes they could make in care plans to improve the QOL of individual residents and also learned of bigger changes their unit or facility could make that would improve the QOL of multiple residents. Importantly, clinicians stated that the Guide offered a language and a systematic approach for addressing wellbeing in NHs.

Challenges to the use of the Guide included insufficient time for the conversation, "tool fatigue," communication challenges with residents, and staff burnout in the wake of the pandemic. Additional stated barriers to supporting wellbeing included the staff shortages and high turnover rates currently facing many NHs.

Conclusions

Early testing has shown how the use of the Wellbeing Conversation Guide can lead to concrete changes in practice that benefit residents and also initiate a broader systemic shift in practice towards supporting quality of life for people living in NHs. The next step in this work is to test the Guide for implementation and early outcomes.

C54

Comparing Potential Drug-Drug-Gene Interactions Across Age Groups in a Population of Individuals Utilizing a Community-Based Pharmacy

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Background: Drug-drug interactions (DDIs) are among the most common causes of adverse drug reactions (ADRs) and are further complicated by genetic variants of drug metabolizing enzymes. These interactions are most common in polypharmacy patients which is estimated to include 44% to 57% of Americans over the age of 65. The aim of this study is to quantify and describe potential drug-drug interactions (DDI), and drug-drug-gene interactions (DDGI) in a community patient population stratified into two age groups of <65 and ≥65.

Methods: A regional pharmacy provided prescription data from March 2020 for 2,884 individuals. The data were assessed for DDI risk, and individuals were stratified to a risk category using the logic incorporated in a commercially available digital DDGI tool. To calculate the frequency of potential drug-gene interactions, genotypes were imputed and randomly allocated to the cohort 100 times via Monte Carlo simulation according to each variants' frequency in the general population. Results were compared across two age groups.

Results: The mean number of medications was 5.3 in the ≥65 group and 3.4 in the <65 group. The probability of a DDI of any severity was 24.3% in the <65 group and 38.7% in the ≥65 group. Predicted DDGI of any severity between groups were 48.7% [95% CI: 47.0%-50.4%] for <65 and 64.4% [95% CI: 61.6%-67.2%] for ≥65. Major severity DDGI were predicted to be 9.6% [95% CI: 8.7%-10.6%] in <65 and 14.2% [95% CI: 12.2%-16.2%] in ≥65. Stratifying by the volume of prescribed medications, cardiovascular agents, analgesics, and antidepressants pose the greatest risk of major DDGI across both age groups, with the risk being numerically greater in the ≥65 group. 9.4% to 19.9% of individuals ≥65 on medications form those 3 classes are expected to be at risk of a major DDGI.

Conclusions: Individuals ≥65 years of age are at elevated risk of DDI and DDGI, compared to younger cohorts, with cardiovascular agents, analgesics and antidepressants causing many of the interactions. These data provide proof of concept that a population medication analysis can identify individuals with the highest risk of DDI

and can estimate those with the highest risk of DDGI. This suggests we can identify individuals best suited for pharmacogenetic testing and provide focused medication review to those in the highest risk categories.

C55

Establishing and Sustaining an Acute Care of Elders Unit: An Incremental Journey to Success

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Introduction Acute Care for Elders (ACE) units reduce hospital associated delirium and functional decline, shorten lengths of stay and reduce costs. However, establishing and sustaining such units has proven difficult. There are only 43 ACE units among the >3500 hospitals in the US. We describe our experiencing in establishing and sustaining an ACE unit model of care in an academic medical center.

Methods Our ACE unit is situated within a academic medical center and is run by a large interdisciplinary team that includes an attending geriatrician, geriatric fellow, nurse practitioner and pharmacist, one senior internal medicine resident, and two interns. We admit older adults ≥ 65 years of age hospitalized for general medical issues. Daily practice is centered around the five key elements described in the original randomized controlled trials – patient centered care assessments, medical care review, specialized prepared environment, early mobilization and physical therapy, and early planning for discharge to home. We have overcome challenges by implementing these principles gradually over the last 15 years. We reviewed patient characteristics and patient centered outcomes for the most recent fiscal year to assess the impact of the ACE model of care within our hospital system.

Results In one fiscal year 902 older adults (mean age 81.3, 62% female, 78% White, 18% Black, 4% other) were admitted to our ACE. At least 42% of patients had a diagnosis of dementia (ICD coding). Notable quality data for fiscal year 2023 January-October includes Adult Mortality Index (observed/expected) of 0.2, 30-day readmission rate of 9.49%, no hospital acquired pressure injuries, no catheter associated urinary tract infections and 8 falls. Our actual length of stay was 5.09 days while our Vizient expected length of stay was 5.84 days. Additionally, staff based on our ACE unit have led hospital wide initiatives including dementia friendly hospital certification and hospital wide falls prevention program.

Conclusion Through an iterative process centered on the five key principles of ACE units we have successfully implemented a sustainable model of care that has resulted in improved outcomes and reduced hospital associated harms for older adults.

C56

Acute Care for Elders Consult Service collaboration with the Trauma Team at a large medical center

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Background:

Falls in adults 65 and older are serious, costly and associated with high morbidity and mortality. The reason for this project is to determine the benefits of involving the Acute Care for Elders Consult Service in the care of older adults admitted to the hospital after fall with injury.

Methods:

This is a retrospective quality improvement study. We will review outcomes of patients admitted between January and July of 2022 after fall with injury, who were also seen by the ACE Consult Service. We will report patients' mortality, type and mechanism of injury, LOS, rates of delirium and readmission, and diagnosis of geriatric syndromes. Geriatric syndromes include, among others, polypharmacy, cognitive impairment, dementia, delirium, functional decline, debility, and gait impairment. Review of patients' electronic health record and analysis of our hospital trauma registry will be performed.

Results:

We retrospectively reviewed the charts of patients admitted for fall with injury between January and July 2022 who also received an ACE Consult(n=62). 17(27%) fell in an unspecified place in a private residence, 14(22%) in a bathroom, 9(14%) in a bedroom, and 7(11%) in a kitchen. 39(62%) were a same level fall, and 8(12%) fell on stairs. LOS ranged between 2 and 31 days.13(20%) developed delirium and 12(19%) had dementia.15(24%) had cognitive impairment, 23(37%) had functional decline, and 13(20%) had polypharmacy. 22(35%) discharged with home health services, 10(16%) discharged home, 20(32%) discharged to SNF, 4(6%) discharged to hospice, 4(6%) discharged to inpatient rehab, and 2(3%) died during hospitalization. 29%(18) had rib fractures, 29%(18) had lacerations, 20%(13) had a proximal femur/hip fracture, 16%(10) of patients had ICH.32(51%) had 10 or more medications prescribed prior to admission, and in 18(29%) deprescription of a high risk medication was recommended. 18(29%) of patients had 3 or more geriatric syndromes.

Conclusions:

ACE Consult Service can effectively collaborate with the Trauma Team and strengthen geriatric trauma care. ACE expertise, in collaboration with the interdisciplinary team, is important in the timely identification and management of geriatric syndromes in older adults admitted with traumatic injury. More studies are needed to determine if ACE consultation can improve clinical outcomes in these individuals.

C57

Increasing Clinical Research Participation within the Black Community thru an Innovative Community-Informed Education & Recruitment Program

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Background:

Prior studies attest to a lack of awareness about Alzheimer's Disease (AD) research and participation in research studies among Black Americans. The AHEAD Study was designed to evaluate the efficacy and safety of Lecanemab in 1400 study participants with preclinical or early preclinical AD and elevated or intermediate Amyloid. Black American participation in this multicenter double-blinded trial has been suboptimal. Our study, a one-year funded project, seeks to raise awareness about AD and the AHEAD Study in the Black American community, with a specific aim of increasing the number of Black participants in the AHEAD Study by developing and implementing a Community Education and Recruitment Program (CERP).

Methods:

Eastern Virginia Medical School and Hampton University, a Historically Black College University (HBCU), partnered to establish a Community Advisory Board and Ministerial Alliance with representation from the Hampton Roads Black community. Through monthly meetings, the board has guided the development and implementation of our CERP. We also recruited two Black community health workers (CHW) and created an educational and recruitment toolkit to train CHWs about AD, outreach, and approaches to community recruitment for the AHEAD Study. We monitored all outcome measures, including the number of community members who attended: (1) outreach programs, (2) informational sessions, and (3) were screened, recruited, and randomized for the AHEAD Study.

Result:

Through our CERP, we targeted senior centers, health fairs, civics events, fraternities/sororities, and churches within the Black community. We have held community luncheons and talks at two

Black churches in urban localities in Hampton Roads, followed by three virtual follow-up informational sessions dedicated to the AHEAD Study. As of November 2022, we have participated in 20 community outreach events with over 500 attendees. 122 Black participants have shown interest in the study, 31 have been prescreened, and 2 have passed the screening phase and enrolled in the AHEAD Study.

Conclusion:

Partnering with key community stakeholders thru a community-informed education and recruitment program has proven to be highly effective in circumventing sociocultural barriers to research participation by members of underrepresented groups.

C58 Encore Presentation

"Stop the Fall" Program Addresses Fall Risk in Older Adults

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Background: The University of Montana (UM) School of Physical Therapy New Directions Wellness Center (NDWC) provides older adults with evidence based fall risk and functional screens, education, and a staff assisted exercise program while promoting interprofessional education (IPE) for health care students. NDWC is an inclusive exercise facility on UM campus serving individuals with chronic disease or disability.

Methods: Students perform fall risk and other screens and communicate results with primary care providers and supervising faculty, promoting the students' ability to work effectively on health care teams through IPE [3,4]. The structured IPE setting provides formal and informal learning for students, and ultimately leads to improvements in communication, collaboration, leadership between team members while promoting improved patient outcomes [5].

Results: From 3/1/22 to 9/30/22, 34 individuals received a fall risk assessment and participated in the NDWC program for a total of 371 exercise sessions; 28 DPT students worked or volunteered in NDWC for a total of 192 hours. Learners from speech pathology and nursing participated in screening of individuals. Family Medicine residents also interacted with the learners and clients.

Conclusions: NDWC provides a wellness service to the community-dwelling older adults by helping address quality of life and reducing fall risk through screening and assisted exercise programs in a casual and inclusive environment [2]. The Center also promotes a healthier community, providing a valuable service to older adults while training the future interprofessional health care workforce[1].

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C59

Making Hospitals Age-Friendly: Development of a Framework for Implementation of 4Ms Care

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Background: Older adults are at the greatest risk of hospital-associated complications and disability, and many acute care settings may not provide a systematic set of evidence-based practices tailored to older adults. Age-Friendly Health Systems (AFHS) aim to follow an essential set of evidence-based practices through focusing on the 4Ms of Mentation, Mobility, Medication, and What Matters. We created a process for implementation and evaluation of AFHS in a VA Medical Center hospital to teach the 4Ms to health professions trainees and team members and implement reliable 4Ms care for hospitalized older adults.

Methods: We used the four phase Replicating Effective Programs (REP) implementation framework (Table 1) to develop our approach for implementation and evaluation of AFHS in the hospital setting. We investigated existing AFHS implementation resources, engaged stakeholders in hospital leadership and on the interprofessional team, analyzed hospital baseline data relevant to the 4Ms, and explored partnership with existing initiatives to inform our REP framework of AFHS.

Results: We developed a process roadmap for AFHS implementation (Table 1). In pre-conditions, we identified five existing initiatives related to 4Ms care and sought to collaborate using AFHS as a unifying framework: the Behavioral Recovery Outreach (BRO) and STAR-VA dementia behaviors program (Mentation), the STRIDE inpatient walking program (Mobility), a pharmacy-led "Med Rec Tech" program (Medications), and the VA Life Sustaining Treatment Initiative (What Matters).

Conclusions: Implementation of AFHS in the hospital setting benefits from the structured approached of the REP implementation framework. Every hospital setting is unique; this implementation framework could be adapted across hospitals to decrease risk of hospital-associated complications and disability and speed the spread of AFHS care.

Table 1

(1) Pre-conditions	- Understand current state of 4Ms through data analysis and examination of aligning health system initiatives and existing resources - Engage stakeholders in hospital leadership and interprofessional team - Outline specific intervention and identify test unit suitable to intervention
(2) Pre-implementation	- Identify AFHS champions to create an interprofessional working group - Create AFHS implementation timeline - Develop training tools e.g. 4Ms bundle to disseminate to learners and team members; pilot test intervention and seek subsequent feedback
(3) Implementation	- Implement learner and team member training in 4Ms - Partner with health data experts to collect data relevant to 4Ms outcomes e.g. rates of delirium, falls, medication adverse events, and discharges to home - Conduct stakeholder interviews to further evaluate implementation
(4) Maintenance and evolution	- Review data and incorporate feedback from initial AFHS implementation - Prepare to expand AFHS initiative to further units - Identify future AFHS champions to sustain wider intervention

C61 Encore Presentation

A cluster randomized trial of two implementation strategies of the EQUIPPED medication safety program

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Objectives: EQUIPPED (*Enhancing Quality of Prescribing Practices for Older Adults Discharged from the Emergency Department*) is a quality improvement program focused on prescribing safety toward older adults at the time of ED discharge. EQUIPPED implementation involves three core components including provider education, clinical decision support, and audit and feedback using the American Geriatrics Society Beers Criteria to determine potentially inappropriate medications (PIMs). This study evaluated implementation of audit and feedback delivered through a dashboard compared to academic detailing with an EQUIPPED champion.

Methods: In a cluster randomized implementation study (October 2019-September 2021), eight VA EDs were randomized to either the Academic Detailing (n=4) or Dashboard (n=4) strategy for audit and feedback. The primary outcome was the monthly proportion of PIMs prescribed to Veterans 65 years or older at discharge from the ED. Poisson regression was used to evaluate the number of PIMs prescribed 6-months prior to implementation compared to 12-months following with the total number of prescriptions included as an offset term.

Results: Eight VA ED sites successfully implemented EQUIPPED. During baseline, Academic Detailing and Dashboard sites had similar PIM prescribing rates 8.01%, Academic Detailing, vs. 8.04%, Dashboard (p=0.90). After EQUIPPED, the Academic Detailing group significantly improved PIM prescribing (7.07%) compared to the Dashboard group, (8.10%) [1.14 OR (95% CI 1.08 – 1.22) for Dashboard compared to Academic Detailing]. In an exploratory analysis in which the prescribing evaluation was limited to providers who received EQUIPPED audit and feedback, both groups showed a statistically significant reduction in PIM prescribing rates post-implementation (6.73% Academic Detailing, 6.39% Dashboard), and there was no statistical difference between implementation strategies (p=0.22).

Conclusions: While the academic detailing approach to EQUIPPED audit and feedback was more effective at the group level to improve safe prescribing, the trial suggests dashboard-based audit and feedback is a reasonable strategy in resource-limited settings.

C62

Safety of deprescribing education for patients and clinicians in the OPTIMIZE pragmatic cluster randomized trial

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Background

Patients, family members and clinicians list potential adverse drug withdrawal events (ADWE) following medication discontinuation or fears of upsetting a stable medical equilibrium as key barriers to deprescribing. Currently, there are limited methods to pragmatically assess the safety of deprescribing and ascertain ADWE. We aim to report the results of safety monitoring for the OPTIMIZE trial of deprescribing education for patients, family members and clinicians.

Methods

Pragmatic, cluster randomized trial. Multivariable Poisson regression comparing outcome rates between study arms. Clinical record review and adjudication of sampled records to assess potential causal relationships between medication discontinuation and outcomes. Population: Adults age 65+ with dementia or mild cognitive impairment, one or more additional chronic conditions, prescribed 5+ chronic medications. Intervention: An educational brochure on deprescribing mailed to patients prior to primary care visits, provider notification about individual brochure mailings, and educational Tip Sheets provided monthly to primary care clinicians. Outcome measures: Rates of hospitalizations and mortality during the 4 months following brochure mailings.

Results

Total N=3,012 (1,433 intervention and 1,579 control) participants. There were 420 (18.8%) hospitalizations in the intervention vs. 517 (20.1%) in the control arms. Adjusted risk ratios in intervention vs. control groups were 0.92 (95% CI 0.77, 1.09) for hospitalization and 1.23 (95% CI 0.80, 1.91) for mortality. Both arms had zero deaths 'likely' attributed to a medication change prior to the event. 3 of 30 (10%) intervention group and 7 of 35 (20%) control group hospitalizations were considered 'likely' due to a medication change.

Conclusions

Population-based deprescribing education is safe in the older adult population with cognitive impairment. Pragmatic methods for safety monitoring are needed to further inform deprescribing interventions.

C63 Encore Presentation

Pilot of Pharmacist-Led Telehealth Deprescribing for People with Dementia in Primary Care

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Background: People with dementia (PWD) have complex medication regimens, exposing them to increased risk of medication-related harm. Pragmatic deprescribing strategies which align with patient-care partner goals are needed.

Methods: This was a two-arm, randomized pilot feasibility study of a pharmacist-led intervention to deprescribe medications not aligned with patient-care partner goals. The study was conducted from May 2021 to May 2022 at 2 healthcare systems. PWD were eligible if age ≥65, taking ≥5 medications, cared for in primary care and had a care partner who helps manage medications. Dyads were randomized to receive a 2-visit pharmacist telehealth intervention immediately (intervention) or delayed by 3 months (control). Outcomes, including the Medication Regimen Complexity Index (MRCI) – which incorporates dosage form, frequency and additional use directions – were assessed at baseline and 3 months (i.e., before the pharmacist intervention in the control group).

Results: After 9 months, 69 dyads enrolled; 27 of 34 (79%) randomized to the intervention group and 28 of 35 (80%) randomized to the control group received the intervention. There was no notable difference between groups in mean age, sex, or race/ethnicity. The intervention and control groups had a similar number of medications at enrollment, 13.8 (±5.3) and 13.3 (±5.9), respectively. After 3 months, 21 patients in the intervention group (62%) and 14 in the control group (40%) had ≥1 medication deprescribed; 18 patients in the intervention group (41%) and 12 in the control group (34%) had ≥1 new medication added. The intervention compared with usual care decreased the mean number of medications from baseline to 3 months by 0.9 (±2.4) vs. 0.4 (±2.1) medications and was associated with a 0.1 (±13.4) point reduction in the MRCI among intervention patients vs. 0.6 (±13.4) point increase among control.

Conclusions: Pharmacist led telehealth deprescribing may reduce medication burden in PWD. To align with patient-care partner goals,

both deprescribing and prescribing were recommended by pharmacists. Additional research is needed to determine whether goal-directed deprescribing improves health outcomes for PWD.

C64 Encore Presentation

Feasibility and Acceptability of Pharmacist-Led Telehealth Deprescribing for People with Dementia in Primary Care

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Background: People with dementia (PWD) have complex medication regimens, exposing them to increased risk of medication-related harms. Deprescribing strategies which align with patient-care partner goals are needed but are difficult to integrate in busy primary care practice workflows.

Methods: This was a 2-arm, randomized pilot feasibility study of ALIGN: Aligning Medications with What Matters Most, a pragmatic, pharmacist-led intervention to deprescribe medications not aligned with patient-care partner goals. The study was conducted from May 2021 to May 2022 at 2 healthcare systems. PWD were eligible if age ≥65, taking ≥5 medications, cared for in primary care and had a care partner who helps manage medications. Dyads were randomized to receive a 2-visit pharmacist telehealth intervention immediately (intervention) or delayed by 3 months (control). Feasibility measures included enrollment, intervention completion rates and pharmacist time. Acceptability was assessed as primary care provider (PCP) acceptance of pharmacist deprescribing recommendations.

Results: Of 323 eligible patients, 132 (41%) declined to participate and 122 (38%) could not be reached. After 9 months, 69 dyads enrolled; 27 of 34 (79%) randomized to the intervention group and 28 of 35 (80%) randomized to the control group received the intervention. The patient population was 48% women, 45% non-White and 12% Hispanic. Most intervention visits (81%) took 21-50 minutes; pharmacists had additional follow-up interactions beyond the required 2 visits with 34 (62%) dyads. PCPs responded to 45 (82%) of the pharmacists' recommendations on the first outreach and agreed with 47 (84%) of their recommendations.

Conclusions: Pharmacist-led telehealth deprescribing with a diverse study population was feasible. PCPs readily engaged with the intervention and agreed with most pharmacist recommendations. Challenges included dyads declining to enroll and time for pharmacists to facilitate goal-directed deprescribing.

C65

Should health systems adopt universal interventions to address unmet needs of dementia caregivers?

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Background: CommunityRx-Caregiver (CRx-C) is an IT-based resource referral intervention delivered at the point of care that proactively connects caregivers of people with dementia (PWD) to resources for common unmet basic and caregiving needs. Concerns about stigmatization can limit adoption of social care interventions that address health-related social risks (HRSRs). We hypothesized that caregivers of PWD who received CRx-C would not report more healthcare-related discrimination than controls.

Methods: Caregivers of PWD recruited 12/20-10/22 to a single-blind trial were randomly assigned to receive usual care or the CRx-C intervention, consisting of education that normalizes caregiver needs, a list of vetted local resources, and connection to a resource navigator and online resource finder. We assessed HRSRs at baseline and experiences of Discrimination in a Medical Setting (DMS) at 1-week (score 7-35, higher = more perceived discrimination). A non-inferiority analysis tested that the difference in mean DMS scores (CRx-C minus control) would be <1.1 points (the non-inferiority margin [NIM]) and affirm that CRx-C did not meaningfully increase discrimination. Sub-analyses were conducted by baseline HRSR status (0 vs ≥1).

Results: Caregivers (N=329) were predominantly female (78%), non-Hispanic black (81%) with household incomes ≥$50,000 (65%). Overall, 39% of caregivers had ≥1 HRSRs and 49% reported experiences of discrimination. Mean DMS scores were 9.4 (SD=3.6) for CRx-C and 9.6 (SD=3.6) for controls; difference = -0.2 points, with a 95% CI upper bound of 0.6 that did not cross the NIM ($p<0.01$). Among those with no HRSRs, mean DMS scores were 9.4 (SD=3.4) for CRx-C and 9.3 (SD=3.2) for controls; difference = 0.1 points, with a 95% CI upper bound at the NIM of 1.1 ($p=0.025$). Among those with ≥1 HRSR, mean DMS scores were 9.3 (SD=3.6) for CRx-C and 10.1 (SD=4.2) for controls; difference = -0.8 points, with a 95% CI upper bound of 0.6 ($p<0.01$).

Conclusions: A universally-delivered social care intervention for caregivers of PWD did not result in more discrimination in health care settings. Given the high prevalence of HRSRs among caregivers of PWD and caregivers' role in supporting an aging population, universally-delivered interventions like CRX-C may be a non-stigmatizing way to connect caregivers with support.

C66 Encore Presentation

Impact of Lemborexant on Waketime Sleepiness/Alertness in Elderly Subjects with Insomnia Disorder and Baseline Scores Indicating Sleepiness

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INTRODUCTION: The presence of daytime symptoms, a diagnostic criterion for insomnia disorder, can be quantified with instruments like the Epworth Sleepiness Scale. Since sleep-promoting drugs are associated with risks of residual morning sleepiness, an assessment of sleepiness/alertness was included in lemborexant (LEM) phase 3 studies. LEM is a competitive dual orexin receptor antagonist approved in several countries for the treatment of adults with insomnia. This post-hoc analysis focused on elderly subjects (≥65y) who rated at least mild/moderate sleepiness at baseline, as this population is more at risk for somnolence with use of sleep-promoting drugs.

METHODS: Study 304 (NCT02783729) was a randomized controlled study in adults ≥55y with insomnia disorder (N=1006), including confirmed sleep maintenance difficulties and an Insomnia Index Score ≥15. Subjects were randomized to bedtime doses of placebo (PBO), LEM 5mg (LEM5), LEM10mg (LEM10) or zolpidem tartrate extended release 6.25mg (not reported here). A Sleep Diary assessed subjective ratings of morning sleepiness with the following question: "How alert/sleepy do you feel this morning?" Subjects rated sleepiness or alertness within 90 min of waketime from 1 (extremely sleepy) to 9 (extremely alert). Scores were averaged over 7-day periods for baseline and the first and last 7 days of treatment. Chi-square tests were used to compare the shift from sleepy (≤3) to more alert (>3) between PBO and treatment groups.

RESULTS: Of 743 subjects assigned to PBO or LEM, 324 (43.6%) were age ≥65y and contributed data for the analyses. At baseline, 24/89 (27.0%), 28/116 (24.1%) and 34/119 (28.6%) of the PBO, LEM5 and LEM10 subjects reported a score ≤3, indicating at least mild/moderate sleepiness. After 1 month, 13/23 (56.5%) of PBO subjects rated their sleepiness/alertness as >3 compared with 22/27 (81.5%; P=0.055) of LEM5 and 22/32 (68.8%; P=0.35) of LEM10 subjects. Two subjects in each treatment arm reported being sleepier at the end of the month of treatment vs baseline.

CONCLUSIONS: In this study, ~25% of subjects age ≥65y reported morning sleepiness at baseline and more subjects receiving

LEM vs PBO improved their alertness at 1 month. These data are concordant with effects of LEM on improving sleep parameters and having a lack of effect on tasks requiring morning alertness.

C67

The impact of a technology-based weight loss program on pre-frail and frail older adults

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Background: Older adults with obesity are at an increased risk of developing frailty and disability. Weight loss is safe and effective in persons with obesity and frailty. However, it is unknown whether persons with obesity and different frailty phenotypes have different outcomes following weight loss.

Methods: Community-dwelling adults aged ≥65 years with a body mass index ≥30 kg/m^2 were recruited for a six-month, single-arm, technology-based weight loss program. Participants engaged in weekly dietitian visits for changes in dietary quality and caloric restriction, and twice weekly physical therapist-led sessions for strength, flexibility, and balance training. Aerobic activity was advised and remotely monitored. We calculated a 45-item frailty index at baseline using subjective and objective measures. Participants were categorized as pre-frail (0.08-0.24) and frail (>0.25). Subjective and objective measures were conducted, with descriptive statistics comparing pre/post values.

Results: There were n=22 pre-frail (41.5%) and n=31 frail (58.5%) participants. There were no differences in age, sex, education level, or income level between groups. Weight decreased in both groups, pre-frail – 90.8kg±2.7 to 85.5kg±2.4 (p<0.001) and frail – 102.7kg±3.4 to 98.5kg±3.3 (p<0.001), with no difference in weight change between groups (p=0.30). We did not observe any differences between groups for appendicular lean mass/height^2 p=0.47 (Δpre-frail 0.001kg/m^2±0.78, p=0.49; Δfrail -0.25kg/m^2±0.29, p=0.20) or fat-free mass p=0.06 (Δpre-frail -0.03kg±0.01, p<0.001;Δfrail 0.01kg±0.02, p=0.37). There were no differences between groups for gait speed p=0.16 (Δpre-frail 0.74m/s±0.04, p=0.05; Δfrail 0.004m/s±0.03, p=0.45) and grip strength p=0.80 (Δpre-frail 0.83kg±1.84, p=0.33; Δfrail 1.50kg±1.71, p=0.20).

Conclusion: Participants with frailty and pre-frailty experienced clinically meaningful weight loss and improvements in physical function after participating in a multicomponent weight loss intervention. Functional status improved for each group, with no differences between groups. This study provides formative data to suggest that weight loss interventions may be equally efficacious irrespective of frailty status.

C68

Sleep and Nighttime Urine Production

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Background: Nocturia is prevalent among older adults and nocturnal polyuria (NP) or increased nighttime urine production is the most common cause. While nocturia is known to cause sleep interruptions, there is growing evidence that the relationship between sleep and nocturia is bidirectional. We have previously shown that awakenings during the first half of the night with a shorter duration of the first uninterrupted sleep period (FUSP) is associated with nocturia and NP, and behavioral sleep intervention (brief behavioral treatment of insomnia-BBTI) improves nocturia. Sleep is known to regulate the circadian rhythm of urine production and acute sleep deprivation in physiologic studies leads to NP, however effect of sleep improvement on nighttime urine production is not known. We postulate that BBTI improves nocturia by decreasing NP, specifically by increasing FUSP.

Method: Community-dwelling older adults aged 65 or more with nocturia frequency ≥2 and insomnia were randomized to receive BBTI vs information control (IC). Those with sleep apnea were excluded. For sleep and nocturia assessment, pre- and post-intervention participants completed a 3-day voiding and sleep diary. Participants with a nocturnal polyuria index-NPi ≥35% were categorized as having NP (NPi = nocturnal urinary volume per 24-hour urine volume).

Results: Fifty-six participants aged 72±6 years were recruited. Daily nocturia frequency decreased by 1±.7 in the BBTI group post-intervention which was significant in comparison to the change in IC group (-.3±.9), *p*=.02. FUSP increased by 54±77 min in the BBTI group and NPi decreased by 7.1±13.2%, but these did not reach statistical significance in comparison with the IC participants who showed similar improvements. NPi showed a moderate and significant inverse correlation with FUSP (r=-.36, *p*=.01). In comparison to IC group, the BBTI group showed a significant increase in total sleep time (*p*=.05), but this did not correlate with change in NPi.

Conclusion: In older adults with concurrent nocturia and insomnia, behavioral treatment directed solely at sleep also improves nocturia. Improving sleep continuity in the first half of the night and increasing FUSP may reduce nighttime urine production and improve NP.

C69

Revisiting the Walter Index: validation of a prognostic index for 1-year posthospital mortality in older adults.

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Background: The Walter Index for one-year mortality is a widely used tool that can identify hospitalized older adults with excellent and poor prognosis. However, it was developed using clinical data collected nearly 20 years ago in a high-income country (United States [US]), and its performance outside of the US with modern clinical data is unclear. We aimed to assess the external validity of the Walter Index in Brazil.

Methods: Our analyses were derived from a prospective cohort followed for 12 months in Sao Paulo, Brazil. We included older adults aged ≥70 years who were discharged from the geriatric unit of a tertiary university hospital between 2009 and 2020. Participants underwent comprehensive geriatric assessments on admission and were reevaluated on discharge. We calculated the Walter Index (range 0-20, 20=worst), which uses six risk factors to assess prognosis (male sex, number of dependent activities of daily living at discharge, congestive heart failure, cancer, high creatinine level, low albumin level), and estimated its accuracy to predict 1-year posthospital mortality. We also explored whether adding other risk factors (age, delirium) improved the index performance.

Results: We included 2,607 participants (mean age, 81 years; 63%, female), having lost 260 (9%) to follow-up. Overall, 1-year posthospital mortality was 25%. Mortality was 8% in the lowest-risk group (0-1 point), 20% in the group with 2-3 points, 34% in the group with 4-6 points, and 53% in the highest-risk group (>6 points). The index had an area under the receiver operating characteristic curve (AUC) for 1-year posthospital mortality of 0.70 (95%CI=0.68-0.73), with good calibration, but dropping from the original 0.75 reported by Walter *et al*.. Adding age to the index did not significantly improve accuracy (AUC=0.71, 95%CI=0.68-0.73, p=0.103), and delirium moderately improved it (AUC=0.72, 95%CI=0.70-0.74, p<0.001).

Conclusions: The Walter Index had moderate discrimination and good calibration to predict 1-year posthospital mortality in older adults in a middle-income country. Our results highlight the importance of revisiting widely used prognostic tools for additional validation and possible updates.

C70

Post-acute Sequelae of SARS-CoV-2 (PASC) in Nursing Home Residents: A Case-Control Study

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Background

PASC describes a syndrome of physical and cognitive decline that persists after acute symptoms of infection resolve. Few studies have explored PASC among nursing home (NH) residents.

Methods

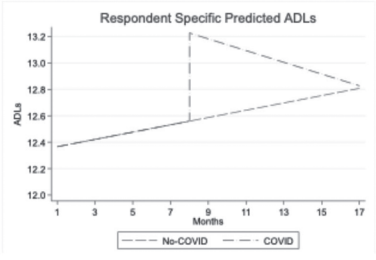
A case-control study was conducted at two NHs in Michigan. Cases were defined as residents with SARS-CoV-2 infection diagnosed before Nov 2021. Controls lived at the same NH during this time and were never infected. We used the Minimum Data Set to examine post-COVID trajectories of functional dependence (Activity of Daily Living [ADL] composite score), and constructed linear mixed-effects models to estimate change acutely following diagnosis and over time adjusting gender, age, and dementia status.

Results

We identified 172 residents (93 cases) and 714 observations. Cohort characteristics include: 61% ≥ 80 yrs.; 71% female; 94% non-Hispanic white; median of 3 comorbidities (IQR 2-4), with no significant differences in characteristics between groups. COVID-19 infection affected the trajectory of composite ADL score for the first nine months following infection, characterized by an acute increase post-infection (β=0.67, p=0.001) followed by improvement toward the expected functionality sans infection (β=-0.07, p=0.057).

Conclusions

Preliminary analysis indicates that NH residents experienced a significant functional decline that persisted for 9 months following acute infection. Further research is needed to determine whether increased rehabilitation services after COVID-19 may help mitigate this decline.



Modeled trajectory of two exemplary patients (both male, above age of 80 and have a diagnosis of dementia). The patient who had COVID-19 infection experienced an acute increase in composite ADL score (decline in function) following infection that persisted until month 17.

C71

MPOA documentation rates increased during the COVID-19 pandemic among hospitalized patients.

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Background: Among patients admitted to BUMCP during the COVID-19 pandemic, only 24% had a medical power of attorney (MPOA) document available. This aligns with the literature, which shows that advanced directive (AD) documentation rates can be as low as 6%. This was impactful since we know that absence of an AD document decreases the likelihood of patients receiving care that aligns with their values, and often results in interventions of limited clinical value. This study aims to explore some of factors that determine the chances that a patient has a completed MPOA document.

Methods: This was a retrospective chart review study. We looked at the trend of MPOA documentation rates in patients age 18 and above who were hospitalized at BUMCP during the COVID-19 pandemic (2018-2022) and collected patients' demographics such as age, sex, marital status and race.

Results: The COVID-19 pandemic led to increased MPOA documentation rates among hospitalized patients from 17% in 2020 to 20% in 2022. Male (22%), divorced (28%) or widowed patients (42%) had higher rates of MPOA documentation when compared to female (18%), single (14%) or married (17%) patients. Furthermore, MPOA documentation rates were lower among Asian (13%), Black (14%), Hispanic (11%) and Native American (11%) patients when compared to Whites (23%). Our findings were statistically significant (P-value < 0.001).

Conclusion: Increased MPOA documentation rates during a global pandemic reflect the importance of advanced care planning. In addition, this study identified specific patient demographics that help us understand some of the factors that lead patients to complete AD documents. For instance, it is reasonable to think that single patients are less likely to complete an MPOA document since they are generally younger and healthier, and thus place lower priority on planning for future sickness. Similarly, married patients could be less concerned about completing an MPOA document as they trust their spouses to know their personal values and to guide us to provide care in alignment with these. Lastly, it seems that racial background appears to have an impact on MPOA documentation rates, which could be explained by the more collectivist culture that we typically observe in non-White compared to White patients.

C72

Asylum Seekers aged 65 and older: A Medical Screening Program at the San Diego-Tijuana Border

K. Fischer, A. Robillard, L. L. Hill. *University of California San Diego, La Jolla, CA.*

Background: Thousands of asylum seekers present to the US-Mexico border each year with a variety of health needs. In December 2018, UCSD first partnered with County and State organizations to provide health screenings for asylum seekers in the US after release from Department of Homeland Security custody. Health assessments identified communicable diseases and acute conditions, protecting both the individual and the public. From Dec 2018-Mar 2020, when the shelter temporarily closed due to the Covid pandemic, no one aged 65+ presented at the shelters. Upon reopening, the demographics of the asylum-seeking populations had shifted. Those aged 65+ now represent nearly 0.5% of the over 150,000 arrivals in the past 18 months (age range 65-104). Previously most asylum seekers arrived from South and Central American countries, traveling for weeks and months by foot, bus, and train; now many arrive by plane from different parts of the world, after traveling for days, facilitating the arrival of asylum-seekers with multiple chronic conditions and higher acuity conditions. Asylum seekers typically stay at the shelters for 24-48 hours, then travel on to where their sponsors are located throughout the US, awaiting final immigration hearings. Patients with chronic conditions therefore need to be stabilized for onward travel and receive further evaluation and treatment at their final destinations.

Methods: This presentation describes the process of customizing the health screening program for older and higher acuity arrivals and details demographics and outcomes for those aged 65+ compared to the younger shelter population. New protocols were established to provide home health aides, screening for dementia as indicated, treating uncontrolled chronic conditions, and refilling essential medications confiscated or stolen during the course of crossing the border. Medical record abstraction compared results of Covid testing, medical screening, and referrals to higher levels of care.

Results: The asylum seekers 65+ had similar rates of Covid positivity to the general shelter population, but higher rates for positive medical screening questions requiring further evaluation (28% vs 20%, p<.05) and referrals to the ED (2% vs 0.5%, p<.05).

Conclusions: Lessons learned in working with displaced populations aged 65+ can be applied to medical responses for a wide variety of emergency situations.

C73

Prescription Cannabinoids Outcomes in Medicare beneficiary: Matched Cohort and Case-Crossover study

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Background: A growing number of US states and nations have legalized the use of Cannabis for medicinal purposes and recent studies suggest that individuals are substituting prescription medications for cannabis. However, evidence regarding their benefit and risk remain incomplete in older adults. Here, we aimed to assess the adverse outcomes such as dementia, fall, fracture, schizophrenia, and delirium associated with prescription cannabinoids in older adults.

Methods: Medicare fee-for-service beneficiary 7.5% sample data in 2014-2016 (n=4,919,122) was used. The inclusion criteria were as follows; 1) ≥ 65 y with epilepsy or cancer or HIV/AIDS, 2) at least 6 months enrollment in Medicare parts A, B, and D before index date to ascertain no cannabinoid prescription in the previous 6 months. Index date for exposed group was the first cannabinoid prescription date and the first non-cannabinoid prescription (or clinic visit) date was for unexposed group. Unexposed subjects are matched to exposed subjects by propensity score, using 72 variables including age, sex, Combined Comorbidity Index, Claims-based Frailty Index, year and month (quintile) of index date and comorbidities and medications by 1:1 ratio. Case-Crossover design was also applied to the statistically significant findings from matched cohort analysis to add further evidence from within subject comparison. A cox proportional hazard model to matched cohort and conditional logistic regression model to case-crossover design were applied and HR and OR with 95% CI were presented respectively.

Results: A total of 1:1 matched 2,118 subjects were selected (Standard mean difference <0.1 for all covariates). Mean age was 75.3 y and female constituted 53.1%. All subjects were followed until 90 days. Prescription cannabinoid was associated with delirium (HR:1.77, 95% CI: 1.21-2.59) and schizophrenia (HR: 2.43, 95% CI: 1.36-4.37). However, fracture and dementia incidence were not statistically different. Case-crossover analysis presented similar results: fall (OR: 2.63, 95% CI: 1.82-3.79), delirium (OR:2.19, 95% CI: 1.48-3.26), and Schizophrenia (OR: 2.00, 95% CI: 1.13-3.52).

Conclusions: Cannabinoid prescription was associated with increased falls and central nervous system adverse outcomes in older adults. However, due to the indication constraint of cannabinoids in the US (cancer, HIV, and epilepsy), further research is necessary.

C74

Prevalence of Anti-Microbial Resistant in Gram Positive Bacteria in Urine in Long-Term Care Facilities: 10 years Follow-up!

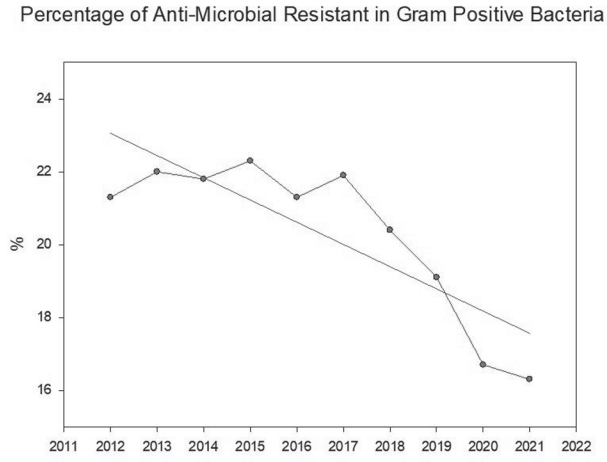
R. Khoury, P. Gudaitis, P. Patel, A. Gandhi, D. Gudaitis. *Aculabs, East Brunswick, NJ.*

Background: Urinary tract infection is one of the most common infections in Long-term Care Facilities (LTCF) residents; and can cause serious complications and it is a significant cause of morbidity and death. Diagnosing and treating these patients is crucial because the patients are frail and are at higher risk for UTI related complications including hospitalization, delirium and death. Gran negative bacteria are the most common cause of UTI; however gram positive cocci is becoming more relevant because of their high affinity to epithelial cells of the urinary tract and the emergence of antimicrobial-resistant bacteria.

Method: We analyzed data collected from 889,838 specimens collected for urine culture from 2012-2021. All Cultures were performed utilizing MicroScan Walkaway 96 conventional panels. The positive cultures were segregated further by the organisms isolated. The percentage of antimicrobial-resistant in gram positive bacteria was calculated on yearly basis. Statistical analysis was done using Analyse-it.

Results: More than 50% of the cultures were positive, one fifth of the positive cultures were gram positive bacteria. There was decline in the percentage of antimicrobial-resistant in gram positive bacteria and especially in the Vancomycin-Resistant Enterococci (VRE) group.

Conclusion: Our data showed a decrease in the antimicrobial-resistant in gram positive bacteria. The decrease in the VRE might be due to increase awareness about the resistant and the limit of the use of vancomycin, in addition to the availability of the other medication to treat gram positive bacteria. However, antimicrobial agents should be used only as necessary; facilities should implement antibiotic stewardship and strategies to limit the spread of these bacteria in the geriatric population.



C75 Encore Presentation

Long-Term Care Facilities are Better place to be: Lessons learned from Initial COVID-19 Infection Guided Omicron Variant Surge Management.

R. Khoury, P. Gudaitis, A. Gandhi, P. Patel, D. Gudaitis. *Aculabs, East Brunswick, NJ.*

Background: Covid-19 is pandemic infection that claimed the life of over 6 million patients. Long-term Care Facilities (LTCF) residents were the first to get affected in the beginning of the pandemic because of their setting and their residents' morbidity and fragility. During the period from November 2021 to January 2022 a sharp rise in Covid-19 cases was noted throughout the country due to Omicron variant; we evaluated and compared the prevalence of Covid-19 in Long-term Care Facilities, outpatient, and the State average.

Method: We analyzed data collected from 75,000 specimens collected for SARS-CoV-2 RT-PCR from November 2021 to January 2022. All samples were tested using RT-PCR (molecular) test; patients were separated as Long-Term Care Facility residents or outpatient and they were further separated based on the State they resided. Percentage positivity for LTCF residents and outpatient were compared to the State positivity rate. Statistical analysis was done using Analyse-it.

Results: The average positivity rate was 7.5% for LTCF residents and 24.2% for outpatients which was very closer to NJ positivity rate. The highest positivity rate for the outpatients was the week between Christmas and New Year (positivity rate was 36.5%); the highest positivity rate for the LTCF resident was for the week after

New Year (20%). The positivity rate for LTCF residents and outpatients were statistically similar November 2021 and toward the end of January 2022.

Conclusion: LTCF had the highest prevalence and death from COVID-19 in the first few months of the pandemic. However, and based on our finding the LTCF had better control of the COVID-19 Omicron surge due to strict policy on visitation, higher than average vaccination and booster rates, better infection control monitoring, and frequent testing that allowed earlier isolation and quarantine which helped stopping the spread of the infection.

Positivity Rate

	LTCF	Outpatient	Average Positivity Rate, NJ
12/12/21-12/18/21	1.8%	9.5%	10-20%
12/19/21-12/25/21	6.5%	24.1%	>20%
12/26/21-1/1/22	15.2%	36.5%	>30%
1/2/22-1/8/22	20.0%	32.2%	>30%
1/9/22-1/15/22	13.2%	20.9%	>20%
1/16/22-1/22/22	9.4%	7.3%	10-20%
1/23/22-1/29/22	5.3%	4.3%	10-20%
1/30/22-2/5/22	2.7%	2.2%	3-10%

C76

Incidence of Humerus and Wrist Fracture in US Black compared to White Women

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BACKGROUND: Numerous U.S. studies demonstrate that the incidence of hip fracture among Black women is about 60% lower compared to White women, but fewer studies have compared the risk of other major osteoporotic fractures. In this study, we examined the incidence of humerus and wrist fracture in older Black women compared to non-Hispanic White (NHW) women.

METHODS: We identified a cohort of Black and NHW female members aged ≥50y in a Northern California healthcare system during 2000-2019 who were followed up to December 2021 for fracture outcome. Incident humerus (proximal or shaft) fracture and distal radius or ulna (wrist) fracture outcomes were examined using hospital, emergency room, urgent care, and surgery or orthopedic visit encounters. Race and ethnicity were determined from self-reported data. Women contributed person-time to qualifying 5y-age groups during follow-up, with censoring at membership cessation, death, end of study, or fracture outcome. Age-adjusted incidence of fracture was calculated using 5y age-specific weights (2010 US Census). Log-Poisson regression was used to determine fracture incidence rate ratios (IRR) adjusting for 5y-age group and calendar year, with NHW women as reference.

RESULTS: 95,919 Black women experienced 481 humerus and 633 wrist fractures and 776,839 NHW women experienced 12,144 humerus and 15,302 wrist fractures. The age-adjusted incidence of humerus and wrist fracture in Black women was 0.58 (95% confidence interval, CI 0.53-0.63) and 0.75 (CI 0.69-0.81). For White women, the age-adjusted incidence of humerus and wrist fracture was 1.51 (CI 1.47-1.53) and 1.96 (CI 1.93-2.00). The IRR for humerus and wrist fracture for Black vs NHW women was 0.40 (0.36-0.44) and 0.39 (CI 0.36-0.42).

CONCLUSIONS: In older Black women, the age-adjusted incidence of humerus fracture is about 60% lower for Black compared to NHW women. This difference in fracture incidence is similar to that previously reported for hip fracture.

C77

Health care utilization and mortality at the intersection of frailty and morbidity among older Medicare beneficiaries with HIV

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Background: A deeper understanding of the health profiles that constitute frailty is needed to anticipate resource demand by older people living with HIV (OPLWH).

Methods: We analyzed hospitalizations, home health admission, and mortality in 2014-2016 Medicare claims data from PLWH aged 50+ years who were continuously enrolled in fee-for-service Medicare. Latent profile analysis identified subgroups based on prevalent conditions from 2014 claims including: substance use (SU), schizophrenia (SCZ), AIDS-defining (cytomegalovirus, candidiasis, peripheral neuropathy, lipodystrophy, cachexia, Kaposi's sarcoma, pneumocystis jirovecii pneumonia [PCP]), geriatric (polypharmacy, dementia [ADRD], depression, falls, hip fracture, sensory deficits, osteoporosis, orthostatic hypotension, urinary incontinence), chronic (kidney disease, hepatitis C [HCV], liver disease, non-AIDS cancers), and vascular conditions (myocardial infarction, stroke). Latent profile groups were stratified by frail/non-frail status. Cox proportional hazards estimated mortality and Poisson regression estimated utilization rates after 1/1/2015 by latent profile-frailty groups, adjusted for demographics, Medicaid eligibility, and HIV treatment non-adherence (<80% of days having antiretroviral therapy).

Results: The 11,075 OPLWH studied were male (73%), with mean age 61 years (standard deviation [sd] 8), and 24% (n=2684) were frail. Five latent profile groups were: SCZ + ADRD (n=276), HCV + SU + PCP (n=484), vascular (n=198), depression (n=1884), geriatric + other AIDS-defining (n=8233). Compared to the non-frail + HCV + SU + PCP group, the highest rates were an 8.80-fold (95% CI [7.38, 10.49]) higher rate of hospitalizations in the frail+ SCZ +ADRD group, a 5.55-fold (95% CI [3.99, 7.72]) higher rate of home health admissions and a 3.86-fold (95% CI [2.13, 6.99]) higher rate of mortality in the frail + vascular group.

Conclusions: Studying the intersection of frailty and morbidity among OPLWH may create opportunities to anticipate and mitigate demand on certain clinical resources.

C78 Encore Presentation

Exploring the association between mid-arm muscle circumference and cognitive function in older adults

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Background: Dementia is a major public health concern that affects 55 million people worldwide with an incidence of 10 million cases each year. Previous studies have demonstrated that low muscle mass may be associated with cognitive decline. However, in contrast to dual-energy Xray absorptiometry (DEXA) or bioelectrical impedance analysis (BIA) that may not be routinely available in primary care settings, mid-arm muscle circumference (MAMC) is a simple, easily attainable measure that is known to correlate strongly with measures of muscle mass using DEXA and BIA. The aim of this study was to examine the association between MAMC and cognitive performance in older adults over time.

Methods: We included community-dwelling adults aged ≥55 years from the China Health and Nutrition Survey (1997-2015) with complete cognitive function and MAMC data. Global cognitive function was estimated based on a subset of the modified Telephone Interview for Cognitive Status (0-27, low-high) every 2-4 years between 1997-2006 and 2015. A multivariable linear mixed-effects model was used to test whether the rate of decline in cognitive

function was associated with MAMC. If no association was found, we tested for an overall association, across all ages, between in cognitive function and MAMC. Models were conducted using the overall cohort and stratified by sex.

Results: Of 3,702 adults (53% female, aged 63.2±7.3 years), mean MAMC was 21.4cm±3.0 and mean baseline cognitive score was 13.6 points±6.6. We found no evidence that the rate of cognitive decline differed by MAMC (p=0.75). However, higher MAMC was associated with better cognitive function, with a 1 standard deviation increase in MAMC being associated with a 0.14 points±0.07 higher cognitive score (p=0.03). In sex-stratified models, we found no difference in the rate of decline by MAMC, and while positive, there were no statistically significant associations between MAMC and global cognitive function.

Conclusion: MAMC was associated with overall cognitive function with higher MAMC being associated with better cognitive performance in older adults. Future studies need to examine the MAMC and cognition relationship across different populations for generalizability and if this relationship is augmented by sarcopenic obesity.

C79

Association of contrast sensitivity with balance and gait under challenging and simple conditions in the Brain Network and Mobility Function (BNET) Study

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Background: To determine if contrast sensitivity (CS) is associated with greater decrements in balance and gait under challenging vs. simple conditions in cognitively healthy older adults.

Methods: Longitudinal analysis of baseline and 18-month data was conducted in 191 older adults. Linear mixed models examined the difference in the association of baseline CS with 1) postural sway on a foam vs. firm surface and 2) gait velocity under dual task, fast pace, and usual pace. Models were adjusted for body mass index, age, sex, hypertension, and diabetes.

Results: Participant mean age was 76.5±4.7 years, with 108 (56.5%) female and 18 (9.4%) black. At baseline, 1 unit lower log CS in the worse eye was associated with a 3-fold larger 95% ellipse area when standing on the foam (β=1.07, p<0.0001) vs. firm (β=0.34, p=0.1545) surface (adjusted diff in β=0.72, p=0.0052). Findings were comparable at 18 months (adjusted diff in β=0.57, p=0.0355). A 1 unit lower binocular log CS was similarly associated with >3-fold greater 95% ellipse area on foam vs. firm surface at baseline (p=0.0118) and 18 months (p=0.0040). The association of worse eye or binocular log CS and the 95% ellipse area did not differ between baseline and 18 months for either foam or firm surfaces (p>0.20). Both binocular and worse eye LCS were significantly associated with a slower gait speed under usual pace, fast pace, and dual task conditions at baseline and 18 months (p<0.05), but the difference in β between conditions and time points was not significant.

Conclusions: In cognitively intact older adults, worse CS was associated with a significantly slower gait under all conditions, and a significantly larger postural sway area on the foam vs. firm surface which persisted at 18 months. CS deficits may identify a subset of older adults with lower functional reserve at risk of balance and mobility issues.

C80

Arthritis and Bothersome Pain Among Caregivers to Older Adults: Prevalence Estimates from the National Study on Caregiving

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Background: National survey estimates suggest that 55% of family caregivers to older adults report bothersome pain (Moon et al., 2017), and 40% have arthritis (Moon & Dilworth-Anderson, 2015). Experiences of persistent (i.e., chronic) pain can make caregiving more challenging (Polenick et al., 2020) and negatively affect caregivers' health, which can lead to worse care recipient outcomes (Pristavec & Luth, 2020). Beyond the existing crude estimates, however, little is known about family caregivers' experiences of pain. We used national survey data to assess the prevalence of family caregivers' bothersome pain or arthritis by type of caregiving arrangement (i.e., relationship to the care recipient, dementia diagnosis, end-of-life [EOL] care) to identify which caregivers may be at a higher risk for pain.

Methods: Using data National Study on Caregiving (NSOC) data (Round 7, N=2,095), we separately estimated the prevalence of self-reported bothersome pain in the previous month and arthritis diagnosis among family caregivers. Accounting for the survey sample design, we utilized modified Poisson models to estimate adjusted associations of caregiving type with the relative prevalence of pain in the last month and arthritis diagnosis.

Results: Most prevalence ratios revealed similarities between caregiving type (p>.05), though we did observe some key differences. The prevalence of bothersome pain in the last month was slightly greater among adult-child caregivers compared to spousal caregivers (Prevalence Ratio [PR]: 1.41, 95% Confidence Interval [CI]: 0.60-3.35), but was similar between dementia and non-dementia caregivers (PR: 0.90, 95% CI: 0.79-1.04) and EOL and non-EOL caregivers (PR: 1.08, 95% CI: 0.91-1.28). The prevalence of arthritis was slightly greater among non-EOL caregivers compared to EOL caregivers (PR: 1.18, 95% CI: 0.96-1.45) and among adult-child caregivers compared to spousal caregivers (PR: 1.13, 95% CI: 0.48-2.65), but dementia and non-dementia caregivers had a similar prevalence of arthritis (PR: 0.97, 95% CI: 0.83-1.12).

Conclusions: Results can be used to guide future research on family caregivers' pain, including which caregivers might benefit the most from pain interventions, for the growing number of family caregivers to older adults in the United States.

C81

Dynamic nature of social isolation in older adults

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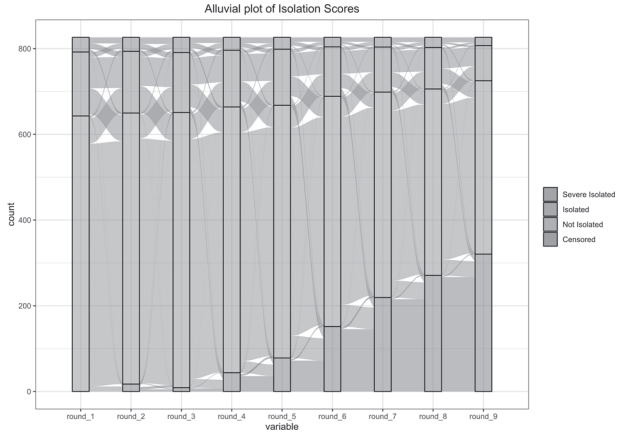
Background: 1 in 4 older adults in the US experience social isolation. Epidemiological studies have demonstrated that socially isolated older adults have high levels of morbidity and mortality, but little evidence of longitudinal outcomes exists. The purpose of this study is to prospectively assess dynamics of social isolation in older adults.

Methods: The study sample (N=6992) included nine rounds of the National Health and Aging Trends Study, a nationally representative sample of Medicare beneficiaries age 65 or older. Social isolation was defined using self-report responses to a previously constructed typology of social isolation. This included four domains: living arrangement, core discussion network size, religious attendance, and social participation. Social isolation trajectories were plotted. Participants who transitioned between categories were evaluated to explore factors influencing this change in the preceding year.

Results: Individuals in the study transition between social isolation categories (image). We examine demographic factors (age, gender, education) and functional factors (limitations in ADLs), present in individuals who transition social isolation categories to understand factors that influence this transition and favor recovery from social isolation.

Conclusion: Social isolation is a dynamic state. Even if transient, becoming socially isolated is strongly associated with significant morbidity and mortality. Expanding our understanding of factors present in newly socially isolated older adults allows for the development of interventions to mitigate the negative consequences.



C82

Diagnostic Uncertainty and Antibiotic Decision-Making in Home Care: A Qualitative Study

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Background: Patients in home-based primary care (HBPC) are prescribed antibiotics at rates similar to those in nursing homes, and many of these prescriptions are potentially inappropriate.[1] Little is known about how providers make prescribing decisions in home care. This study examined antibiotic decision-making in HBPC.

Methods: A national sample of providers in the Veterans Affairs HBPC Program was recruited for participation. Semi-structured interviews were conducted using a standard discussion guide from June 2022 to September 2022; 22 respondents (physicians, n=7; nurse practitioners, n=13; physician assistants, n=2) from 18 states were interviewed. Transcripts were analyzed using grounded theory. The constant comparative method was used to develop a coding structure that was revised after coding sequential transcripts. Themes from the first 12 respondents were identified.

Results: Providers reported that the limited availability of diagnostic testing (e.g., microbiological cultures, radiographic tests) made it difficult to establish infection with certainty. When they were uncertain about the need for antibiotics, factors that promoted prescribing included the desire to avoid hospitalization, barriers to comprehensive evaluation (e.g., time of day, patient location), and pressure from caregivers. Factors that inhibited prescribing at times of uncertainty included a reliable plan for follow up, polypharmacy, and concerns about adverse drug events. Access to pharmacists, subspecialists, and clinical decision support tools facilitated decision-making when providers were uncertain about the class, dose, and duration of antibiotic therapy. Quality measures and comparative prescribing data were unavailable for providers to evaluate prescribing decisions.

Conclusions: Many factors other than the clinical presentation affect antibiotic decision-making in HBPC. These factors warrant study to inform assessments of antibiotic appropriateness in home care.

References:

[1]Datta et al. National Cohort Study of Homebound Persons Living With Dementia: Antibiotic Prescribing Trends and Opportunities for Antibiotic Stewardship. Open Forum Infect Dis. 2022; 9(9):ofac453

C83

Lessons Learned About the Surgical Experience of Patients and Caregivers from the COVID-19 Pandemic

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Background: The COVID-19 pandemic introduced challenges for patients undergoing elective surgery: scheduling delays, a transition to virtual care, and frequent changes in policies (e.g., visitor restrictions, discharge processes). These challenges may disproportionately affect older patients and their caregivers. We sought to understand their surgical experiences during the pandemic to inform surgical practices.

Methods: We performed a qualitative study with older adults and their caregivers regarding preparatory behaviors before and after elective colorectal surgery (n=10 dyads). Interviews were conducted during the pandemic; thus, the effects of the pandemic were commonly discussed and warranted a separate analysis. Thematic analysis was used to analyze the transcripts.

Results: We identified four themes influencing surgical experiences. 1) *Perceiving surgery as non-elective:* Dyads felt surgery was necessary for quality of life and thus urgently needed. Uncertainty around scheduling distressed dyads. 2) *Importance of in-person meetings:* Meetings in-person were valuable for trust building, especially those involving the surgeon. Virtual care was sometimes perceived as a marker of lower surgical complexity. 3) *Importance of caregiver involvement:* Patients felt the emotional, physical, and informational support of their caregiver contributed to the success of their surgery. 4) *Inconsistent communication* between surgical team members and to the dyad lowered confidence and preparedness.

Conclusion: Surgical teams should consider using the word "scheduled" rather than "elective" surgery to acknowledge the importance of the procedure to dyads. Surgical teams should incorporate opportunities for dyads to meet the surgeon in-person and indicate that virtual meetings are not indicative of lower surgical complexity. Surgeons should advocate for caregiver involvement from initial consultation to recovery at home. Lastly, health systems should provide consistent information to increase trust in the surgical team and help dyads prepare for surgery.

Themes & Exemplary Quotes

Theme	Patient Quote	Caregiver Quote
Perceiving Surgery as Non-Elective	I, I was in such pain. I was in so much pain…'Cause I was to the point that….if this doesn't get better, then put me in hospice and palliative care. And I don't wanna live like this the rest a' my life. -Patient 2 That's my, my hope. And I, I'm more than a little worried right now with the university canceling surgeries, that this is gonna get canceled. And, I won't do well with that. Because of, it's impacting everything else I'm doing right now…You know it's, yeah, it, you know sort of an elective surgery but it's not. It's sorta one step past elective. -Patient 7	It wasn't an easy decision before we ever saw the surgeon. But it'd been recommended for quite a while, and we finally made up our mind. So now we're confident this is the way to go… we were hopin' to get it like the next week [after surgical consultation], which we know wouldn't happen, but... if anything, to have gotten the surgery a little sooner in the month, would have been better. But, you know, they can do only what they can do -Caregiver 8 And I said is this routine? And they said well it's not life or death. So that's why it got put back to the 14th. So.. How did that, how did that make you feel? Well, I mean we were in Florida, so I guess it could a been worse if we were sitting home, (laugh). ... You know. But, I felt, I felt sorry for him. I, you know, I… I just know how anxious he is to have this be done. And, um… but, what can you do? -Caregiver 9
Importance of In-Person Meetings	When I talked to Dr. H., and we, we've only met video, so I said I would like to meet her in person before the surgery. They said she would see me in the preop area, which is fine. -Patient 7	I generally try to, you know, when they come in, talk to them. Get their feedback...I'll go outside the room, if I feel I need to talk. Okay, now give me the real skinny, you know...you don't candy coat 'cause you're in front of her. I'll do those things...when the doctors come in, I ask questions, you know. Come up with somethin'…Oh, if you're hangin' out there long enough, they're gonna come through. Learn when their dinnertime is. -Caregiver 10 But his follow-up surgical appointment was video. Now I found that odd—I found that odd! I mean how do you look at the surgical site and, you know? I guess just by the questions they asked they could surmise they didn't need to… I just kinda figured that was one we'd probably have to go back in person. But, you know like I say, he did, he did fine. -Caregiver 9
Importance of Caregiver Involvement	So you, you said you didn't like the fact that your wife couldn't come in every day. Why is that? Well, 'cause she's my wife and…I, she, she's just good at what she does and… I love her and I want her, you know, with me. But, you, what you gonna do when they won't let it? Let her in. I don't know. But, and the other thing is with my, my mind, I can't keep everything straight and… so, yeah. But it, it went well. -Patient 8	Could you go over some of the responsibilities you felt you would have, um, completed, given that COVID was not a situation in this case, and you weren't allowed to be at the hospital? What things could you not provide the patient now, given the situation? Um… the role of patient advocate. The person who heard the physician assessments when they came in. Hearing her questions to them. Um… understanding the, the plan. Um… I, I… missed—all of it. So all I had was her… report which, when you're on pain meds and you're in pain, you don't always remember exactly what was said or what the plan is. So, information was sketchy. And it was frustrating. -Caregiver 7

C84

Caregiver experiences of hospitalizations for people living with dementia during the COVID-19 pandemic

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Background: Persons living with dementia (PLWD) are known to experience adverse effects from hospitalization and from care transitions between hospitals and long-term care (LTC) settings.[1] They also experienced adverse effects from the COVID-19 pandemic, such as those due to social isolation. How were PLWD's hospitalizations and care transitions affected by the COVID-19 pandemic? This qualitative study used in-depth interviews of caregivers for PLWD to answer this question.

Methods: Semi-structured phone interviews with 40 caregivers for PLWD, purposively sampled to achieve variation in PLWD's residence (community vs. LTC), caregiver-PLWD relationship (spousal vs. non-spousal), and caregiver gender. Interviews were analyzed using constructivist grounded theory.

Results: Sixteen of the 40 caregivers reported the PLWD was hospitalized during the COVID-19 pandemic for any cause. A higher proportion of LTC-dwelling PLWD were hospitalized than community-dwelling PLWD. Caregivers reported that pandemic-related social isolation negatively affected PLWDs' health and wellbeing, which in turn contributed to the need for hospitalization. Hospital visitor restrictions resulted in poor communication between caregivers and health care facilities. For PLWD residing in LTC, visitor restrictions and quarantine requirements during care transitions back to LTC resulted in medication errors, re-hospitalization, and symptomatic worsening of the PLWD. Caregivers reported being excluded from the PLWD's medical decision making. This lack of transparency contributed to caregiver frustration and dissatisfaction with the perceived quality of PLWD's care.

Conclusions: LTC and hospital visitor restrictions, mandatory quarantines after care transitions, and social isolation during the COVID-19 pandemic negatively impacted the care of PLWD. These results suggest ways to improve the current quality of care of PLWD, as well as in future public health emergencies. These include enhancing communication via telemedicine and flexible application of policies for vulnerable populations.

References:

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C85 Encore Presentation

How Older Adults Identify and Collaborate with a Support Team during Transitions from Hospital to Home

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Background: Adults aged 60 years and older experience complex transitions from hospital to home, during which they work to recover their health, function, and mobility. Support from providers and unpaid caregivers is critical, but little is known about how older adults identify and collaborate with a support team. The objective is to describe how older adults identify and collaborate with a support team, including unpaid caregivers, healthcare providers, and professional and social networks, during transitions from hospital to home.

Methods: This study utilized grounded theory methodology. One-on-one interviews were conducted with adults aged 60 and older following discharge from a medical/surgical inpatient unit in a large midwestern teaching hospital. Consistent with grounded theory methodology, interviews were largely unstructured to allow for rich description of participant experiences; they were audio-recorded and transcribed verbatim. Data were analyzed using open, axial, and selective coding.

Results: Participants (N = 25) ranged from 60-82 years of age, 11 were female, and all were white, non-Hispanic. A conceptual model was developed which illustrates participants' process of identifying and collaborating with a support team to manage at home and progress their health, mobility, and engagement. Identifying a support team was often informed by participants' needs and goals for the transition. Support teams varied, but included collaborations between older adults, unpaid caregivers, and healthcare providers, which was impacted by their home environment and larger professional and social networks. Conditions that impacted their experience of identifying and collaborating with a support team included finances, knowing what to expect, mental health, access to care and providers, and loss of a support person. Potential consequences included feelings of depressive and related symptoms, isolation and loneliness, and feeling as a burden.

Conclusions: Implications for practice include opportunities to examine older adults' support networks and consider gaps that could impact transitions in care. Implications for research include developing interventions to facilitate collaboration between healthcare providers, caregivers, and older adults during transitions and connections to professional and community resources.

C86

Supporting the support sytem: A qualitative study of challenges to care partner education for older adults undergoing elective major surgery

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Background: Many older adults undergoing elective major surgeries involve a friend or family member (care partner) before and after the surgery. Care partners involvement during a surgical episode is associated with fewer postoperative complications and improved adherence to postoperative care, yet care partners feel poorly-informed about postoperative management. We aimed to identify challenges to having better-informed care partners.

Methods: From 8/2020-9/2021, we conducted semi-structured qualitative interviews of 10 dyads of older adults (aged ≥65 years) who are undergoing elective colorectal surgery and their care partner who will be assisting them after the surgery. We interviewed each dyad member separately before and after the surgery. Interviews were transcribed, coded and analyzed for themes.

Results: We identified three themes contributing to care partners feeling poorly-informed about the surgery: 1) **Variation in the quality and depth of information:** Care partners infrequently received information about the expected recovery course and discharge instructions were rarely specific to the patient's unique needs. The depth of information ranged from no information to hands-on learning experiences. 2) **Under-inclusion of care partners & overreliance on patients:** Despite some patients having cognitive impairment, surgical teams infrequently sought to involve care partners in appointments or during hospitalization, instead relying on patients to convey information. Some care partners preferred to rely on the patient for information. This was often due to perceptions of patient self-efficacy, their perceived role as a care partner, or difficulty reaching the surgical team. 3) **Personality and emotional health**: Some care partners preferred to minimize information to reduce anxiety. Similarly, some patients deliberately withheld information to avoid overburdening their care partner.

Conclusions: There is a need for a standardized approach to caregiver education. Surgical teams should: 1) Not assume that patients are disclosing everything the caregiver should know to be effective in their role and 2) Implement processes to routinely engage care partners throughout the surgical episode.

C87

Geriatric narrative medicine: Impact on student and older adult participants

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Background:

Early exposure to geriatric specialty increases interest in geriatric medicine and can reduce misconceptions about this growing patient population. In addition, reminiscence has been well described as a therapeutic method for improving the psychological health of older adults. Using a narrative book project, we evaluated health professions students' attitudes about older adults, interest in geriatrics, and the presence of reminiscence in older adults.

Methods:

Medical students conducted a narrative medicine project whereby they interviewed patients of a geriatric primary care practice about aspects of their lives and compiled these stories into a printed book. Students were surveyed prior to and following participation in the project. Open-ended questions and the UCLA Geriatrics Attitudes Scale were used to evaluate student perspectives. For older adult participants, retrospective surveys are being collected using the Reminiscence Function Scale, a project satisfaction scale, and open-ended questions regarding their experience in the project. Descriptive and comparative statistics were used to analyze the quantitative data. Free text responses were analyzed using content analysis to gain a deeper understanding of participants' experiences.

Results:

A total of nine pre- and post-interview student surveys were compared. Only 33% of the students were planning to pursue a career in geriatrics and only 50% had received formal training in geriatrics. Baseline attitudes towards older adults were positive, with an average score of 4.0 out of 5.0 on the UCLA Geriatrics Attitudes Scale. A comparison of the averages showed no significant difference between pre-and post-interview surveys. However, qualitative analysis identified that all participants gained a better understanding of older adults' experiences. Older adult participants described high levels of satisfaction with the project.

Conclusions:

Using a narrative medicine project has high satisfaction levels for the older adult participants. While student evaluations showed a lack of formal geriatric training and limited change in students' attitudes toward geriatric medicine, the sample size was small. Next steps in this project include completing and analyzing data collection on reminiscence for older adult participants.

C88

Reconceptualizing Patient Safety after Critical Illness: A Qualitative Analysis

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Background: To ensure patient safety is to both prevent harm and promote wellbeing. Yet, anecdotal experience suggests post-ICU care delivery focuses primarily on harm prevention. We explored stakeholders' perspectives regarding safety after critical illness.

Methods: Content analysis of interviews with 11 *survivors*, 11 *family carers*, and 30 interviews/focus groups with *providers and administrators* designed to understand survivors' needs and barriers and facilitators to post-ICU care. We examined the concept of safety via 1) harm prevention and 2) promotion of wellbeing. We explored whether the mechanism for seeking safety 1) limited activity or participation (disablement), 2) promoted activity or participation (enablement), or 3) neither.

Results: Safety was discussed by 6 (55%) survivors, 4 (36%) carers, and in 17 (57%) interviews/focus groups with providers/administrators. Harm prevention was the *only* safety strategy discussed by 2 (33%) survivors, 3 (75%) carers, and in 17 (100%) interviews/focus groups with providers/administrators. Promotion of wellbeing was the *only* strategy discussed by 1 (17%) survivor. *Both* strategies were discussed by 3 (50%) survivors and 1 (25%) carer. No (0%) providers discussed promotion of wellbeing as a goal of patient safety. Mechanisms of harm prevention included: 1) disablement (eg, not walking to avoid falls); 2) enablement (eg, using adaptive equipment for activities of daily living); 3) neither (eg, describing safety gaps at home). The only mechanism discussed for promoting wellbeing was enablement, which required a survivor's personal drive to pursue an activity. Permission or encouragement from carers or providers supported enablement.

Conclusions: Harm reduction dominated stakeholder descriptions of patient safety, especially among providers. Safety must be reconceptualized to emphasize its integrated functions of harm prevention and promotion of wellbeing in post-ICU transitional care.

C89

Gathering health care information among middle-aged and older adults: Approach and challenges

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Background: Health care decision-making is cognitively complex. Despite having access to many sources of information, consumers may struggle to understand and prioritize competing data. The objectives of this study are to understand 1) the sources of information on which middle-aged and older adults rely when making health care decisions,

2) the barriers faced when gathering this information, and 3) the use of online resources in health care decision-making.

Methods: This study was part of a larger observational study about health care decision-making. We conducted structured telephone interviews about sources of health care information, challenges encountered in gathering health care information, and use of online health care information. Participants were community-dwelling, English-speaking adults 45 years and older who could use a computer keyboard and see and hear well enough to use multimedia health care resources. We excluded people with cognitive impairment or certain chronic conditions relevant to the larger study. We used descriptive statistics to analyze closed-ended questions and content analysis to group responses to open-ended questions.

Results: We enrolled 106 participants with a mean age of 65.7 years; 84 (79.2%) were women, 73 (68.9%) were white, 24 (22.6%) were Black, 9 (8.5%) had Hispanic/Latino ethnicity, and 81 (76.4%) had at least a college-level education. Although participants communicated with others about health-related issues, more than half of participants (52, 51.8%) first looked for information on their own. Nearly all participants (102, 96.2%) used the Internet to gather health information, and 78 (73.6%) participants discussed online health information with a health care provider. However, only 77 (72.6%) participants trusted online health information. Challenges in gathering health information included concerns about information being irrelevant, non-credible, hard to understand, hard to find, contradictory, or excessive.

Conclusion: Nearly all study participants looked for health information online, and half looked for information on their own before communicating with another person. However, many faced challenges obtaining, interpreting, or trusting health-related information. Decision aids and other educational materials might help people to be savvy consumers of health information and make informed health decisions.

C90 Encore Presentation

"We live a different life than we had planned": Family experiences of dementia caregiving at home

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Background: Most people with dementia live at home, receiving care from a spouse/partner or adult child. We designed a longitudinal, ethnographic study to better understand how family relationships impact everyday dementia caregiving experiences.

Methods: This ongoing qualitative project uses a case study approach to observe people living with dementia and identified live-in care partners (dyads). Data collection includes interviews and participant observation focused on the relationship between dyad members prior to dementia onset and during data collection, everyday caregiving activities, and attitudes about dementia care. Video, telephone, or in-home interviews were audio recorded, transcribed, and double coded using Atlas.ti software. Team members used content analysis to identify overarching patterns and met weekly to discuss coding and validate initial findings.

Results: 12 people living with dementia (33% women, 17% people of color) as well as 9 spousal care partners and 3 adult children care partners were recruited (75% women, 17% people of color). Although individual experiences varied widely, a few patterns emerged: 1) Across the dyads, care partners expressed difficulty accepting the change in relationship dynamics following a dementia diagnosis; they described their use of ongoing professional work, social activities, and family support as coping strategies and sources of meaning. 2) Attitudes and beliefs about gender and marital roles were enacted within the caregiving experience. Among care partners, all of the women and one man discussed personal commitment and familial obligation in relation to caregiving and accepting the dementia ("We're still together and we still finish each other's sentences"). All of the men described their resistance to the concept of disease progression and their attempts to make things better ("I push a little," "I want to hear a yes or a no"). All care partners relied on memories of the pre-dementia relationship as sources of meaning.

Conclusions: Although each relationship was unique, family care partners shared a sense of dislocation and difficulty with accepting the cognitive and functional changes occurring with dementia. Their responses to dementia caregiving seemed shaped by personal attitudes related to gender and marital obligations.

C91

Completion of an online Automated Self-Administered 24-hour (ASA-24) dietary assessment tool in older adults: A feasibility crossover study

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Background: Certain dietary components and patterns impact the trajectories of health with aging. However, existing dietary assessment tools are known to be cumbersome and challenging to use. With older adults' use of technology increasing, we aimed to explore the feasibility of completing the online, Automated Self-Administered 24-hour (ASA-24) dietary assessment tool.

Methods: We conducted a randomized, crossover study comparing community-dwelling older adults' (≥65 years) preference for self-administered (SA) versus research assistant administered (RAA) ASA-24. Participants were recruited via ResearchMatch.com and randomly allocated to an RAA ASA-24 group (n=10) first or an SA ASA-24 group (n=10) first. One week later, participants completed the alternative sequence. After each method of completion, participants completed an online 11-item Likert-scale regarding their perceptions of ASA-24 (1-5, strongly disagree to strongly agree). Mean and standard deviations were reported for each question and changes in each method was evaluated.

Results: There were no significant differences between groups for sex, age, race, ethnicity, education, or income. After completing both sequences, both groups disagreed with a statement regarding a need for research assistant help with the online system (RAA first 1.4±0.5 vs SA first 1.7±0.8, p=0.34). When conducting an SA ASA-24 first, this demonstrated less confidence that the system could be learned quickly (SA 4.5±0.5 vs RAA 3.4 ±1.0, p=0.001). Participants felt the system was easier to follow when an SA ASA-24 was administered first, (SA 4.6±0.5, RAA 3.8±1.0, p=0.04), while there was no difference when the RAA ASA-24 was administered first (RAA 4.4±1.3, SA 4.1±0.7, p=0.39).

Conclusion: We demonstrated that older adults can complete dietary recall using an online platform and SA is the easier method. Order of administration method (SA vs RA) may impact perceived ease of use. Limitations include a small sample lacking heterogeneity. Next steps will include increasing the diversity of the sample and use of an SA ASA-24 platform to identify dietary patterns that impact aging.

C92

Expanding Health Professions Students' Access to Age-friendly Interprofessional Collaborative Practice via Project ECHO

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BACKGROUND: Training in interprofessional (IP) geriatrics collaborative practice is important for all health professions trainees, but such IP clinical training opportunities are rare. The Extension for Community Healthcare Outcomes (ECHO) Model has rapidly spread

as a way to train health professionals in specialty care via case-based sessions with a virtual learning community. We sought to determine whether longitudinal integration of health professions students into a Project ECHO–Geriatrics would be a feasible and effective way to deliver training on age-friendly care and IP collaborative practice.

METHODS: Students were recruited from health professions programs at the University of Washington. After an introduction to age-friendly care and ECHO, students participated in a minimum of 3 monthly ECHO sessions and post-session debriefs. Surveys were distributed via e-mail at program completion to assess outcomes; data were collected anonymously. Items assessed confidence with age-friendly and IP competencies on a 5-point scale (1 low, 5 high) using a retrospective pre-post design. Students rated program features, and open-ended questions elicited comments and key takeaways. The significance of pre-post changes was analyzed using the Wilcoxon signed rank test.

RESULTS: From January to June 2022, 14 students from 5 health professions programs (undergraduate and advanced practice nursing; medicine; pharmacy; and physical therapy) completed the program. Survey response rate was 93%. One hundred percent of students reported the program was meaningful and worth their time. Self-efficacy improved in all areas and showed greatest change for providing age-friendly care (3.9 post; mean change 1.6; p=0.003). Improvement in all IP competency items was significant, with greatest improvement in knowing one's own and others' respective roles on an IP team (4.3 post; mean change 1.1; p=0.004). Students reported being more likely to focus their career on older adults after program participation.

CONCLUSIONS: In this pilot, we demonstrated that utilizing an existing Project ECHO program to expand access to IP collaborative practice training for health professions students is feasible and effective in improving age-friendly and IP competencies. Based on these promising results, the program is being expanded at our institution and may be considered for replication at other institutions with Project ECHO programs.

C93

"A Normal Working Adult"- Implicit Bias Against Older Adults Revealed in First-Year Medical Students' Reflections on Ageism

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Background:

First-year medical students have limited exposure to geriatric patients, and may not recognize the heterogeneity of aging or the prevalence of ageism. We sought to introduce medical students to independent, community-dwelling older adults in order to help them develop empathy toward geriatric patients and for us to understand students' biases about aging. Whether beginning medical students have predominantly negative attitudes about older adults is unknown.

Methods:

At NYU Grossman School of Medicine, we created Geriatrics Connect, a longitudinal curriculum for first-year medical students to learn about the lived experience of older persons through monthly telephone calls with a community dwelling patient over age 75. Students took a life history from their assigned patient, and learned about their social history. Twice during the semester, students wrote reflections about these experiences, including a reflection on ageism. Five independent reviewers coded each essay, ensured concordance in identifying themes, and created a thematic analysis summary.

Results:

We analyzed 106 student reflections for themes. The most common themes included: a sense of awe at functional abilities and independence of patient partners (95%); surprise by patients' hobbies and cognitive abilities (80%); and an expectation that being older equates with poor health (56%). For many students, their sole previous experience with older adults was with their own grandparents (42%). Notably, students' reflections about their patients — in some cases, even when writing specifically about their own lack of ageism — included ageist language, such as "mentally with-it," "incredibly sharp mind," "fiercely independent," "wildly independent," and "not as spry."

Conclusion:

Students' written reflections revealed that ageism is prevalent among first-year medical students. Despite their self-perception about understanding the diversity of functional ability in older age, the students' language in their writing revealed an implicit and negative bias about aging. Opportunities to address ageism, and the harms of this bias, should be a core component of medical education.

C94

Interprofessional Education on Transitions from Hospital to Skilled Nursing Facilities

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Background: At our institution, an interprofessional (IP) hospital team meets with IP teams from local skilled nursing facilities (SNFs) in a weekly teleconference to discuss patients recently discharged from the hospital to the SNFs. The purpose is to identify and reconcile gaps in care during patients' transitions. We obtained a grant from our institution's interprofessional education center to build an IP educational experience centered around this teleconference, with the aim of teaching learners the importance of working within an IP team to perform safe care transitions.

Methods: We collaborated with several professional training programs to recruit learners. We designed a weeklong educational experience for the learners, which includes: 1) watching an online module that describes care transitions within SNFs, 2) participating in a one-hour interactive session on IP competencies and transitions of care facilitated by a Geriatrics fellow and a geriatrician, and 3) attending the weekly teleconference. IP trainees in groups of 2-5 participate weekly and fill out a post-survey to reflect on their experience.

Results: We have held this weeklong experience 10 times over the last 4 months. Twenty-four learners from 3 academic institutions have participated, including pharmacy, nurse practitioner, clinical nurse specialist, and medical students, as well as medicine, medicine-psychiatry, and family medicine residents. Eighteen learners (75%) have completed the post-survey, which includes pertinent items modified from the W(e) Learn Interprofessional (IP) Program Assessment tool. The learning activities, the facilitators, and the overall experience have been rated highly on the survey by most of the respondents. In open-ended questions on the survey, learners reflected on the importance of working in an interprofessional team and identified specific take-home points regarding care transitions to apply to their practice.

Conclusions: This interprofessional, multi-institutional educational activity has engaged IP learners and has been rated highly by participants. Next steps include ongoing program evaluation and engaging other IP learners, including physical therapy and occupational therapy students. A similar experience could be adopted elsewhere for interprofessional education.

C95

ACGME Milestone-Specific Evaluation Tool for Geriatrics Fellows

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Background: Our program created and tested a new evaluation tool in 2021-2022 that was based on ACGME's revised milestones. Geriatrics fellows initiate use of this web-based tool after an observed clinical encounter to self-evaluate their performance and to receive faculty evaluation on a variety of domains, including cognitive impairment, delirium, and falls, among other domains. This year, we implemented the tool with our five first-year fellows.

Methods: The tool was introduced to the current fellows during orientation, and expectations for the number of evaluations to be obtained by each fellow on their rotations were shared. For the first several months of the year, standing weekly fellowship meetings provided the opportunity to remind the fellows about the tool and address any questions that arose. Data on utilization of the tool was extracted from Qualtrics, the platform on which the tool is housed.

Results: Thirty-two evaluations have been obtained by the five fellows this year, out of an expected 55 evaluations, for an overall compliance rate of 58%. Compliance varies by setting; for example, compliance is 69% on the consults rotation and 42% in the primary care clinic. The most commonly selected domains for evaluation are polypharmacy, general behaviors for observation, goals of care, and cognitive impairment, while the least selected domains include falls, weight loss, and osteoporosis. The overall mean difference between the fellow self-evaluation score and the faculty evaluation score, both of which are based on the same scale from 1-4 in 0.5 increments, is 0.33.

Conclusions: We have successfully implemented a new bedside evaluation tool in our Geriatrics fellowship. Next steps include improving compliance toward expectations, encouraging fellows to select a more even distribution of domains, using the data to track fellow improvement over the course of the year, and collaborating with other programs to disseminate use of this tool.

C96

Using the ECHO Model to Promote Mindfulness

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Background: During the pandemic the Indiana Geriatrics Education and Training Center (GETC) began identifying learning needs for Area Agencies on Aging care managers (CM) and social workers (SW) and community health workers (CHW) from primary care (PC) centers. Learners expressed challenges with self-care attributed to working virtually with complex patients who had heightened pandemic related needs. Mindfulness has many positive effects: build resiliency, enhance creativity, boost emotional intelligence, and improve brain structure and function to produce improved mood. Self-care, one domain of mindfulness, can be taught and lead to conscious stress reduction even in anxiety-producing situations. GETC partnered with the Indiana Family Social Services Administration Division of Aging and two local health systems to develop and deliver an Extension for Community Health Outcomes (ECHO) series to include a professional development segment on mindfulness.

Methods: An interdisciplinary team of GETC facilitators trained in the ECHO model developed sessions for CM, SW, and CHW. Each ECHO included a "mindful moment (MM)", a brief self-care didactic with resources for further study. MM provided evidence-based approaches to build a toolbox of self-care skills. Mindful topics included, but not limited to, awareness around being consciously present, gratitude, movement, social connectedness, importance of rituals and routines.

Results: During a PC series conducted between September 2020 and September 2022, 10 ECHOs were provided to SW and CHW (average attendance 25). From May 2020-November 2022, 32 ECHOs were provided to CM (average attendance 371). Feedback on MM showed 96% of attendees found the content applicable to their work and improved their understanding of the topic. Themes from qualitative comments on feedback surveys showed mindfulness training was an important and necessary part of attendees' future education. The most helpful MM sessions covered breathing exercises, recommendations on self-care books and podcasts, and helping improve emotions.

Conclusions: MM, as part of ECHOs, were found to include content helpful for self-care during stressful situations. Learners developed individual self-care toolboxes with skills and resources to help better utilize mindfulness in their daily practice.

C97

Patient Priorities Care Train-the-Trainer Tele Education: Preparing Geriatric Educators to Teach Priorities Aligned Decision Making

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Background: What Matters is the pivotal, but poorly understood, "M" of Age-Friendly Care. Patient Priorities Care (PPC) is an evidence-based framework for identifying and aligning care with What Matters. To enhance dissemination and sustainability of PPC, a train-the-trainer series was developed for educators of health professional trainees.

Methods: Interdisciplinary educators were invited via the AGS forum and Teacher's Section. Participants attended seven, one-hour virtual sessions, including didactics describing PPC and reviewing resources. They also participated in interactive case-based huddles. During huddles, participants received coaching on identification of priorities and strategies for optimal care alignment with identified priorities. Participants were surveyed regarding attitude, confidence, and knowledge on implementing and teaching PPC.

Results: 71 individuals inquired about the series and 50 participated. Participants included physicians, nurses, social workers and physical therapists drawn from 46 sites nationally. At the end of the series, >50% of respondents reported feeling moderately confident or confident in training their trainees to use PPC. The percentage of respondents reporting changes resulting from training are shown in the Figure. Changes reported in free text response included "incorporating it into the 4 M's teaching," "incorporating PPC at all levels of care," and "will add to curriculum for next year."

Conclusions: A virtual train-the-trainer series increased participant confidence and motivation in teaching PPC to health professional trainees. This is a feasible and effective method to increase dissemination and sustainability of PPC as a preferred framework for identifying and acting on What Matters.

Practice Change and Motivation

I am motivated to make changes to my practice	87%
I have made changes to my practice	72.7%
I am motivated to teach this content to my trainees	63.6%
I have taught this content to my trainees	54.5%

C98 Encore Presentation

Physician Assistant Geriatric Residency: A Novel Approach to Target the Geriatric Workforce Shortage

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Background:

From 2014 to 2030, the U.S. population >65 years if age will increase from 15% to 21% with a 45% increased demand for geriatricians.[1,2] In 2020, 0.8% of Physician Assistants (PA) worked in geriatrics and graduating PA students reported a significant lack of skills in caring for older adults.[3] In response to these issues, the first geriatric PA residency program in the US was developed in 2012 at the Michael E. DeBakey VAMC.

Methods:

The PA Residency in Geriatric Medicine is focused on the care of complex older adults in a variety of settings. Core rotations include outpatient geriatric primary care, inpatient geriatric complex care consults, geriatric psychiatry, wound care, long-term care, palliative care, home based primary care, and two electives. Clinical experiences are supported by a dedicated educational curriculum including a month-long immersion course; weekly didactics; geriatric grand rounds; journal club/research course; and monthly national VA PA residencies teleconference. In 2020, a post residency survey was implemented to track competencies and perceptions of the program.

Results:

From 2013 to 2021,18 residents graduated with an increase in the training cohort from an initial size of 1 to a current class of 5. 50% of graduates provide care to complex patient populations in specialties including spinal cord injury, geriatrics, and home based care. 9/18 graduates have been employed within the VA. After one year of practice, 100% of graduates stated they would choose the residency again and would recommend it to others. All graduates stated they strongly agree or agree that the program helped them achieve all competencies related to systems based practice, professionalism, interpersonal and communication skills, patient/clinical skills, practice-based learning, and medical knowledge.

Conclusions:

Geriatric PA residency programs provide an opportunity for PAs to gain knowledge and skills to equip them to provide care for complex older adults. Successes of the program include a significant percentage of graduates caring for individuals with a high degree of medical complexity and remaining within the VA healthcare system. Expansion of this model will increase the skills of PAs in caring for older adults and help address the geriatric workforce shortage.

C99

Set Up for Success or Failure? – Exploring the transition experiences of program directors in Geriatric Medicine

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Background: Fellowship program directors (PDs) fulfill a unique role that requires a broad skillset, including expertise in teaching, evaluation, leadership, curriculum development, and administration. While succession planning for the role would seem to be a high priority, there is limited literature describing the current experiences during the transition for PDs in medical subspecialities in general, including Geriatric Medicine. Given this, the authors sought to explore the experiences of current and former PDs in Geriatric Medicine fellowship programs and whether formal training for the role accompanied the transition.

Methods: A convenience sample of attendees at the 2022 American Geriatrics Society Annual Scientific Meeting Fellowship Directors Preconference completed an anonymous, electronic survey regarding their experiences with transitioning to the PD role during a presentation about succession planning. Items surveyed included: participant's role in the fellowship program, tenure of the previous and current PD, nature of the handoff between the incoming and outgoing PD, subjective experience during the handoff, and receipt of formal training.

Results: Among those surveyed (n=74), 51 PDs responded. Many previous PDs occupied the role for over 10 years (40.5%), while the majority of current PDs were new to the role, with 52.7% having a tenure of three years or less. Overall, the majority of current PDs reported a neutral or negative experience as they took on the role of PD (69.4%). Respondents in programs where the outgoing PD had a tenure of <4 years were more likely to report a negative experience (OR of 4.0) during the transition than those from programs with longer standing outgoing PDs. A formal hand-off between the outgoing and incoming PDs and participation in formal training for the role significantly reduced the likelihood of a difficult transition (OR of 0.06 and 0.07, respectively). The top area identified for improving the transition experience was formal mentorship.

Conclusions: Many incoming PDs in Geriatric Medicine experience difficulties as they transition into the role. Formal mentorship, training, and planning for PD transitions represent unmet needs in Geriatric Medicine fellowship programs.

C100

Health Professions Students as Champions for Dementia Caregiver Referrals

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Background:

Dementia caregivers and patients experience high levels of stress over a sustained period, often without supportive resources. Caregiver interventions demonstrate that decreasing caregiver burden is associated with improved care for dementia patients, yet, clinicians underutilize caregiver support resources. Educating clinicians about accessing caregiver referral resources is key, but traditional education has failed to achieve robust results. We suggest a novel approach with health professions students uniquely positioned to champion referrals.

Methods:

An interprofessional team (e.g., caregiver referral specialists, educationalist, physicians, social gerontologist), created a 15-minute video module focused on dementia and caregiver resources aimed at health professions students. The module included information to highlight: 1) identification of dementia; 2) point-of-care dementia and caregiver support tools (www.geriatricfastfacts.com); 3) the process to initiate Direct Connect (DC) referrals to the Alzheimer's Association. Medical, nursing and pharmacy students viewed the module asynchronously or synchronously with faculty available for questions. A brief on-line evaluation asked students to judge module quality on attributes (e.g., relevance to my profession, length), and key competencies (e.g., detecting cognitive loss, educating others about the referral program, likelihood to recommend DC).

Results:

Initial curriculum launch occurred from April-August 2022, with learners (N=51) in medicine (N=33), nursing (N=15), and pharmacy (N=3). 76% of learners (N=39), rated "quality of module" excellent/very good, with "relevance to my profession" rated 4.7 and "clarity of content" rated 4.5 (1=low, 5= high Likert scale). Post-module level of "confidence in detecting cognitive loss" was 3.0 (1=low, 4=high) with 83% of learners reporting very/somewhat likely to "recommend DC".

Conclusions:

This educational intervention aims to improve dementia patient care through increasing clinician DC referrals using students as referral champions. Curriculum pilot data from learners is strongly favorable, leading to expanded curriculum implementation.

C101 Encore Presentation

An Age-Friendly Course Adopting the 4M Geriatric Model in a Primary Care Nurse Practitioner Program

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Background

Training nurse practitioners (NP) to assume an expanded role in management of geriatric patients is key to addressing the care needs of a growing older adult population. To that end, the Yale School of Nursing revised geriatric coursework required of family nurse practitioners (FNP) and adult geriatric nurse practitioners (AGNP) to ensure the curriculum was sufficiently in-depth, engaging, and inclusive.

Methods

Revisions included a new course, "Advanced Primary Care of the Older Adult" which focuses on the role of the nurse practitioner in the assessment, diagnosis, and management of primary geriatric syndromes. The 4M model (Medications, Mentation, Mobility, and what Matters most) provided the framework. Additionally, faculty added expert speakers, interactive dementia animated videos, book and movie discussions and a geriatric telehealth simulation component. Content was guided by training needs data collected from prior NP students.

Students were surveyed pre (academic year 2019-2020) and post (academic years 2020-2021 and 2021-2022) roll-out. Survey topics included confidence in and attitudes towards geriatric care as well as satisfaction with the geriatric curriculum. Outcome measures were derived by taking the mean of survey items relevant to each topic. Prior to averaging, item responses, all on a 5-point Likert scale, were recoded so that a higher response indicated more confidence, a more positive attitude or greater satisfaction, as appropriate. Linear regression models were fit to each outcome to determine the degree and significance of change following new curriculum implementation.

Results

46 students participated in the end of year survey (N=18 pre-rollout, response rate=53%, N=28 post-rollout, response rate=44%). In multivariate regression analyses adjusted for differences in age, gender, race, program (AGNP and FNP) and previous geriatric experience, we found significant improvement in measures of both confidence in providing geriatric care ($B=.60$, $p<.01$) and satisfaction with course content ($B=.86$, $p<.01$). Analysis of qualitative data confirmed student satisfaction with the new course.

Conclusions

Survey results suggest that changes to the curriculum better equip our students to work with older patients. Future work will build on these findings and include expansion and more rigorous evaluation of the program.

C102 Encore Presentation

Creating an After-Visit Summary Module for an Advanced Ambulatory Medicine Clerkship

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Background: Training in writing a satisfactory After-Visit Summary(AVS) is an essential skill for future practitioners. This skill is not systematically taught in clinical settings yet provides a valuable health education tool that can facilitate a patient's understanding of their illness, encourage adherence to their treatment plan and prevent errors.

Methods: Advanced Ambulatory Medicine is a required 4-week Clerkship for 4th-year students at the Geisel School of Medicine. An After Visit Summary (AVS) Online Module was created to augment the students' learning on writing patient care instructions. Students listened to a 25-minute pre-recorded lecture on after-visit summaries. Afterward, they were asked to read a Geriatric Case on Falls (Aquifer Case# 12) and submit an AVS electronically for this case using a worksheet provided. Clerkship Directors reviewed each AVS and provided individualized feedback using a pre-defined rubric. Students were also asked to complete a pre and post-survey related to this activity consisting of 8 questions meant to measure their confidence level using a 5-point Likert scale on important aspects of writing an AVS.

Results: 81 students completed the AVS module. Pre and Post survey data showed improvement in confidence. Overall, the mean score increased from 3.06 to 4.24. In addition, students have been engaged in this project and have generally provided thorough yet concise after-visit summaries.

Conclusion: This AVS module is an effective exercise that improves the skills of learners in writing an AVS. This module demonstrated a significant improvement in students' confidence levels in each of the measured skills. Utilization of a virtual case with skills practice and personalized feedback allowed for the augmentation of didactic teaching that can be completed asynchronously at a student's own pace during this clerkship.

C103

Geriatric Anorexia: Understanding Clinician Practice Patterns and Educational Gaps in Identification and Management

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Background: Geriatric anorexia is a serious and commonly encountered condition in practice, yet it receives little attention. Information on the existing gaps in knowledge among HCPs regarding geriatric anorexia is limited. This study aimed to conduct a thorough educational needs assessment in order to qualitatively and quantitatively measure existing gaps in clinician knowledge and confidence in regard to the diagnosis and management of geriatric anorexia.

Methods: This was a multiple methodology study consisting of two virtual focus group discussions lead by faculty moderator and a CME accredited assessment instrument of 28 multiple choice, knowledge- and case-based questions that allowed participants to assess their knowledge, attitudes, and confidence with regard to geriatric anorexia. The survey was available online to US clinicians without monetary compensation or charge. Respondent confidentiality was maintained, and responses were de-identified and aggregated prior to analyses. Data collection occurred from April 19, 2022 to June 14, 2022. Question level data was organized into three clinical themes.

Results: In total, 132 PCPs, 1,698 nurses and APNs, and 358 other physicians participated in the assessment. Clinicians demonstrated gaps in the following areas (See Table 1).

Additionally, only 12% of clinicians reported being mostly to very confident in their ability to identify patients with geriatric anorexia.

In alignment with the above results, focus group participants highlighted the lack of confidence in identifying and managing geriatric anorexia, lack of familiarity with assessment tools, and the need for strategies in managing these patients.

Conclusion: This educational research on assessment of physicians' clinical knowledge and confidence yielded important initial insights into clinical gaps among US clinicians related to diagnosis and management of patients with geriatric anorexia. Medical education activities focused on decreasing these clinical practice gaps are warranted.

Correct answer (%) by clinical theme

Clinical Theme	Primary Care Physicians (n=132)	Nurses/Advanced Practice Nurses (n=1698)	Other Physicians (n=358)	Total Clinicians (n=2188)
Prevalence and Risk Factors for Geriatric Anorexia	35%	34%	34%	34%
Recognition and Assessment of Geriatric Anorexia	46%	47%	50%	48%
Clinical Management of Geriatric Anorexia	47%	46%	46%	46%

Percentage of questions answered correctly within each clinical theme across key learner groups

C104

Snapshot Multimedia Learning: An Effective Tool for Teaching and Learning Geriatrics

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Introduction: Geriatric medicine topics, such as Care Transitions and Geriatric Syndromes, are complex. Teaching these topics in a traditional lecture format or workshop is time-consuming, while the time allotted to teach medical students and residents in Geriatric Medicine rotations is shorter every year. Both trainees and educators would benefit from "snapshot" teaching materials that communicate key concepts in 5-10 minutes of self- or guided learning. We are in the process of creating a series of interactive case-based educational resources in Geriatrics for medical students, residents, and other healthcare trainees. We are now presenting the first case of the series and the preliminary outcomes.

Methods: A multidisciplinary team at the Miami VA Geriatric Research Educational and Clinical Center, designed an interactive 7-minute module to be used as an educational resource on the topic of Care Transitions. This module was viewed and evaluated by 30 first- and second-year internal medicine residents and by 12 third- and fourth-year medical students. The trainees provided a curriculum evaluation with questions on content and multimedia format and learning objectives, using a 5-point Likert scale.

Results: 42 medical trainees completed the module in the fall of 2022. 100% completed the evaluation: 95.2% (N=40) agreed the educational activity was useful for quick and effective teaching of key points of a complex topic; 83.33% (N=35) of the participants stated that they preferred snapshot learning to the traditional lecture format. Overall ratings of the module were positive: 23.80% (N=10) responded "Agree" and 76.19% (N=32) "Strongly Agree" with the value of the educational content (mean of 4.76 out of 5, with a standard deviation of 0.42).

Conclusion: This educational module was highly rated and positively critiqued by learners. Since this module was a success, our team is working on developing similar modules for other topics, starting with Falls and Dementia. The value of the series is that each module can be viewed flexibly by trainees during rotation downtimes, such as between clinic patients or hospital rounds, thus reducing the need for formal didactics. The modules will be made available for other institutions to download and incorporate into their curriculum.

C105

A Nationwide Point-of-care Ultrasound Curriculum for Geriatric Fellows

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BACKGROUND:

Prior research demonstrated the feasibility of incorporating a city-wide geriatric-oriented point-of-care ultrasound(POCUS) curriculum into 3 existing geriatric fellowships. The current pilot study assessed the feasibility of expanding this POCUS curriculum nationally across bi-coastal geriatric fellowships.

METHODS:

In July '22, we recruited 13 fellows from 4 fellowship programs. The fellows completed a online pre-curriculum survey about prior POCUS experience, interest, confidence levels and attitudes. Responses were in Likert scale format(0=least, 10=most). The fellows also completed a online pre-test to assess baseline POCUS knowledge. The curriculum began with a 4-hour didactic session, consisting of lectures on knobology/physics, echo, lung, bladder, deep venous thrombosis(DVT) and jugular venous pulse(JVP) along with scanning time on standardized patients. 8 fellows attended in-person and 5 fellows participated virtually from their home institution. Afterwards, the fellows completed a online post-test and post-survey.

RESULTS:

In the pre-curriculum survey, 12 fellows had some POCUS training and 1 fellow had none. All fellows expressed interest in learning POCUS. 12 of 13 fellows agreed that POCUS was an important adjunct to the physical exam. 7 of 13 fellows agreed that POCUS utility would be limited by time constraints. 10 of 13 fellows agreed they would use POCUS in their clinical practice and that a POCUS curriculum should be formally incorporated into geriatric fellowship. The average pre and post-test scores were 51% and 81% respectively with a Δ +30%(Range: 0-60%). After the didactic session, all fellows reported, on average, an overall 2.3 fold increase(Range: 1.2-3.5) in confidence levels in image acquisition and 2.8 fold increase(Range: 1.7-4.4) in image interpretation. The fellows reported greatest confidence in the JVP and DVT and least in cardiac.

CONCLUSION:

Our pilot study showed that a nationwide geriatric POCUS curriculum was feasible and valued by all fellows with all fellows demonstrating improved POCUS knowledge and confidence.

C106

Interprofessional Assessment of Older Adults in a Skilled Nursing Facility

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Background: Learners are rarely exposed to interprofessional clinical care in skilled nursing facilities (SNFs). The Age-Friendly Health Systems 4Ms (What Matters, Mobility, Medication, Mentation) provides a framework for integrating disciplines to promote high quality care. A newly designed training program introduced the 4Ms to medical and nursing students and certified nursing assistants (CNAs), as an interprofessional assessment tool in the SNF setting.

Methods: Monthly two-hour trainings were held at a 110-bed community SNF beginning in September 2022. Participants included medical students on a Geriatrics elective, volunteer nursing students and CNAs employed at the SNF. Participants completed a pretest

and received didactics from Geriatrics Faculty. Next, in teams which included each discipline, participants sequentially interviewed two SNF patients, using an interview guide with 4M prompts appropriate to their profession. Participants shared reflections in a short debriefing session. Faculty provided feedback and post-session surveys were collected. Patients were interviewed about their experiences.

Results: To date, a total of 10 participants (3 CNAs, 3 medical students, and 4 nursing students), ages 20-59, participated in two trainings. Six had prior training in primary care or SNF settings and 8 were from underrepresented populations. While only 4/7 were able to correctly identify the 4Ms on the pretest, all (100%) correctly identified them on the post-test. The majority (7/10) reported it was "very useful" to have multidisciplinary learning experiences and that working in interprofessional teams would significantly improve job satisfaction and quality of care. Feedback from the participants highlighted the positive impact of shared communication and using patients' values to develop plans of care. Challenges included group collaboration and communication with patients with functional and cognitive impairment. The four patients interviewed expressed satisfaction with the assessment.

Conclusions: This interprofessional experience introduced learners to the 4Ms of geriatric care and fostered collaboration to evaluate complex older adults in the SNF setting. Participants and patients expressed high levels of satisfaction with the training. Sessions will continue with a goal of adding learners from different health professions.

C107

Assessing the Impact of Quality Improvement Curriculums on Physician Knowledge

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Background: Quality improvement (QI) curriculums are an integral part of physician training, as it provides physicians with the knowledge and skills needed to apply QI practices in real-life settings. We developed a project-based QI curriculum for Geriatric and Palliative Medicine fellows at an urban, academic institution. As part of this curriculum, first-year fellows received coaching and guidance from second-year fellows acting as junior coaches, and attending physicians acting as senior coaches. Individual QI teams consisting of first-year fellows, junior and senior coaches, were divided based on interests in different QI projects.

Methods: Using the Quality Improvement Knowledge Application Tool (QIKAT), we assessed the knowledge of first-year fellows, second-year fellows, and attending physicians before and after completing the QI curriculum using paired t-test analyses. QIKAT is an assessment comprised of three cases in which QI aims, quality measures, and recommended changes are asked to be identified. The QIKAT score was separated based on the Aim, Measure, and Change components, and amounted to a total score of 27 possible points. Data was collected from 2020-2022.

Results: Of the 33 first-year fellows, 54% did not receive formal QI training prior to undertaking the fellowship QI curriculum; however, 67% of fellows participated in a continuous improvement effort beforehand. After completion of the curriculum, first-year fellow aim, change, and total QIKAT scores were found to be significantly higher. Senior coaches' measure, change, and total QIKAT scores were significantly higher; however, second-year fellow pre- and post-scores were not statistically significant.

Conclusion: Exposure to QI education provides physicians the knowledge and tools to improve the healthcare system. Our findings suggest our model for QI education improves overall QI knowledge for first-year fellows and attending physicians. Ongoing efforts to improve QI knowledge for second-year fellows are needed.

	Pre-AIM Score (_/9)	Post-Aim Score (_/9)	p-value	Pre-Measure Score (_/9)	Post-Measure Score (_/9)	p-value	Pre-Change Score (_/9)	Post-Change Score (_/9)	p-value	Pre-Total QIKAT Score (_/27)	Post-Total QIKAT Score (_/27)	p-value
1st Year Fellow Average Score (SD)	4.58 (2.02)	6.06 (2.78)	0.01	7.67 (1.83)	8.15 (1.77)	0.30	6.82 (2.46)	7.79 (2.13)	0.05	19.06 (5.30)	22.00 (5.40)	0.03
2nd Year Fellow Average Score (SD)	8.17 (1.33)	7.00 (1.79)	0.20	8.33 (1.03)	8.67 (0.82)	0.36	8.33 (0.52)	8.17 (1.17)	0.74	24.83 (1.17)	23.80 (2.64)	0.36
Senior Coach Average Score (SD)	5.44 (2.88)	6.11 (2.03)	0.63	6.22 (3.03)	8.78 (0.67)	0.05	5.44 (2.55)	8.11 (1.62)	0.03	17.11 (7.37)	23.00 (3.00)	0.09

C108

Elder Abuse Curriculum for Medical Residents and Geriatric Fellows

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Background: Elder abuse (EA) is a global public health problem affecting millions of older adults (OA). EA is seldom reported and detected, exposing victims to unremedied harms. Physicians are well positioned to identify and respond to EA yet are rarely trained in the signs and report less than 2% of cases nationally, inhibiting the timely delivery of medical care and social support to OA victims. The purpose of this study was to develop and test an EA curriculum for family and internal medicine residency and geriatric fellowship programs.

Methods: Four universities, all Geriatric Workforce Enhancement Program (GWEP) Grantees, collaborated to develop the curriculum following a needs-assessment and grounded in clinical/teaching expertise. Content was organized in 5 interactive self-study online modules, a faculty-facilitated skill development module, and practice board questions that promote integration of learning. The curriculum was tested with family and internal medicine residents and geriatric fellows using a retrospective pre-post survey to assess changes in learner confidence on a 5-point Likert scale with 1 being least to 5 being very confident.

Results: To date, seven individuals have completed the curriculum and assessment (3 residents, 1 faculty, and 3 geriatric fellows). Confidence in understanding EA, discussing, screening, identifying signs and symptoms, reporting, applying interventions, working with diverse and cognitive impaired populations, responding to self-neglect, and implementing person-centered/trauma informed care with possible victims of EA all increased. While sample size prohibited tests for significance, we observed a greater than 1-point change, on average, for all survey questions suggesting that the curriculum influenced learner confidence. The greatest change in learner confidence was in screening and reporting.

Conclusions: Initial data suggest that the curriculum can prepare early career physicians to identify and respond to EA in their clinical practice resulting in identification of victims who would otherwise remain hidden. Results forecast curriculum efficacy and support for program integration. In addition, continued evaluation of the curriculum may indicate its potential to improve the delivery of literate geriatric primary care, foster population health, and advance social justice for OA victims.

C109

Transitions in Care Practicum: A Workshop for Patient Care Transitions

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Background

Medical errors are a leading cause of morbidity and mortality in the United States. Ineffective handoffs and transitions of care are significant contributors to medical error. Geriatric patients are disproportionately affected due to increased complexity. To increase education and skill development surrounding transitions of care education, third year medical students entering sub-internships participated in a novel full-day interactive workshop.

Methods

The workshop was presented as a combination of asynchronous online material with a subsequent in-person component. Asynchronous didactics covered utilization of the IPASS framework for inpatient handoffs and selection of appropriate discharge disposition. Students additionally watched a video about composing a discharge summary and then wrote a discharge summary utilizing provided simulated patient cases. For the in-person portion of the workshop, students were divided into groups with assigned faculty facilitators. Students first practiced handoffs using the IPASS format. They then used another group's discharge summary to guide a simulated after-discharge visit as either a primary care provider or as a provider admitting a patient to subacute rehabilitation. Students observed gaps in discharge communication first-hand. A post-workshop survey was conducted to assess student comfort with transitions of care and elicit feedback.

Results

154 students completed the workshop with 63 responding to a post-practicum survey. Survey responses were graded on a five-point Likert scale with 1 indicating "least comfortable" and 5 indicating "most comfortable." Respondents indicated improved comfort with identifying appropriate discharge disposition (mean 3.89 vs 3.29, N=63, P<.001), writing a discharge summary (mean 3.94 vs 3.19, N=58, P<.001), and completing safe handoffs in the hospital (mean 3.7 vs 2.84, N=54, P<.001) compared to before the practicum. 38 out of 54 students (70%) indicated prior training in patient handoffs.

Conclusions

A workshop focused on transitions of care was effective in increasing medical students' comfort with care transitions in and out of the hospital. Feedback suggested including training earlier during the course of medical education. Education and training in care transitions may help improve care of older adults by reducing medical errors which commonly occur during transitions of care.

C110

Using Electronic Knowledge Based Resources to Teach Medical Trainees About Caring for Older Adults

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BACKGROUND

In the era of modern medical education, there is an increased use of advanced technologies in both the classroom and at the bedside with the goal of ultimately optimizing patient outcomes. Trainees are increasingly entering medical school with a high level of technological literacy and an expectation of curricular variety. Utilization of electronic knowledge resources (EKRs) can enhance traditional geriatric education programs by maximizing learner engagement, accommodating diverse learning styles/needs, and increasing student exposure to varied patient populations and clinical concerns. We worked to identify a comprehensive list of frequently utilized EKRs with an eye to bolstering geriatric teaching across all levels of training.

METHODS: Three geriatric educators came to consensus about the most common EKRs used for teaching geriatrics to all levels of medical trainees and designed an anonymous, 32 yes/no item red cap survey with optional write in section, to ascertain which EKRs other geriatric educators utilized. The survey was disseminated to 231 educators (ADGAP Board, AGS Education Committee and Teachers Section Members) from 6/6/22-7/22/22. Data was analyzed using simple statistics.

RESULTS:

The response rate was 29% (66/231). Respondents were 76% (50/66) female and had an average of 11 years of experience in teaching. 76% (50/66) taught at an academic center.

CONCLUSION:

Teaching while using EKRs is currently fundamental to enhance medical education. This study provides educators with "high yield" resources that may assist in the augmentation and diversification of current teaching approaches and outcomes.

RESULTS

Electronic Knowledge Resources	Percentage of Respondents Use For Student Learner	Percentage of Respondents Use For Resident Learner	Percentage of Respondents Use For Fellow Learner
Eprognosis	45% (30/66)	68% (45/66)	59% (39/66)
POGOe	30% (20/66)	42% (28/66)	0% (0/66)
Alzheimer's Association	24% (16/66)	42% (28/66)	46% (31/66)
STEADI Toolkit	22% (15/66)	36% (24/66)	39% (26/66)
Geriatrics at Your Fingertips	22% (15/66)	34% 23/66)	39% (26/66)
Aquifer Geriatrics	21% (14/66)	0% (0/66)	0% (0/66)
Geriatric Review Syllabus	0% (0/66)	0% (0/66)	57% (38/66)
Geriatrics Care Online	0% (0/66)	0% (0/66)	36% (24/66)
Prepare for your care	0% (0/66)	31% (21/66)	0%(0/66)

C111

Nursing Home Staff Perspectives on Two Approaches to Dementia Care Training

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Background: Centers for Medicare and Medicaid Services specifies minimum-levels of dementia-related training that nursing home staff must complete annually. Yet, little is known about best approaches for training staff to care for this patient population. Thus, we examined staff perspectives of training components and application within the context of a pragmatic clinical trial.

Methods: The parent study was a pragmatic clinical trial, which examined multidisciplinary (MD) and transdisciplinary (TD) approaches to staff dementia training. The MD approach leverages discipline specific dementia knowledge to address resident issues as they arise and provides training to staff caring for that resident, as needed. The TD approach trains all staff, regardless of job role, with a common language and understanding of the disease. Embedded within the parent study, this multiple case study explored staff perspectives on dementia training and application to practice. Each case (n=23) represented one nursing home and included an average of 16 staff per case. A total of 327 interviews were conducted. Interviews were recorded and transcribed verbatim. A rapid qualitative analysis approach was used.

Results: Regardless of training approach, staff most frequently described training that addressed managing challenging behaviors, communicating with patients, and strategies used for patient care. However, the two groups differed in their application of the training. For example, when managing challenging behaviors, the TD group described redirecting upset patients with food/drinks, whereas the MD group used redirection by providing preferred activities (e.g., based on patients' history). For communicating with patients, the TD and MD

groups were similar in their training application by recognizing the importance of a calm environment and its impact on patients.

Conclusions: Our findings indicate that even though there are similar training concepts to both the MD and TD approach, the application of this training may be different. There is a need to better understand these differences and identify best practices to applying dementia training to deliver quality care.

C112

Distressing Symptoms After Major Surgery Among Community-Living Older Persons

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Background: Relatively little is known about how distressing symptoms change among older persons after major surgery. Our study had two objectives: first, to define changes in distressing symptoms after major surgery in older persons. Second, to determine whether these changes differ according to timing of surgery (elective vs non-elective), sex, multimorbidity, and socioeconomic disadvantage.

Methods: Prospective cohort study of 754 community-living persons aged ≥70 years. Analytic sample included 368 admissions for major surgery from 274 participants who were discharged from the hospital. The occurrence of 15 distressing symptoms was ascertained in the month before and for the 6 months after major surgery. Multimorbidity was defined as >2 chronic conditions. Socioeconomic disadvantage was assessed at the individual level (Medicaid eligibility) and neighborhood level (area deprivation index score >80th state percentile).

Results: The mean age (standard deviation) was 83.3 (5.7) years; 246 (66.9%) were women, and 330 (89.7%), 34 (9.4%), 2 (0.5%), and 2 (0.5%) self-identified as White, Black, Hispanic, and Other. For all major surgeries, the occurrence of distressing symptoms increased from nearly 20% in the month before hospital admission to nearly 90% in the month after discharge before approaching preadmission value at month 3 and beyond; similar pattern was seen for mean number of distressing symptoms, from 0.7 pre-hospital to about 3.5 in the month after discharge to preadmission value by month 3. In multivariable analyses, the rate ratios, denoting proportional increases in the 6 months after major surgery relative to pre-surgery values, were 2.56 (95% CI, 1.91-3.44) and 2.90 (2.01-4.18) for the occurrence and number of distressing symptoms. The corresponding values were 2.12 (1.53-2.92) and 2.20 (1.48-3.29) for elective surgery, and 3.54 (2.06-6.08) and 4.51 (2.32-8.76) for non-elective surgery; P-values for interaction: 0.009 and 0.030. No other significant subgroup differences were observed.

Conclusions: Among community-living older persons, the burden of distressing symptoms increases substantially after major surgery, especially in those having non-elective operations. Reducing symptom burden after major surgery may improve quality of life and enhance functional outcomes.

C113

Trends by Race/Ethnicity in Gabapentinoid Prescribing After Surgery in Older Adults

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Background

Differences in opioid prescribing by race/ethnicity have been described across many healthcare settings. As surgeons increase use of opioid sparing medications, it is unclear if disparities persist in non-opioid pain medication prescribing, such as gabapentinoids (GB).

Methods

We conducted a retrospective cohort study using a 20% Medicare sample, merging data from Medicare Carrier, MedPAR and Outpatient Files with Part D for 2013-18. We included patients ≥66 years without prior GB use who underwent one of 14 common procedures. Fills for GB 7-days before or after surgery were considered a discharge prescription. The primary outcome was the proportion of GB discharge prescribing among racial/ethnic groups.

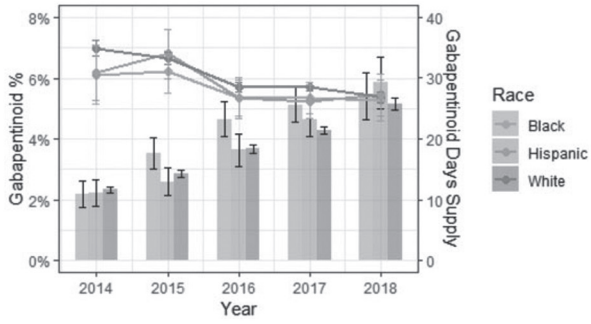
Results

Among 494,922 patients, GB prescribing increased between 2013 and 2018 from 2.3 to 5.1% in whites, 2.2 to 5.4% in blacks and 2.2 to 5.9% in Hispanics (Fig1). The difference in GB prescribing by race was significant in 2015, 2017 and 2018. Opioid prescribing also increased, with higher prescribing to white patients. The proportion of opioid prescribing to white patients increased from 56 to 60% from 2014 to 2018, compared to black patients (52 to 54%) and Hispanic patients who had no change at 56%. This difference between groups was statistically significant.

Conclusions

We found prescribing variation of GBs among racial/ethnic groups; however, the absolute variation was quite small and may not be clinically significant. Importantly, we found that despite national attention to prescribing disparities, variation continues to persist in opioid prescribing. The limited variation of GB prescribing may be because it does not carry the same stigma of abuse as opioids.

Figure 1: Postoperative Gabapentinoid Prescribing by Race/Ethnicity



C114

Traumatic Brain Injury Outcomes in Elderly and Younger Adults

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Background: Traumatic brain injury (TBI) affects all ages, with high morbidity and mortality. This study describes the demographics and outcomes with TBI in a rural level 1 trauma center in the Midwest U.S.

Methods: We performed a retrospective review of all adults admitted with TBI to a Level 1 trauma center between February 2016-June 2021. Demographics, injury, and outcome data were collected. Patients were grouped by age (elderly patients defined as age 65 and older). Mild TBI was defined by admission Glasgow coma scale (GCS) of 13-15 (minimal or no neurologic symptoms), moderate/severe TBI was defined by GCS of 12 or less. Chi-square tests were used to compare categorical variables and Mann-Whitney U tests to compare continuous variables.

Results: 1,708 patients were admitted with TBI and had documented admission GCS. Demographics and outcomes by age group and TBI severity are listed in Table 1. Median age overall was 60 (range 18-102), 63% of the injuries occurred in rural locations, and 42% of TBIs occurred in elderly patients. Falls were the most common

cause of injury overall (56%) and were significantly more prevalent in the elderly. While the risk of in-hospital death was significantly higher in the elderly compared to younger adults in both severity groups, this risk difference was much greater in the mild TBI group compared to moderate/severe TBI (Odds ratio (OR) =10.7 (95% Confidence Interval (CI) 2.5-46.7) and OR 1.9 (95% CI 1.1-3.3) respectively. Elderly patients with mild TBI were significantly less likely to discharge compared to younger patients, whereas moderate/severe TBI in both age groups was associated with few discharges to home.

Conclusions: TBI was associated with significant mortality risk across all ages, however, elderly patients had a much higher risk of death after mild TBI compared to younger patients.

	Mild TBI (GCS 13-15) N = 1472			Moderate/Severe TBI (GCS ≤ 12) N = 236		
	< 65 years old N = 834	65 and older N = 638	P value	< 65 years old N = 147	65 and older N = 52	P value
Sex (Male) *n (%)*	581 (70)	360 (560)	<0.001	108 (74)	34 (65)	0.42
Age *Median (Range)*	46 (18-64)	78 (65-102)	N/A	47 (31-57)	78 (73-86)	
Race			<0.001			0.04
White *n (%)*	713 (86)	620 (97)		125 (85)	87 (98)	
Native American/Alaska Native *n (%)*	74 (9)	13 (2)		13 (9)	1 (1)	
Black *n (%)*	25 (3)	1 (0.2)		1 (1)	0 (0)	
Asian *n (%)*	2 (0.2)	1 (0.2)		0 (0)	0 (0)	
Hispanic *n (%)*	6 (0.7)	0 (0)		0 (0)	0 (0)	
No answer *n (%)*	14 (2)	3 (0.5)		8 (5)	1 (1)	
Injury Due to Fall *n (%)*	302 (36)	531 (83)	<0.001	50 (34)	72 (81)	<0.001
Rural Injury Location *n (%)*	482 (56)	415 (65)	0.005	105 (71)	64 (72)	0.94
Alcohol involved in injury *n (%)*	383 (46)	72 (11)	<0.001	76 (52)	11 (12)	<0.001
Injury Severity Score *median (IQR)*	10 (5-17)	14 (9-17)	<0.001	25 (17-29)	25 (17-26)	0.56
Length of Hospital Stay *median days (IQR)*	2 (1-5)	4 (2-7)	<0.001	10 (4-20)	7 (2-14)	0.005
ICU admission *n (%)*	265 (32)	255 (40)	0.001	140 (95)	81 (91)	0.20
ICU Length of Stay *median days (IQR)*	1 (1-3)	2 (1-3)	0.02	6 (2.5-11)	3 (1-7)	<0.001
Discharged Home *n (%)*	684 (82)	415 (65)	<0.001	27 (18)	14 (16)	0.60
In hospital mortality rate *n (%)*	2 (0.2)	16 (2.5)	<0.001	45 (31)	41 (46)	0.02
Transition to Comfort Care *n (%)*	0 (0)	12 (1.9)	<0.001	28 (19)	34 (38)	0.001

Abbreviations: TBI: Traumatic Brain Injury; GCS: Glasgow Coma Scale; n = number; IQR: Interquartile Range, ICU: Intensive Care Unit

C115

Hospitalizations and 30-day Returns to Hospital in Centenarians at a Community Teaching Hospital

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Introduction: Centenarians are one of the most rapidly growing segments of society in the U.S. and may present clinically different from younger groups. Only few studies have focused on hospitalizations in centenarians. The purpose of this study is to analyze admission diagnoses, coexisting chronic illnesses, hospital length of stay, and rate of 30-day return to the hospital in centenarians compared to younger old patients.

Methods: This is a secondary analysis of an existing quality improvement database for a geriatric care transitions program. Cohort included patients 75 years and older admitted to non-ICU beds over 1 year period in a 400-bed community teaching hospital. Patients who expired or discharged to hospice were excluded. Patients were divided in 2 groups: 75-99 years old and 99+. Returns to the hospital included visits to the emergency department without admission and any admission within 30 days of discharge. Cohorts were compared using Chi-square analyses.

Results: There were 497 centenarians and 59,469 younger old patients out of 59,966 eligible patients. The top primary diagnoses for hospital admissions for centenarians were acute infection (22.7%) and trauma (20.3%). Compared with younger old people, the primary diagnoses that were significantly higher in centenarians included acute infection (22.7% vs 13.3%, p-value=<.001), trauma (20.3% vs 16.7%, p-value=0.036), and renal-electrolyte disorders (5.4% vs 3.6%, p-value=0.034). Certain comorbidities were less frequent in centenarians: CKD 3 or higher (4.2% vs 7.1%, p-value =0.013), DM without chronic organ damage (4.8% vs 11.2%, p-value=<0.001), DM with chronic organ damage (1.6% vs 5.6%, p-value=<0.001), and rheumatic disease (0.2% vs 1.7%, p-value=0.009). The only comorbidity higher in centenarians was CHF (21.3% vs 15.1%, p-value=<0.001). No difference noted between age groups in hospital LOS (2.38 days vs 2.37 days; p=0.958) and 30-day return to hospital rates (20% vs 21%; p=0.324).

Conclusion: Centenarians have lower prevalence of selected comorbidities and more likely to be admitted for infectious diseases than the younger old group. There was no significant difference in LOS or 30-day returns between age groups. Further studies needed in more diverse populations of centenarians as their number and rate of hospitalization continue to rise.

C116

Need for Assessment of Older Adult Caregivers; The Silent Secondary Trauma Patient

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Background: One in six Americans is the primary caregiver of an older adult. Acute needs, such as surgery, falls, and broken bones, account for 27% of their caregiving needs. This unpaid, devastating burden has led to caregivers reporting difficulty caring for their health, physical strain, and emotional stress. The overall health-related quality of life (HRQoL) among caregivers of older adult trauma patients affects millions yearly and remains underappreciated in our society. **Methods:** We performed a systematic literature review of HRQoL measures used to study caregivers for older adults with injuries. A librarian developed and conducted the search using the MEDLINE, EMBASE, and CINAHL Complete databases. It included a mix of keywords and subject headings related to older adults, caregivers, trauma, and QoL. The search was initially conducted on 9/11/2019 and updated at two intervals, with the most recent search on 8/12/22. After the removal of duplicates, 8,708 articles underwent dual, independent screening. Utilizing the Cosmin guidelines, we identified 1,699 studies that were reviewed for construct validity for caregiver-centered domains. **Results:** 75 relevant studies were included in full-text review with 100 unique HRQoL measures. The majority (83%) evaluated had six or fewer HRQoL content domains. Social functioning (79%), mental health (75%), physical role (57%), physical functioning (60%), self-control (51%), and vitality (49%) were among the HRQoL topics most often evaluated measures. Pain (19%), anxiety (34%), depression (37%), general health (39%), and life satisfaction (41%) were least often addressed by evaluated measures. Ten unique HRQoL measures were used in studies of caregivers of older adult trauma patients; however, none of these were validated. **Conclusion:** No measures are currently validated for the caregivers of older adult trauma patients. Current caregiver outcome measures emphasize social function, mental health, and physician function while neglecting to address pain, anxiety, and depression. Studies to explore the specific domains important to caregivers of older adult trauma patients are needed, along with validated HRQoL measures to assess interventions critical to this unique population.

C117

Tolerability of Heart Failure Guideline-Directed Pharmacotherapy with Sacubitril/Valsartan or Empagliflozin in Older Adults

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Background: Evidence shows that guideline-directed medication therapy (GDMT), including the newer agents (sacubitril/valsartan [sac/val] and sodium glucose transport inhibitors [SGLT2i]), prevents hospitalizations and decreases cardiovascular mortality in patients with heart failure. Little is known about risks of harm with sac/val and SGLT2i in older adults to help inform risk versus benefit care decisions.

Methods: This retrospective cohort study of national Veterans Affairs (VA) data identified patients with heart failure, irrespective of ejection fraction, who were ever prescribed sac/val, empagliflozin (SGLT2i), or both. Patients were stratified by age group, and

frequency of pre-specified adverse events were examined through 90 days post-index prescription date. In patients prescribed sac/val we examined percentages with hypotension, worsening renal function, and hyperkalemia; in patients prescribed empagliflozin we examined percentages with hypotension, worsening renal function, diabetic ketoacidosis (DKA), and urinary tract infections (UTIs).

Results: This cohort included 37,490 patients prescribed sac/val and 58,452 prescribed empagliflozin. Approximately 97.6% patients were male, 72.7% were ≥ 65 years old, and 27.1% self-identified as a historically excluded and minoritized racial or ethnic group. See table for primary outcome results.

Conclusions: In older Veterans with heart failure prescribed empagliflozin, incidence of hypotension, worsened renal function and UTI appeared highest in the oldest age groups, whereas in those prescribed sac/val, incidence of adverse events did not appear increased with age. Further studies are needed to examine whether patient characteristics, medication dose, or concomitant medications influence these findings.

Percentage of individuals with adverse events within 90-days post-index prescription date by age in years

Medication	Adverse Event, %	< 65	65-74	75-79	80-84	85-89	≥ 90
Sacubitril/ Valsartan	Hypotension	7.3	7.5	6.7	6.3	5.9	5.5
	Worsening Renal Function	8.2	10.4	11.7	10.6	10.2	9.9
	Hyperkalemia	2.4	2.7	3.0	2.6	2.0	2.8
Empagliflozin	Hypotension	3.9	3.4	3.6	3.4	3.9	6.2
	Worsening Renal Function	8.6	11.1	14.8	13.6	16.5	15.8
	DKA	0.3	0.2	0.2	0.1	0.0	0.3
	UTI	1.0	1.5	1.9	2.6	3.6	5.3

C118

Distressing Symptoms and Disability after Critical Illness among Older Adults

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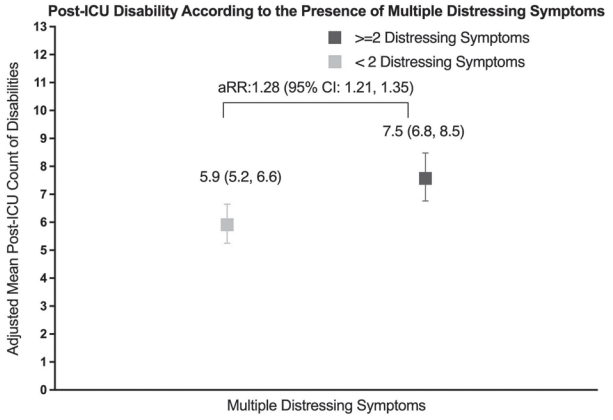
Background: Older adults with critical illness experience an increase in distressing symptoms and disability. Whether distressing symptoms are associated with disability following a critical illness is not known.

Methods: From an ongoing cohort study of 754 community-dwelling persons≥70 years, 233 hospitalizations with a stay in the intensive care unit (ICU) were identified from 193 participants (1998-2018). During monthly interviews, we ascertained the occurrence of 15 distressing symptoms, based on restricted activity (defined as staying in bed for ≥1/2 day or cutting down on usual activities because of the symptom in the past month), and disability in 13 basic, instrumental, and mobility activities at the present time. We constructed Poisson regression models to evaluate the association between distressing symptoms and subsequent disability for a 6-month period after hospitalization, adjusting for demographics, frailty, cognitive impairment, pre-hospitalization disability, mechanical ventilation, and ICU length of stay.

Results: The mean(SD) age was 83.7(5.7) years. Each unit increase in the number of distressing symptoms was associated with a 5% increase in disability [adjusted rate ratio (RR):1.05;95% CI:1.04,1.06]. Multiple symptoms (≥2) were significantly associated with greater disability (adjusted RR:1.28; 95% CI:1.21,1.35) (Figure).

Conclusion: Distressing symptoms are independently associated with disability following critical illness and addressing them might enhance functional recovery.



aRR= adjusted rate ratio. The adjusted mean post-ICU count of disabilities are marginal means derived from the multivariable Poisson regression model for post-ICU disability with the exposure as multiple distressing symptoms and covariates described in methods. The 15 distressing symptoms included shortness of breath; fatigue; dizziness; arm or leg weakness; swelling of ankles/ feet; musculoskeletal pain; chest pain; nausea, vomiting, or diarrhea; difficulty sleeping; urinary problems; memory or thinking problems; cold or flu symptoms; poor vision; depression; and anxiety.

C119

FRAILTY AND UPTAKE OF ANGIOTENSIN RECEPTOR NEPRILYSIN INHIBITOR FOR HEART FAILURE WITH REDUCED EJECTION FRACTION

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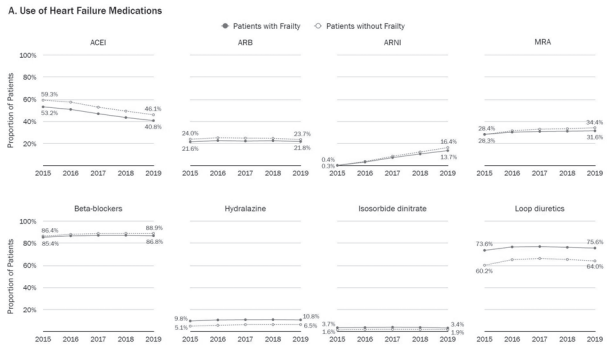
Background: Frail older adults less often receive evidence-based treatments. We examined trends in use of angiotensin receptor neprilysin inhibitor (ARNI) and other guideline-directed medical therapy (GDMT) in older adults with heart failure reduced ejection fraction (HFrEF).

Methods: Using 2015-2019 Medicare data, we estimated the proportion of HFrEF patients initiated on ARNI and receiving GDMT each year by frailty status. Logistic regression was used to identify patient characteristics associated with ARNI initiation. GDMT includes 1) ACEi/ARB/ARNI; 2) beta-blockers; 3) mineralocorticoid receptor antagonist (MRA). Frailty was defined as a claims-based index ≥ 0.2.

Results: We found 147,506-180,386 beneficiaries with HFrEF annually (mean age 77 years, 26-27% women, 54-56% atrial fibrillation, 21% history of myocardial infarction, 57-64% diabetes, 55-69% chronic kidney disease, 15-17% dementia, 43-49% frail). From 2015 to 2019, frail patients had slower uptake of ARNI (non-frail: 0.4% to 16.4%; frail: 0.3% to 13.7%) and use of all 3 GDMT classes (non-frail: 22.0% to 27.0%; frail: 19.6% to 21.8%). Factors associated with lower ARNI initiation include age ≥85 years (OR [95% CI], 0.89 [0.80-0.99]), female sex (0.79 [0.72-0.85]), dementia (0.88 [0.81-0.96]), and frailty (0.87 [0.81-0.94]).

Conclusion: The proportion of frail older adults who receive all 3 classes of GDMT improved minimally. Effort to translate research evidence to clinical practice is needed.



C120

Prospective Monitoring of the Effectiveness and Safety of Angiotensin Receptor-Neprilysin Inhibitor Among Older Adults with Heart Failure with Reduced Ejection Fraction and Frailty

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Background: Evaluation of the effectiveness and safety of sacubitril/valsartan, an angiotensin receptor-neprilysin inhibitor (ARNI), in routine care populations is important, particularly for older adults with heart failure (HF) and frailty.

Methods: We conducted 1-to-1 propensity score matched cohort studies of older adults with HF with reduced ejection fraction who were newly prescribed an ARNI or an angiotensin receptor blocker (ARB) by analyzing Medicare claims data as new data accumulated since the FDA approval of ARNI in 2015 through 2019. Frailty was defined as a validated claims-based frailty index ≥0.20. Cox proportional hazards models were used to estimate the hazard ratios (HR) and 95% confidence intervals (CI) for HF hospitalization or death (composite effectiveness outcome) and any serious adverse events of hypotension, acute kidney injury, hyperkalemia, or angioedema (composite safety outcome) by the patient's frailty level.

Results: In the matched cohort of non-frail patients (n=12,426, mean age 75.5 years, 23.6% women, mean follow-up 3.2 months), rates of the effectiveness outcome per 100 person-years were 17.7 in ARNI users and 16.1 in ARB users (HR 1.06, 95% CI 0.90-1.22); corresponding rates of the safety outcome were 8.2 and 5.2 (HR 1.53, 95% CI 1.17-2.01). In the matched cohort of frail patients (n=7,428, mean age 76.4 years, 34.6% women, mean follow-up 3.0 months), rates of the effectiveness outcome per 100 person-years were 32.7 in ARNI users and 36.1 in ARB users (HR 0.88, 95% CI 0.76-1.00); the corresponding rates of the safety outcome were 15.3 and 12.6 (HR 1.18, 95% CI 0.92-1.51).

Conclusion: In routine care, there was a trend toward greater benefit for ARNI compared to ARBs in frail patients with HF with reduced ejection fraction. In non-frail patients, ARNI was not associated with greater benefit and was associated with more serious adverse events compared to ARBs.

C121

Prospective Monitoring of Effectiveness and Safety of Apixaban in Older Adults with Atrial Fibrillation and Frailty

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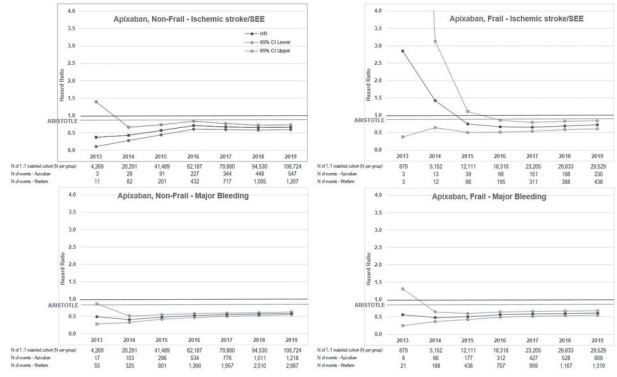
Background: Our objective was to emulate a prospective surveillance to detect the early effectiveness and safety signals of apixaban after their approval in older population with different levels of frailty.

Methods: We conducted 1-to-1 propensity score matched cohort studies of older adults by analyzing Medicare claims data as new data accumulated from 2013 to 2019. Frailty was defined as a validated claims-based frailty index ≥0.20. We used Cox proportional hazards model to estimate the hazard ratios (HR) and 95% confidence intervals (CI) for the effectiveness endpoint of ischemic stroke and systemic thromboembolism (SEE) and the safety end point of major bleeding of apixaban vs warfarin, stratified by frailty levels.

Results: In the propensity score-matched cohort of non-frail patients (n=106,724 per group, mean follow-up 12.0 months), there was evidence for apixaban's effectiveness and safety within 1 year of the drug approval. In the propensity score-matched cohort of frail patients (n=29,529 per group, mean follow-up 9.0 months), there was evidence for apixaban's effectiveness within 3 years and safety within 1 year of the drug approval. Subsequent analyses provided more precise estimates. The findings are consistent with the ARISTOTLE trial results.

Conclusion: Our near-real time prospective monitoring using real-world data detected early effectiveness and safety signals of apixaban in non-frail and frail older adults.



C122

TRENDS IN UTILIZATION OF P2Y12 INHIBITORS IN OLDER ADULTS TREATED WITH ST-ELEVATION MYOCARDIAL INFARCTION FOLLOWING PERCUTANEOUS CORONARY INTERVENTION, 2010-2020

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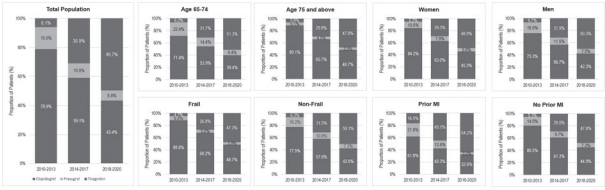
Background: Potent P2Y12 inhibitors (ticagrelor, prasugrel) have superior efficacy over clopidogrel but at the expense of increased risk of bleeding. We examined trends in P2Y12 inhibitor use in older adults with ST-elevation myocardial infarction (STEMI) treated with percutaneous coronary intervention (PCI).

Methods: We analyzed the 2010-2020 claims data from Optum Clinformatics Data Mart to identify Medicare Advantage Plan beneficiaries who were newly prescribed a P2Y12 inhibitor after PCI for STEMI. We excluded patients with history of intracranial hemorrhage, stroke, and oral anticoagulant use within 1 year prior to STEMI. We calculated the proportion of patients prescribed ticagrelor, prasugrel, and clopidogrel over time and conducted multivariable logistic regression to identify factors associated with use of potent P2Y12 inhibitors vs clopidogrel.

Results: Total of 12,611 patients were identified (mean age 74 years, 39.3% women). Proportion of patients receiving clopidogrel decreased from 91.4% to 40.9% with concurrent increase in those receiving a potent P2Y12 inhibitor (mostly ticagrelor) from 8.6% to 59.1% (Figure). Older age (OR [95% CI], 0.96 [0.96-0.97]), female sex (0.87 [0.80-0.94]), anemia (0.80 [0.72-0.89]), and frailty (0.78 [0.67-0.89]) were associated with lower use of a potent P2Y12 inhibitor.

Conclusion: Patients at increased risk of bleeding because they are older, are frail, and have anemia are less likely to receive a potent P2Y12 inhibitor.



C123

De-escalation of anti-TNFs in Older Adults with Rheumatoid Arthritis

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Background: Biologic disease modifying anti-rheumatic drugs (bDMARDs) such as anti-TNFs improve clinical and radiographic outcomes in rheumatoid arthritis (RA). However, their use is associated with dose- and age-dependent adverse effects including increased risk of serious infections. Current clinical practice guidelines recommend de-escalating bDMARDs in RA patients with low disease activity or in remission. In this study, we evaluated prevalence and factors associated with anti-TNF de-escalation in older adults with RA.

Methods: In this retrospective observational study, we identified adults 66 years of age or older with RA, on anti-TNF therapy within 6 months of cohort entry date with at least 6-7 months duration (proxy for stable use), using 20% Medicare data from 2009-2017. We evaluated the use of five anti-TNFs: Adalimumab, Etanercept, Certolizumab, Golimumab, and Infliximab. Baseline patient characteristics including comorbidity and concomitant use of glucocorticoid (GC) and other DMARDs were collected. Anti-TNF use was categorized as either continuation or de-escalation, identified by dose reduction, dosing interval increase or cessation of use.

Results: We identified 5720 Medicare beneficiaries who met study inclusion criteria. Average age was 74.0 (SD 5.8), 77.9% were female, 83.3% were non-Hispanic white, and 26.4% had low-income subsidy. One in five de-escalated anti-TNFs (21%), of whom 62% either reduced dose or increased dosing interval and 38% ceased use. Patient characteristics by patterns of anti-TNF use are summarized in Table 1.

Conclusions: Anti-TNFs are de-escalated in one in five older adults with RA in usual care. Further study is needed to evaluate impact of de-escalation on RA outcomes.

Variables	Continuation N=4528	De-escalation	
		Dose reduction/interval increase N=731	Cessation N=461
Sociodemographic			
Age, mean (SD) median (IQR)	74.2 (6.0) 72.8 (69.2, 78.2)	73.8 (5.2) 72.6 (69.9, 77.1)	73.1 (5.2) 71.6 (68.7, 76.3)
Female	3504 (77.4)	557 (76.2)	378 (82.0)
Race/Ethnicity White Black Hispanic Other	. 3756 (83.0) 258 (5.7) 313 (6.9) 201 (4.4	. 637 (87.1) 29 (4.0) 45 (6.2) 20 (2.7)	. 376 (81.6) 30 (6.5) 40 (8.7) 15 (3.2)
Low Income Subsidy	1256 (27.7)	127 (17.4)	118 (25.6)
12months Baseline Period			
Comorbidities mean (SD) median (IQR)	. 2.2 (2.0) 2.0 (1.0, 3.0)	. 1.8 (1.6) 1.0 (1.0, 3.0)	. 2.0 (1.7) 2.0 (1.0, 3.0)
Concomitant csDMARD use, yes/no	2260 (56.5)	452 (61.8)	262 (56.8)
Concomitant long-term GC, yes/no	1399 (30.9)	167 (22.8)	150 (32.5)

***Categorical variables are presented as n (%). Abbreviations: SD=standard deviation, IQR=interquartile range, csDMARD=-conventional synthetic disease modifying anti-rheumatic drug, long-term GC=glucocorticoid for >90 days**

C124

"*I Just Keep Thinking Tomorrow's Going To Be Better And Then I'll Figure It Out*": Family Caregivers for Surgical Older Adults Need More Information, Instrumental Help, and Psychosocial Support

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Background: Little is known about the needs of caregivers who play a critical role in the surgical older adult's perioperative care. Our study aim was to assess perceived needs of family caregivers for older adults undergoing major elective surgery.

Methods: We recruited primary caregivers of community-dwelling, English-speaking older adults ≥ 65 years undergoing major elective surgery and receiving care from a preoperative clinic at the University of California, San Francisco. We conducted semi-structured, in-depth interviews with caregivers about their experiences before and after surgery. Interviews were transcribed and analyzed using thematic analysis.

Results: Thirteen caregivers (mean age 67 ± 10.7, 85% women, 77% spouses) completed interviews. Participants described three main areas of needs while caring for older adults after a major surgery. First, caregivers wanted more detailed and timely information on day-of-surgery expectations, post-operative prognosis, and recovery trajectory – "*They told my husband to take it easy for about six weeks. And I think that's about as specific information as we got."* Second, caregivers needed more easily accessible, instrumental help at home after hospital discharge – *"I wish there was an ostomy nurse here who could help me. It's really hard to communicate with doctors because you don't have a direct line."* Third, caregivers wished for psychosocial support for the caregiver-patient dyad to cope together during the perioperative period – "*You sometimes feel a little lonely, especially as older adults who don't have kids or other people to help you out."*

Conclusions: The needs of caregivers for surgical older adults extend beyond typical surgical education about the post-operative and transitional care period. Interventions by a coordinated surgical team who can offer guidance on short- and long-term post-operative trajectory, provide or organize hands-on help at the patient's home, and give direct psychosocial support may help meet the complex needs of caregivers.

C125

Geriatric Remote Initiative (GeRI): Qualitative Feedback from Older Cancer Survivors and Caregivers About Home-Based Technology for Assessing Symptoms and Function During Cancer Care.

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Background: Cancer is a disease of older adults (OAs), yet few aging metrics are included in cancer care or trials. Health technology could facilitate assessment and monitoring of symptoms and function but many technology adoption hurdles exist for older adults. Therefore, it is crucial to engage older adults in health technology development. This study aimed to obtain input from older cancer survivors and their caregivers about the 3 devices proposed for use in the GeRI cancer care platform: a tablet, a smartwatch and a smart scale.

Methods: In this qualitative study, semi-structured interviews were conducted over videoconferencing in sample of 65+ year old cancer survivors and their caregivers. Participants were asked about 1) their prior experience using tablets, smartwatch, and smart scale; 2) their willingness to use health technology for cancer care and to participate in studies including health technology; and 3) their perspectives on the use of health technology in future cancer care. Interviews were audio recorded, transcribed and reviewed to identify themes.

Results: Nine older cancer survivors (mean age 74) and 3 caregivers (CGs, mean age 55) were consented and interviewed (July-October 2022). Six OAs and one CG preferred a tablet over a smartphone to monitor health, but only 2 OAs and 2 CGs had previously used a smartwatch or a smart scale. Seven OAs reported they would be willing to use healthcare technologies if they informed cancer management and 4 OAs believed that those in their circle would participate in health technology acceptability studies. All but one OA believed that health technology will play an integral role in healthcare's future. Five OAs and 1 CG reported excitement regarding this prospect, while the rest expressed concerns about equity, accessibility, or privacy.

Conclusions: The proposed GeRI devices and studies incorporating them were acceptable to most OAs with cancer and their CGs. Both older cancer survivors and CGs anticipate health technology will have a large role in future healthcare. Half of OAs and CGs have equity, accessibility and privacy concerns which must be addressed prior to use.

C126

Characterizing the ED Recidivism Risk among Geriatric Patients Presenting To the Emergency Department

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Background

The geriatric population has the highest emergency department (ED) usage rates in the United States. Multi-morbidities, impaired mobility, changes in mental status and polypharmacy all contribute to the high ED usage and increase the risk of repeat ED visit. Early identification of these patients at the initial ED presentation could reduce the rate of ED recidivism. We hypothesized that a greater comorbidity burden, polypharmacy, and/or recent ED visitations would be associated with increased ED return within 30 days.

Methods

We identified patients aged 65 years and older admitted to a busy academic Level 1 Geriatric ED from January 1, 2019, to August 31, 2019. Age, ED visitations in the prior six months, Polypharmacy (>10 medication), Charlson Comorbidity Index (CCI), Emergency Severity Index (ESI) and admission to the hospital were investigated. The primary outcome of interest was return to the ED within 30 days of the initial visit. Bivariate analyses and multivariable logistic regressions, adjusted for chief complaint, admission, prior ED visit in the past 6 months, high ESI acuity (1 or 2), and polypharmacy.

Results

7,161 ED visits by 5,600 unique geriatric patients were identified. 40.8% of visits were preceded by an ED visit in the prior 6-months. Polypharmacy was reported on 69.7% of visits; CCI of 5 or more was observed in 20.3% of visits; high ESI acuity was encountered in 12.1% of visits. Bivariate analysis showed that ED visits in prior 6 months, polypharmacy, and high CCI were all associated with return to the ED within 30 days ($p<0.006$). In the adjusted model, we identified that an ED visit within the past 6 months and polypharmacy have 2.44- and 1.44-times greater odds to return to ED, respectively. Age was not significantly associated with 30-day revisit to ED after adjustment, whereas admission to the hospital protected against 30-day re-admission to the ED ($p < 0.05$).

Conclusions

Prior visits to the ED and polypharmacy more strongly predict a return to the ED within 30 days in the geriatric population. Therefore, characterizing the factors associated with increased ED re-visitation can help identify patients who are at risk and could benefit from additional resources. Age alone was not predictive, whereas hospitalization was protective to the repeat ED visit.

C127

Geriatric Delirium in the Emergency Department: What Are We Missing?

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Background: Geriatric patients with delirium are at increased risk for prolonged hospitalization, poorer outcomes, greater costs and higher risk for of institutionalization. By identifying those at risk early, interventions can be implemented to prevent delirium. Cleveland Clinic's Level 1 geriatric ED currently screens for delirium by performing the 4AT screen only if changes in mental status are noted by family or patient in triage. We hypothesize this approach underestimates the prevalence of delirium on presentation to the ED, particularly among high-risk geriatric patients.

Methodology: High risk geriatric patients presenting to the ED were identified using an internally devised risk stratification algorithm based on known risk factors for delirium including; age (>65 years old), polypharmacy (>10 medications), dementia history and repeat ED visits or hospitalizations (>5 over the preceding year). Of these, 100 patients were randomly selected to undergo a 4AT delirium screen in the ED on presentation, regardless of whether mental status changes were noted in triage. Incidence of delirium and cognitive impairment on presentation by 4AT was calculated and compared to current methodology. Those unable to speak and those who did not consent were excluded.

Results: The average age of patients screened was 74 years old (65-95), outpatient medication count was 15 (0-40) and average prior ED visits/hospitalizations over the preceding year was 3 (1-68). 7 had a known prior history of dementia. 56 were male, and 44 were female. Of the 100 patients screened, 14 scored 4 or above on the 4AT screen; suggesting delirium on arrival. Of these 14, only 3 were detected using current methodology for identifying delirium in the ED. 27 of those screened scored between 1-3; indicating cognitive impairment. Patients with cognitive impairment (4AT scores between 1-3) were not detected by current methodology.

Conclusion: All high-risk geriatric patients should be screened for delirium on presentation to the ED at the time of triage using the 4AT screen. This should not be dependent only on report of acute mental status changes by patient or family. Patients who do not screen positive for delirium but score between 1-3 on 4AT, indicating likely cognitive impairment, could also be potential targets of delirium prevention interventions if they are admitted to the hospital.

C128

Preoperative geriatric assessment to inform treatment decisions: The COMPASS project

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Background

For older patients with cancer, management decisions are more complex in the presence of frailty, chronic illness, or uncertainty whether benefits of surgery outweigh its potential impact on quality of life. Optimal decision-making necessitates patient understanding of risks, benefits, and burdens of surgery and surgeon understanding of patients' specific goals. Nonetheless, these prerequisites are often lacking. To support surgical decision-making, we designed a multidisciplinary, referral-based program: the COMplex PAtient-centered Surgical Support (COMPASS) Project.

Methods

This was a pilot quality improvement extension to an existing preoperative geriatrics evaluation program at a single, tertiary cancer center. Patients ≥65 years who were considering surgery were referred by their surgeon if they felt a discussion defining patients' values would enhance decision-making. Prior to COMPASS consultation, the caser was discussed by the referring surgical team, the geriatrician, and a surgeon with palliative medicine training. The patient was then seen by the geriatrician and the consultation was documented and communicated as appropriate. The surgeon and patient then met to reach a treatment decision. Notes from the COMPASS visits were analyzed using a grounded theory approach to identify major themes.

Results

During a 12-month period, 10 patients were referred for assessment, of whom 9 have had consultations. One patient was hospitalized prior to COMPASS consultation and decision was made to pursue radiation therapy rather than surgery. Major themes documented in COMPASS notes included illness understanding, prognostic understanding, prior health experiences, health beliefs, motivations for surgery, concerns, alternatives, clinician assessment, and future health needs. After further communication with their surgeons, 7 patients proceeded to surgery and 2 patients were referred for radiation therapy rather than surgery: 1 based on patient preference and 1 based on surgeon recommendation.

Conclusions

A multidisciplinary approach to preoperative communication is feasible and provides information about patients' experiences, perceptions, and motivations with respect to cancer care. This information can be used to inform future treatment decisions.

C129

Impact of Geriatric Trauma Co-Management on 1-Year Mortality in Older Adults with Multiple Rib Fractures

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Background: Rib fractures in older adults are associated with higher morbidity and mortality due to physiologic changes of aging. Geriatric trauma co-management programs for rib fractures have shown in-hospital mortality benefit but have not looked at long-term outcomes. We hypothesized that patients 65 and older with multiple rib fractures and co-managed by a geriatrician will have a lower 1-year mortality.

Methods: This was a retrospective cohort analysis at a level 1 trauma center with multiple rib fracture patients (N=395) aged 65 and older admitted directly to the Trauma ICU from Sept 2012 to Nov. 2014. Those seen by geriatrics co-management service (GTC) were compared to those receiving usual trauma surgery care (UC). Patients (38) that died, discharged to hospice or with unknow dead status were excluded. The primary outcome was 1-year mortality. Secondary outcomes were 30-day and 1-year readmissions and number of ED visits during the following year. Univariate analysis was done using Student's t-test and Fisher exact test. Kaplan-Meier, and multivariate Cox-proportional hazard models were used to calculate survival, which was adjusted by age, gender, comorbidities, admitted from SNF, ISS score, number of ED visits, number of readmissions, surgical revision, and 30-day ED visits.

Result: 38.9% (139) were cared for by the GTC. GTC patients were older (81.6±8.6 years vs 79±8.5, p=0.0053) and had more comorbidities (Charlson 2.8±1.6 vs 2.2±1.6, p= 0.0002). Overall, the GTC patients had an adjusted 46% less chance of dying in 1-year (HR 0.54, 95% CI [0.33-0.86]), but higher among patients that were 65-70 (89%) or older than 85 years old (66%), HR 0.11[0.02-0.64] and 0.34[0.13-0.91]. There were no significant differences for the secondary outcomes.

Conclusions: GTC showed a significant reduction in 1-year mortality even though patients were overall older and more comorbidities. This shows multidisciplinary teams are crucial to patient outcomes and their impact should continue to be further explored.

C130

Patient's perceptions of " intensity" of heart failure medications among older adults-a qualitative analysis.

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Background:

Most of the older adults with Heart Failure (HF) do not receive target doses of HF medications. There is a speculation that the dose strength of the recommended medications may not be the optimal intensity for older adults. However, little is known regarding the understanding of patient's perceptions of the treatment burden or "intensity" of HF medications.

Methods:

We conducted a qualitative study using semi-structured, in-depth interviews of patients ≥ 65yrs of age with the diagnosis of HF who were admitted to the acute cardiac care units at an academic, urban hospital. Patients were diagnosed with HF prior to their current hospitalization. Audio-recorded interviews were transcribed and thematic analysis was done by four separate analysts.

Results

Of the 10 patients enrolled in the study with median age of 74yrs (66-88yrs), 8 (80%) were females, 4 (40%) were Whites and 4 (40%) were African Americans. Six major themes were identified in the perception of "intensity" of heart failure medications which are shown in the Table.

We identified that the most common themes were experiencing adverse drug effects (80%) and burden from suffering psychological distress (80%), followed by problems in logistics (70%), burden from the number of the medication (70%), impact from patient doctor relations (70%), and burden from the cost (40%).

Conclusions:

This pilot study provides a robust insight into the "intensity" of HF medications and distinctive ways the treatment burden is experienced by patients taking these medications. Identification and understanding of the range of modes, patients experience intensity of HF medications, can help in the development of effective strategies and plans to reduce the adverse clinical outcomes from high intensity of HF medications.

Table. The recurring themes in the perception of "intensity" of heart failure medications among older adults.

Theme	Number of patients (N=10)
Adverse drug effects	8 (80%)
Problems in logistics	7 (70%)
Burden from the number of the medications	7 (70%)
Burden from the cost of the medications	4 (40%)
Burden from the psychological distress on patients	8 (80%)
Impact from the patient-doctor relations	7 (70%)

C131

Polypharmacy and Supplement Use in Older Drivers: Results from the LongROAD Prospective Cohort Study

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Background:

Over 30% of older adults experience polypharmacy, which is associated with poorer health outcomes and increased frailty; this effect is due to drug-drug interactions, as well as adverse effects of individual medications. While around 74% of community-dwelling older adults report use of dietary supplements (DS), its contributions to the effects of polypharmacy and functional markers of independence including driving behaviors, cognition and frailty have been less frequently studied.

Methods:

The Longitudinal Research on Aging Drivers (LongROAD) study is a multi-site prospective longitudinal cohort study that evaluates driving safety among older adults. At enrollment and annually, participants undergo a "brown bag" medication review, resulting in a comprehensive database of medications and DS. Longitudinal subjective and objective health and driving data is also collected. Here, we describe the frequency and trends of DS use, its contribution to polypharmacy across two years, and evaluate how supplement use affects measures of frailty, cognition, and driving behaviors.

Results:

Of 2990 participants, 70.2% reported at least one DS at baseline, and DS contributed to approximately 30% of the mean pill burden (2.28 of 7.58). DS users were more likely to be white and more educated than non-users, and both medication and DS use increased with age. Of baseline DS users, 95.6% used DS at year 1, and 82.3% at year 2. At all time points, the most common DS were vitamin D (~20% of total DS), multivitamins (15-16%), calcium (9-10%), omega-3 formulations (8.7-9.9%) and Vitamin C (4.2-4.8%). Medication polypharmacy, but not supplement use, was associated with some markers of frailty and cognition. Increased medication and DS use were associated with restrictive driving behavior.

Conclusions:

DS is an important contributor to polypharmacy in older adults. DS use alone does not appear to be associated with frailty and cognition measures, but may affect driving behavior. Clinicians should consider the functional effects of DS among their older adult patients.

C132

Potentially reversible causes of cognitive concerns

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Background: Prior studies have identified multiple potentially reversible causes (PRC) of cognitive decline. Common clinical conditions in older adults (e.g. sleep disorders, use of sedating medications, mood disorders) can mimic cognitive symptoms, increase risk of dementia, and exacerbate cognitive disorders. Comprehensive geriatric assessment (CGA) can facilitate identification of PRC.

Methods: The CAB provides multidisciplinary (geriatrics, neuropsychology, neurology) evaluations for individuals with cognitive concerns. Since 2022, geriatricians and trainees at CAB complete CGAs using our novel electronic medical record (EMR)-based template. Charts for new patients seen January – June 2022 were reviewed to identify PRC and cognitive state. Excel and SPSS 27 were used for analysis, with Chi square test for differences in PRC by cognitive state.

Results: Demographics for the 271 patients included average age 76 years; 74% female; 47% Hispanic, 31% African American, and 10% white. Cognitive diagnoses were Subjective Cognitive Complaints (SCC) in 15.5%; Mild Cognitive Impairment (MCI) in 31%; and Major Neurocognitive Disorder (MND) in 53.5%. Documented PRC included polypharmacy in 67%; potentially inappropriate medications (PIM) in 41%; psychiatric or behavioral issues in 63%; sleep disorders in 57%; vision impairment in 45% and hearing impairment in 28%. One or more PRC was identified in 76% of patients. Polypharmacy and mood disorders had higher prevalence in worse cognitive states, but this difference was not statistically significant.

Conclusions: In this study, PRC were common in individuals referred for specialist cognitive assessment. Lack of statistical significance in difference by cognitive state may reflect referral bias or small sample size. Though managing PRC in individuals with MND does not usually lead to cognitive normalization, identifying and managing PRC may improve impairments. Individuals with SCC, and some with MCI, may experience remission of cognitive symptoms when PRC are effectively identified and managed. This study highlights the benefit of a holistic approach to evaluating cognitive concerns and that CGA template can effectively identify PRC.

C133

Effectiveness of anti-resorptive drugs in post-menopausal women with osteoporosis and advanced chronic kidney disease.

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Background: Post-menopausal women with osteoporosis are at increased risk of fractures. Data on the benefit of anti-resorptive drug use in patients with advanced CKD is inconclusive.

Methods: A retrospective study, reviewing 500 medical records of patients from the family and internal medicine clinics was done. Inclusion criteria were women, >65 years of age with a diagnosis of osteoporosis and CKD stage 4 or 5, charts were screened to see whether the patients had 2 DEXA scans, baseline, and follow-up > 2 years after starting anti-resorptive medications. 12 charts were identified that met criteria. Patient characteristics as age, ethnicity, BMI, comorbidities, and the presence of mineral bone disease (MBD) were collected. The effectiveness of therapy was determined by fracture rates while on treatment and stable or improved T-scores on DEXA scans.

Results: There were a total of 14 encounters, 7 patients on alendronate, 5 patients received denosumab from the start, and 2 were switched from alendronate. The results are listed in Table 1. Side effects reported in the alendronate group were hypocalcemia and GI side effects.

Conclusion:

Although the number of the included patients was small, and DEXA scans are not the ideal method for bone mineral density assessment in CKD patients, denosumab seems to have better effects on BMD than alendronate.

Baseline clinical characteristics (n=14)		
Mean age (Years)		74.5
Ethnicity (White)		(8) 66.6%
Mean BMI		27±6.2
Diabetes Mellites		(6) 50%
Hypertension		(9) 75%
Hyperthyroidism		(5) 41.7%
Previous history of fragility fracture		(5) 41.7%
GFR <30 ml/min/1.73m2		(12) 100%
Total patient encounters (n=14)		
Antiresorptive therapy received	alendronate	denosumab
	(7) 50%	(7) 50%
Mineral Bone disease before therapy	(5) 71.4%	(4) 57.1%
Fractures while being on therapy	(4) 57.1%	(1) 14.2%
DEXA scan T score improved/stable		
Spine	(7) 100%	(6) 85.7%
Femur	(2) 28.5%	(5) 71.4%
Side effects	(2) 28.6%	(0) 0%

Table 1

C134

Delirium, A Not-So-Atypical Presentation for COVID-19 in Older Adults with Multimorbidity

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Background: That older persons with high medical complexity disproportionately suffer poor outcomes from COVID-19 is widely accepted. Consequently, early recognition and treatment remains paramount for better outcomes. Though atypical presentation such as confusion may be the prevailing COVID-19 symptom for these persons, the CDC describes the most frequent presenting symptoms of COVID-19 as anosmia, cough, fever, and myalgias. In this study we evaluated the true incidence of delirium in older adults with multimorbidity and COVID-19 presenting to the Emergency Department (ED) during the peak global pandemic.

Methods: Chart review of patients seen in the ED from 4/1-12/1/2020 for COVID-19 was performed. Persons age ≥65 with 2 OR age ≥80 years with 1 of the following criteria were selected: polypharmacy, history of fall, repeat ED visitation, history of dementia, and positive delirium screen. Demographic characteristics were demonstrated with frequencies and percentages; continuous variables were summarized using mean and standard deviation (SD). Delirium incidence was calculated using results of 4AT screening (score ≥4 considered positive.) In-depth chart review was conducted for those with a negative 4AT or if screening was not performed to check for clinical diagnosis of delirium. Symptoms of fever/hypothermia, cough, and myalgia were also analyzed.

Results: One-hundred forty-four charts were reviewed. Average age was 81.6 years (SD of ± 7.99.) There were 77 females (53.5%) and 67 males (46.5%), with ethnicity showing 107 non-Hispanic Black (74.3%) vs. 35 non-Hispanic White (24.3%) (data missing for 2 patients -1.4%.) Of the total, 15 were excluded (insufficient clinical data, incorrect 4AT scoring, or intubation upon arrival.) COVID-19 symptoms were assessed in 129 persons: fever/hypothermia 22 (17%), cough 39 (30.2%), myalgias 6 (4.7%), and delirium 56 (43.4%).

Discussion: In medically complex older adults, delirium is an under-recognized presentation of COVID-19. This study shows that delirium incidence in this population being higher than previously described. One observational study of COVID-19 showed only 21% were diagnosed with delirium. Recognition of delirium as a common symptom in COVID-19 may lead to more expeditious diagnosis and management, potentially improving clinical outcomes. Use of 4AT can be effective in identifying delirium.

C135

Intravenous (IV) lorazepam is associated with increased mortality among older hospitalized patients with and without cognitive impairment

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Background: In a previous study comparing hospital mortality among all patients age 70+ admitted one year before (2017, N=6136) and after (2019, N=7403) implementation of an inpatient geriatrics program, IV lorazepam was found to be one of the variables associated with mortality in the univariate analyses.[1] The purpose of the current secondary data analysis is to further examine this association between IV lorazepam use and mortality while controlling for other variables.

Methods: IV lorazepam use was defined as receiving ≥1 doses of the medication. Data on dosage amount was not available from the EMR database. Cognitive impairment (CI) was defined as in the original study a priori using a list of 30 ICD–10 diagnoses. Other variables examined: age, gender, case mix index, ICU stay, sepsis, palliative care, oral benzodiazepines, oral and IV antipsychotics, oral and IV narcotics. Logistic regression was used to calculate adjusted ORs of dying for all variables.

Results: Among patients with CI in 2017, 519/1760 (29.5%) received IV lorazepam and in 2019, 463/2386 (19.4%) patients received IV lorazepam. Mortality rates among patients with CI who received IV lorazepam was 17.5% in 2017 and 15.1% in 2019. For patients without CI, 462/4376 (10.6%) patients in 2017 and 502/5017 (10.0%) patients in the 2019 received IV lorazepam. Mortality rates for patients without CI who received IV lorazepam were 28.8% in 2017 and 37.1% in 2019. The highest adjusted ORs (95% confidence intervals) of dying for the following categories, **2017 with CI**, **2019 with CI**, **2017 without CI** and **2019 without CI**, were for **IV lorazepam** [3.2 (2.2, 4.8), 3.6 (2.3, 5.6), 9.7 (6.5, 14.6), 27.1 (18.5, 39.6)], **ICU stay [**3.4 (2.2, 5.3), 5.2 (3.0, 9.1), 5.0 (3.5, 7.1), 3.15 (2.2, 4.5) **sepsis** [1.9 (1.2, 3.1), 3.0 (1.9, 4.7), 2.0 (1.2, 3.4), 2.0 (1.2, 3.4) **and palliative care** [3.6 (2.4, 5.5), 5.4 (3.4, 8.7), 10.0 (6.1, 16.5), 6.9 (4.0, 12.0)], respectively.

Conclusion: Use of IV lorazepam is associated with increased mortality among older hospitalized patients with and without cognitive impairment.

[1]Flaherty JH, et al. An Inpatient Geriatrics Program...JNHA 2022, 26(1):103-109

C136

Hospital and Transitional Care of Low Impact Vertebral Compression Frature

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Background

Vertebral fractures are the most common type of osteoporotic fracture in older adults in the US, and result in increased morbidity and mortality. Although vertebral fractures are robust predictors of future fractures, hospital and transitional care practices have not been adequately explored. This study aimed to evaluate current management practices of low impact vertebral fractures in hospitalized older adults.

Methods

This retrospective study included older adults (65+) admitted to the hospital and found to have a new (not previously documented

in the electronic health record, EHR) vertebral compression fracture on radiographic imaging (CT scan). Patients who sustained non-low impact vertebral fractures (e.g., pathologic) were excluded. EHR data elements included: presenting complaints, laboratory studies (e.g., vitamin D), inpatient management (e.g., spine consult), and discharge instructions (e.g., referral for bone mineral density).

Results

Of the charts reviewed (N = 50), the average age was 85.0, 70% (n=35) were female, 66% (n=33) were white, 82% (n=41) came from home, and only 18% (n=9) were independent. Nearly 20% (n=9) had a history of osteoporosis and 32% (n=16) had a prior fracture on imaging. Most (72%, n=36) patients were admitted to medicine. Radiographic findings revealed that 48% (n=24) of patients had both thoracic and lumbar fractures and 22% (n=11) had evidence of retropulsion. The most common presenting symptoms were pain (74%, n=37), inability to ambulate (52%, n=26), delirium (18%, n=9), and constipation (16%, n=8). Regarding laboratory tests, TSH was checked in 54% (n=27), PTH in 4% (n=2), and vitamin D in 24% (n=12). Over 90% (n=46) of patients were managed with PT and pain control, 54% (n=27) were given a brace, and 54% (n=27) had as spine surgery consult. Overall, only 18% (n=9) of patients with a new vertebral fracture had documentation of osteoporosis on their discharge paperwork. On discharge, 4% (n=2) of patients were initiated on vitamin D and 6% (n=3) on calcium; and 48% (n=24) were referred for spine follow up and 2% (n=1) for endocrine. No patients were referred for bone density testing or consideration for bisphosphonates or teriparatide.

Conclusions

This study highlights the gaps in inpatient and transitional care identification and management of vertebral compression fracture, which is a potential missed opportunity to prevent future fractures and disability.

C137

Socially Isolated Older Women have a Higher Risk of Self-Neglect: Results of a Nationally-Representative Sample

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Background: Self-neglect among older adults is characterized by inattention to one's hygiene and immediate living conditions, is strongly tied to health outcomes, and may reflect unmet needs from social relationships. We determine if subjective loneliness or objective social isolation, two markers of social well-being, are associated with self-neglect in a national sample of older adults and how the association differed by gender.

Methods: We used data from the National Social Life, Health, and Aging Project (NSHAP) Wave 3 (2015), a nationally-representative survey of 3,677 community-dwelling older adults. Loneliness was measured using the 3-item UCLA scale and social isolation using a 12-item scale assessing household contacts, social network interaction, and community engagement. Self-neglect was defined using in-person interviewer evaluations of household conditions (building condition, cleanliness, odor and clutter) and bodily self-presentation (clothes and hygiene). We categorized self-neglect as the lowest quintile of household condition (household disorder) or bodily self-representation (poor hygiene). Logistic regressions were used to test the association of social measures with self-neglect and to test for gender interactions.

Results: The sample was 54% female, 11% Black, 8% Hispanic, and on average 64± 9.7 years old. After adjustment, the association between social isolation and body self-neglect and household self-neglect was stronger among women compared to men (p-value of interaction <0.05). Loneliness was not associated with body or household neglect.

Conclusions: Social isolation is associated with body and household neglect among women, and body neglect among men. Future work might show how social isolation impacts self-neglect and inform interventions to address self-neglect through enhancing social connectedness.

		No Isolation % (95% CI)	Social Isolation % (95% CI)	p-value
Men	Body Neglect	22% (19-25)	30% (25-35)	0.01
	Household Neglect	20% (17-23)	25% (19-31)	0.08
Women	Body Neglect	14% (12-16)	33% (26-40)	<0.001
	Household Neglect	17% (15-19)	30% (25-36)	<0.001

C138

Association of epigenetic age with frailty and clinical outcomes in a pilot study of patients undergoing liver transplantation

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Background: Frailty is an important predictor of mortality and clinical outcomes in patients with liver failure. Biological mechanisms of aging may underlie frailty, and can be estimated by epigenetic clocks (eg PhenoAge) via changes in DNA methylation (DNAm). Biological age is accelerated (AgeAccel) when epigenetic>chronological age. It is unknown whether AgeAccel associates with frailty in patients with liver failure or predicts clinical outcomes.

Methods: We selected DNA from peripheral blood mononuclear cells of 12 UCSF participants in the Functional Assessment in Liver Transplantation (FrAILT) Study for this pilot. FrAILT is a prospective study of >800 adults with cirrhosis awaiting liver transplantation with liver frailty index (LFI) data which predicts pre-transplant mortality. DNAm status of 850,000 CpG sites was measured in triplicate using Illumina MethylationEPIC arrays. AgeAccel is derived from a linear regression model of DNAm PhenoAge regressed on chronological age. Group differences via T test.

Results: 7 subjects were frail (LFI≥4.4, mean age 55) and 5 robust (LFI<3.2, mean age 55). All were transplanted. Mean coefficient of variance for 3 PhenoAge replicates was 0.05. PhenoAge was associated with chronological age (R^2=0.66). Mean AgeAccel was +2.5 years (p=0.23) in frail vs. robust subjects. 4 subjects who died or were readmitted post-transplant had mean AgeAccel +3.8 years (P=0.07) vs. subjects without these outcomes.

Conclusions: In this pilot study of epigenetic age in a relatively young transplant population, AgeAccel may be associated with both frailty and clinical outcomes. A larger study is needed to determine if biological age provides clinical predictive power independent of frailty measures.

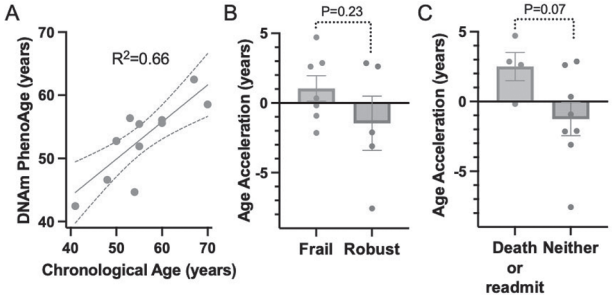

Fig 1: (A) PhenoAge vs chronological age. (B) AgeAccel by frailty status and (C) by death or readmission outcome. Mean+/-SEM.

C139

Always Look at the Feet: What the Long Toenail Sign May Reveal

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Background: Foot problems are common in older adults, but inspection of the feet during physical examination is often overlooked. Many older adults have difficulty cutting their toenails and the "Long Toenail Sign" (LTS) may be an indicator of functional decline, cognitive decline, or both. However, there is a paucity of research describing the LTS in older adults. Our study aims to describe the prevalence of the LTS in an inter-disciplinary Veterans Affairs geriatrics ambulatory clinic and to compare demographic, functional, and cognitive characteristics of patients with long toenails to those without. **Methods:** This was an observational study. We performed chart reviews on 62 patients seen in a geriatrics clinic whose foot exams were documented as part of a quality improvement project. The presence or absence of long toenails was determined by the provider. We then compared characteristics of patients with the LTS to those without. If a patient was seen more than once during the study period, only information from first encounter was included. **Results:** 27% of patients were reported to have the LTS. See Table 1 for unadjusted descriptive statistics. **Conclusion:** The LTS was prevalent in a VA geriatrics clinic at 27%, with trends toward increased dementia (59% vs. 42%) and mortality (41% vs. 27%) among patients with the LTS, though these were not statistically significant. Limitations of our study include small sample size and homogeneous population. Future research should continue to study the relationship between the LTS and measures of cognitive and functional outcomes, as this hidden physical exam sign may reveal opportunities for intervention.

Table 1

		Overall Population (n=62)	No Long Toenail Sign (n=45)	Positive Long Toenail Sign (n=17)	
Clinical Characteristics	Age (avg.)	83 ± 8	83 ± 8	82 ± 7	p=0.40
	Diabetes	17/62 (27%)	12/45 (27%)	5/17 (29%)	p=1.00
	Caregiver at visit	38/62 (61%)	30/45 (67%)	8/17 (47%)	p=0.16
	Self-cuts toenails	19/57 (33%)	12/40 (30%)	7/17 (41%)	p=0.41
Cognitive Characteristics	**Dementia[1]**	**29/62 (47%)**	**19/45 (42%)**	**10/17 (59%)**	p=0.24
	MOCA (avg.)	18 ± 5 (n=34)	19 ± 5 (n=23)	16 ± 6 (n=11)	p=0.25
Functional Characteristics	Mean gait speed (m/s)	0.70 (n=40)	0.65 (n= 31)	0.80 (n=9)	p=0.06
	Able to perform chair stand	24/55 (44%)	19/39 (49%)	5/16 (31%)	p=0.24
	Able to don/doff shoes	39/61 (64%)	33/44 (75%)	6/17 (35%)	**p<0.05**
	Falls within last 6 months	25/62 (40%)	17/45 (38%)	8/17 (47%)	p=0.51
	Use of assistive device	32/58 (55%)	26/43 (61%)	6/15 (40%)	p=0.17
Mortality	**Died within 2 years of visit**	**19/62 (31%)**	**12/45 (27%)**	**7/17 (41%)**	p=0.27

[1]documented on problem list or in assessment and plan

Table 1

C140

Trends in Delirium Rate During the COVID-19 Pandemic: A Comparative Study Across 13 Hospitals

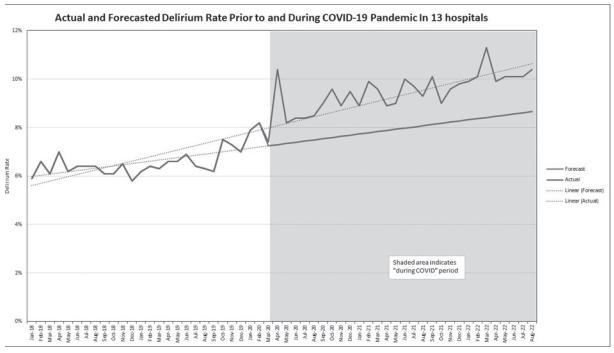
E. Tharmathurai, J. G. Van Baardwijk, A. Khan, S. Riutta, J. Adefisoye, M. Malone. *Aurora University of Wisconsin Medical Group, Milwaukee, WI.*

During the COVID-19 pandemic, strategies to prevent delirium in the hospital were limited due to restrictions in staff, visitor policies, and patient isolation. We suspected that the delirium rate may have increased during the pandemic. This study aimed to investigate trends in the delirium rate and to compare delirium rate prior to and during the pandemic in hospitalized older adults

Methods: Data was obtained retrospectively from the electronic health record. Delirium was defined as delirium symptoms documented by nurses while performing clinical assessment. Study time frame was 1/2018-08/2022; 1/2018-2/2020 defined as pre-COVID; 3/2020-8/2022 as during-COVID. The delirium rate was calculated for each month by combining data from inpatients ≥65 years of age from all hospitals. Delirium rates were trending upwards before COVID so linear regression was used to forecast the expected delirium rates during COVID. Estimated rates were compared to actual rates; Wilcoxon Rank Sum Test and Wilcoxon Signed-Rank Test were used to test for differences in the median delirium rates

Results: Overall median delirium rate was 8.15% in 157,753 encounters. The median delirium rate increased by 3.2 percentage points, from 6.4% to 9.6%, for pre-COVID vs. during-COVID 19, respectively (Z=-6.33, p<.001). During the pandemic, the median delirium rate was 1.6% points higher than the forecasted rate (9.6% vs 8.0%, Z=-4.78, p<.001) (figure)

Conclusion: Although the delirium rate was trending up before COVID, the rates increased significantly more than expected. This study is important because it demonstrates that when there is a change in the way healthcare is delivered it may detrimentally impact delirium rates. Recognizing that delirium rates appear to have increased should prompt a renewed emphasis on delirium prevention strategies.



C141

What Challenges do Healthcare Providers Perceive as Existing toward Adaptation of Patient Priorities Care?

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Background: As Veterans age, they must confront an increasing number and complexity of chronic conditions and disabilities. Patient Priorities Care (PPC), a process that aligns treatment decisions with patient priorities rather than disease guidelines, was developed to focus care on outcomes most important to older adults, rather than single-disease clinical practice guidelines. This study aimed to understand what barriers clinicians working in Veterans Association (VA) primary care clinics perceive towards adapting PPC.

Methods: Semi-structured, one-to-one interviews were performed by JA using an interview guide, recorded, and professionally transcribed. Participants were invited to share their feedback and perspectives on an upcoming PPC implementation trial having received three PPC documents via email before the scheduled interview. Interviews were coded and thematically analyzed by JA and JB.

Results: 28 primary care clinicians sampled from VA healthcare systems in Southeast Texas and New England were interviewed from October 2021 through February 2022 via telephone. Analysis revealed four primary barriers perceived as existing toward the adaptation of PPC within VA primary care clinics: (i) time pressures (ii) follow-up and documentation of priorities over time (iii) managing patient expectations and (iv) communication between primary care and specialists.

Conclusion: Clinicians perceive a number of challenges at patient, clinician, and system levels toward the adaptation of PPC within VA primary care clinics. If concerted efforts are made to address these barriers during PPC implementation, it will undoubtedly lead to more successful uptake and adaptation of PPC within these settings.

Barriers Perceived as Existing Toward the Adaptation of PPC within VA Primary Care Clinics.

Theme:	Exemplary Quote:
Time pressures	P3 – 'The biggest challenge I think we face in healthcare mostly is time. So, we're all kind of working too much already. So, anything that takes up more time or perceived as is gonna take away time away from other things that we also think are really important priorities.'
Documentation of priorities over time	P14 – 'How is the follow-up with this? Like you do it once, or like then you have to follow up with the person to see if they're maintaining or reaching the goals that they set?'
Managing patient expectations	P2 – 'But you know, just because the patient does not want to take the medicine does not mean that we will always follow what the patient wants.'
Communication between primary care and specialists	P9 – 'So again there's nothing here that pulls in all the other specialists or that is incorporating them to be part of this whole thing, which is one of the main issues and problems we have with aligning care.'

C142

Outpatient follow-up is associated with reduced 30-day readmission after seizure discharge in older adults

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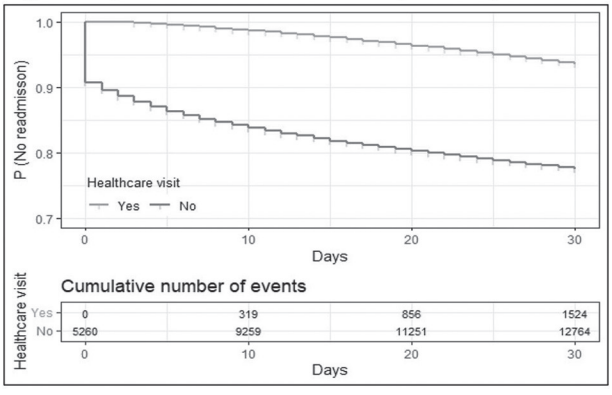
Background: Older adults, due to increased multimorbidity, are expected to have higher readmission rates after seizure-related hospitalization than the general adult population. We sought to define 30-day readmission rate in older adults after seizure/epilepsy hospitalization and to examine whether occurrence, timing or specialization of follow-up (f/u) care reduced readmission risk.

Methods: This is a retrospective cohort study of adults age ≥65 hospitalized with a primary diagnosis of seizure/epilepsy using 2016-2019 Medicare data. Primary outcome was readmission within 30 days and exposure of interest was presence or absence of f/u and specialty of f/u provider. We a priori defined variables from literature/clinical judgement and used a least absolute shrinkage and selection operator (LASSO) method to select variables contributing most to the data's variance for inclusion in the final multivariable model.

Results: Of 80,391 beneficiaries with admissions for seizure/epilepsy, 17.7% were readmitted within 30 days (22.3 % without v. 6.4% with a f/u visit). 20.6% had only a primary care visit (23.1% of not readmitted v. 8.8% of readmitted), 2.5% saw neurology only (2.9% v. 0.8%), 0.3% neurosurgery only (0.3% v. 0.3%), 0.1% epilepsy only (0.1% v. 0.0%), 5.4% had a combination of visits (6.9% v. 0.8). In multivariable models, many factors were associated with 30-day readmission (will be presented). Notably, odds of readmission were inversely associated with outpatient f/u within 30 days (Figure).

Conclusions: We found high rates of readmission in older adults with seizure/epilepsy hospitalization. Outpatient f/u was associated with reduced likelihood of readmission. These findings reinforce the importance of discharge planning and suggest that ensuring outpatient f/u may be an easy intervention to reduce readmissions.

Figure. Proportion without readmission by follow-up visit status



C143 Encore Presentation

Journey Mapping to Visualize and Describe Spousal Caregiver Stress Peri-Hospitalization

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Background: Caregivers for persons living with dementia (PLWD) are frequently spouses. Caregiver hospitalization causes a disruption to caregiving and is often an unexpected event. The research goal was to understand the caregiver stress trajectory peri-hospitalization. The hypothesis was that caregivers would have the highest stress levels during their own acute health event and hospitalization and lower stress levels during other events such as the PLWD dementia diagnosis.

Methods: Semi-structured journey mapping interviews were conducted to map caregivers' stress while caring for the PLWD and managing their own health event. Spousal caregivers (n=18) who were hospitalized in the past 12 months were given a visual aid worksheet to orient them to the activity and then asked to rate their stress levels on a scale of 0 (not stressed) to 5 (most stressed) at five time points: dementia diagnosis (of PLWD), progression of dementia, caregiver health event (change in condition), caregiver hospitalization, and caregiver return home from hospital. Data were mapped and analyzed for themes and commonalities.

Results: Caregivers were 78% women, mean age 76 (±7), 78% white, and 17% Hispanic. Thirty-three percent of caregivers reported a condition that affects their caregiving activities (e.g., kidney disease, diabetes, chronic pain, cancer, oxygen dependent). Ten percent reported taking a medication that affects their caregiving activities. Fifteen caregivers (83%) reported they had caregiving support, which mostly came from their children. Four clusters of caregiver journey maps were revealed. Cluster 1 (n=4) had the highest stress during their hospitalization due to concern about the care of the PLWD while they were hospitalized. Cluster 2 (n=8) rated their stress lower during hospitalization due to being relieved of caregiving duties. Cluster 3 (n=3) reported highest stress at the time of PLWD progression and during hospitalization. Cluster 4 (n=3) were at a sustained high-stress level over all time points.

Conclusion: Caregiver stress levels around their own hospitalization is not universal. Meeting the needs of caregivers peri-hospitalization should be tailored to the individual caregiver. Insight into the needs and timing of planning caregiver support in case of caregiver hospitalization warrants further study.

C144

Days Spent at Home and Patient Well-Being among Frail Older Adults

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Background: "Days spent at home (DAH)" has been gaining increasing attention as a meaningful outcome measure. This study examined the association between DAH and patient-centered outcomes among frail older adults.

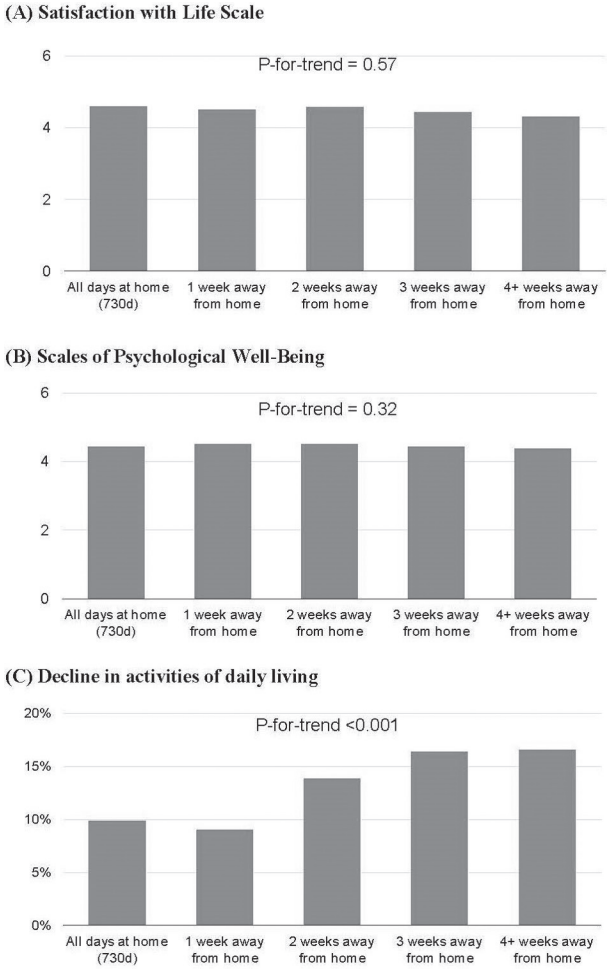
Methods: We included frail older adults from the 2016-2018 Health and Retirement Study. DAH was calculated by subtracting the total number of days spent in hospitals and nursing homes (self-reports) from 730 days and categorized into five groups: 730, 729-723, 722-716, 715- 702, or <701 days. Outcomes were life satisfaction, psychological well-being, and a decline in activities of daily living (ADL). We fit multivariable linear regression models to examine the association between DAH (an ordered variable) and each outcome adjusting for individual characteristics.

Results: Our study included 1,740 frail individuals. We found no evidence that DAH is associated with life satisfaction (p-for-trend = 0.57)

or psychological well-being (p-for-trend = 0.32) among frail older adults (Figure). However, we found that a one-week increase in DAH is associated with a lower probability of experiencing a decline in ADL by 6.5 percentage points (p<0.001).

Conclusion: We found that DAH was not associated with patient well-being measures among frail older adults while more DAH was associated with a decline in ADL.

Figure. Association between days spent at home and study outcomes



C145

Impact of COVID-19 pandemic on site of death among Medicare beneficiaries

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Background: Evidence is limited as to how the site of death changed during the coronavirus disease 2019 (COVID-19) pandemic. We evaluated the impact of the pandemic on site of death among Medicare beneficiaries. We also investigated whether the impact of the pandemic varies by medical conditions of beneficiaries: cancer, chronic obstructive pulmonary disease (COPD), and dementia.

Methods: Using a quasi-experimental difference-in-differences method, we estimated net changes in site of death during the pandemic period (March–December 2020) versus the pre-pandemic period (January–February 2020), using the data on the same months in the prior years (2016-2019) as the control. Participants were 20% sample of Medicare fee-for-service beneficiaries aged 66 years and older who died from 2016 through 2020. We excluded beneficiaries who died in acute care hospitals with a diagnosis of COVID-19.

Results: We included 1,133,273 beneficiaries who died without COVID-19 during the study period. We found that the proportion of Medicare beneficiaries who died at home or in the community setting increased (difference-in-differences [DID] estimate, +3.1 percentage points [pp]; 95%CI, +2.6 to +4.0 pp; P<0.001), beneficiaries who died in an acute care hospital decreased (-0.9 pp; 95% CI, -1.4 to -0.5 pp; P<0.001), and beneficiaries who died in an inpatient hospice decreased (-2.1 pp; 95% CI, -2.4 to -1.7 pp; P<0.001) during the COVID-19 pandemic. There was no evidence that death in nursing homes changed during the pandemic. We observed a similar trend across beneficiaries with cancer, COPD, or dementia, while the changes among those with cancer appeared to be the largest.

Conclusion: Using the national data on Medicare beneficiaries, we found that site of death shifted from acute care hospitals and inpatient hospice to home during the COVID-19 pandemic, with no impact on nursing home deaths.

C146

Timing and Setting of Advance Care Planning among Medicare Decedents in 2016-2019

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Background: The Centers for Medicare & Medicaid Services began to reimburse clinicians for advance care planning (ACP) discussions, effective January 1, 2016. However, evidence is limited on how the timing and setting of ACP visits have changed since ACP billing codes have been introduced. We sought to characterize the utilization of the first ACP claim among Medicare decedents to inform future modifications to ACP billing codes.

Methods: Using a random 20% sample of Medicare fee-for-service beneficiaries aged 66 years and older who died in 2016-2019, we identified the first billed ACP discussion for each beneficiary from 2016 through 2019 and calculated the time (in months) from the date of first ACP discussion to the date of death. We also determined the setting of ACP discussion using the place-of-service code in the claims data.

Results: Our study included 820,695 beneficiaries (mean [SD] years of age, 83.1 [8.8]; 54.2% female). The proportion of beneficiaries who had at least one ACP discussion increased from 5.1% in 2016 to 21.9% in 2019. We found that 46.6% of the first ACP discussions for decedents in 2016 were held during the last month before death, which decreased to 26.2% for decedents in 2019. Similarly, the proportion of the first ACP discussions held more than 12 months before death increased from 10.8% in 2017 to 34.1% in 2019. We also found that the proportion of the first ACP discussions held in the office or outpatient setting along with Medicare Annual Wellness Visit increased over time (from 7.2% in 2016 to 14.1% in 2019), while the proportion for the inpatient setting decreased (from 42.4% to 38.0%).

Conclusion: Our results suggest that ACP discussions may be occurring earlier in an individual's care and more frequently in the office or outpatient setting with Medicare Annual Wellness Visit.

C147

Association of VA-FI and Clinical Outcomes in Veterans with Cancer Hospitalized with Acute COVID-19

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Background: Veterans with pre-existing cancer diagnoses and COVID-19 infection have high in-hospital mortality. Frailty, a multi-systemic geriatric syndrome characterized by increased vulnerability to stressors, is common in patients with cancer and associated with poor clinical outcomes. Although the role of frailty in cancer patients hospitalized with COVID-19 and other infectious disease emergencies remains unclear. Our study aim was to assess the association between frailty and clinical outcomes in veterans with cancer hospitalized with COVID-19.

Methods: The retrospective cohort study included hospitalized veterans with cancer and acute COVID-19 infection at 7 VA facilities in FL and PR from March-August 2020. Frailty was assessed using a 30-item VA Frailty index (VA-FI) with scores grouped by tertiles. We collected Veterans' socio-demographics, COVID-19 PCR (Polymerase Chain Reaction) tests, clinical and utilization outcomes with chart reviews of VA databases. We ran binomial logistic regression analyses to calculate the odds of clinical and utilization outcomes according to the tertiles, adjusted for age, BMI, sex, race, ethnicity, and other conditions with greater risk for poor COVID-19 outcomes. We calculated the area under the curve (AUC) to determine the accuracy of the VA-FI for predicting in-hospital mortality.

Results: We included 122 veterans, mean age of 73.4 yrs. (SD=11.5), 95.8 %(n=113) male, and mean BMI 29.20 (SD=6.8). There were no differences in socio-demographics but chronic conditions were more prevalent in the top tertile. Compared to the low tertile, the top had a higher risk of ICU transfer OR:5.9 (95 CI:1.2-28.9) p<0.03, inpatient death OR:16.7 (95%CI:1.3-208.7) p= 0.03, nursing home placement OR:11.0 (95% CI:1.1-107.6) p= 0.04, 30-day OR:9.3 (95%CI:1.4-60.0) p= 0.02, 6-month OR:6.9 (95%CI:1.7-27.1) p= 0.01, and 1-year post-discharge mortality OR:7.7 (95%CI:2.0-29.8) p= 0.03. There were no differences in ICU admission, 30-day readmissions, or length of stay. VA-FI was a good predictor of inpatient mortality, AUC 0.71 (95%CI:0.59-0.83) p<0.02.

Conclusion: Our study shows that higher levels of frailty are associated with several clinical outcomes in inpatients with COVID-19. The VA-FI can screen for the risk of a wide range of clinical outcomes in patients with pre-existing cancer and acute COVID-19 infection to drive clinical decisions.

C148

Social networks as transportation alternatives in the transition to non-driving

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Background: Individual transportation alternatives, e.g., rides from friends/family, are important coping factors in the transition to non-driving. However, it is unclear whether certain social network characteristics are more strongly associated with access to individual transportation alternatives. Our objective was to characterize the association between changes in social network characteristics and the odds of receiving rides from family and friends.

Methods: We analyzed National Health and Aging Trends Study for community-dwelling older adult drivers in 2015 (n = 4,411). We conducted weighted logistic regression analyses to estimate whether social network variables (living with a spouse/partner, living with a child, or having people to talk to about important things) and their one year changes between 2015-2016 were associated with the odds of receiving a ride from a family member/friend in 2016, adjusted for driving status and biopsychosocial characteristics.

Results: Older adults had a significantly higher odds of receiving a ride from a family member/friend in 2016 if they reported having ≥ 5 people to talk to in both rounds (OR = 2.86, 95% CI: 1.91-4.29) or in the 2015 round only (OR = 1.44, 95% CI: 1.04-1.98) when compared to those who did not in either round. Older adults also had a higher odds of receiving a ride in 2016 if they reported living with a spouse/partner in either 2015 only (OR=2.31, 95% CI: 1.26-4.22), 2016 only (OR=1.22, 95% CI: 1.00-1.49), or both rounds (OR=2.07, 95% CI: 1.75-2.46) when compared to those who did not in both rounds. There was no significant difference in the odds of receiving a ride based on the status of living with a child in either or both rounds during the study period.

Conclusions: Our findings are consistent with previous evidence that social network members outside one's household may be particularly important for access to individual transportation alternatives. Next steps include investigating the feasibility of screening for social support beyond marital status and living arrangement in clinical settings and the potential impact of identifying those with limited support prior to the transition to non-driving.

C149

Attitudes of Primary Care Providers and Staff Towards LGBTQ Older Adults

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Background: LGBTQ older adults face immense obstacles seeking healthcare compared to heterosexual peers. Negative experiences at the hands of healthcare professionals are a primary barrier to care.[1] Data suggests medical professionals receive little training specific to LGBTQ patients.[2] Previously, the documentary film, *Gen Silent*, has been used to address knowledge gaps and biases of healthcare professionals.[3]

Methods: Participants were recruited via email. The survey developed by Porter et al. was used to evaluate anonymous changes in participants' knowledge, perceptions, and attitudes towards LGBTQ older adults before and after a showing of an excerpt of *Gen Silent*.[4] A paired t-test was used to evaluate for significant differences.

Results: Total N=24 with n=16 for staff and n=8 for providers. Statistically significant differences between staffs' responses were found in awareness of policy disparities between LGBT and heterosexual older adults (p=0.002) and barriers to care faced by LGBT older adults compared to heterosexual peers (p=0.03) as well as referral of LGBT older adults to local resources (p=0.03). Statistically significant differences in providers' responses were also found in awareness of barriers to care (p=0.001) and current referral (p=0.05) as well as awareness of resources for LGB and T persons (p=0.006 and 0.001 respectively).

Conclusions: Though this was a small study, it indicates that *Gen Silent* can increase awareness of challenges faced by LGBTQ older adults, sparking conversations that can lead to more inclusive healthcare linkage to resources in the community.

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C150

Factors Associated with Medicare Advantage Disenrollment among Older Adults Living with Dementia

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Background: Little is known about factors associated with Medicare Advantage (MA) disenrollment among older adults with dementia. In addition, few studies have examined plan selection within spousal dyads.

Methods: We used the 2010-2018 Health and Retirement Study (HRS) linked with Medicare enrollment data. We included respondents with dementia ≥65 years and enrolled in MA in January of each interview year (n=2,305), among whom 737 had a spouse ≥65 years. Multinomial regression was used to examine factors associated with change of MA plans from January of the interview year to the following year (i.e., staying in the same MA plan, switching between MA plans, and disenrolling from MA to fee-for-service [FFS] Medicare) in older adults with dementia overall and those with a spouse. Risk factors included demographics (sex, age, race/ethnicity), socioeconomic status (e.g., marital status, education, family income, Medicare and Medicaid dually eligibility), health status (activities of daily living [ADL], instrumental ADL [IADL], comorbidities), health care use (inpatient hospitalization and nursing home stay), and spousal change of MA plans.

Results: In MA enrollees with dementia, 78.6% stayed in the same MA plan within a year, 17.0% switched to a different MA plan, and 4.5% disenrolled from MA to FFS. Relative to those aged 65-74, those 75-84 had lower odds of switching between MA plans (odds ratio [OR]: 0.6 [95% CI: 0.5-0.9]). Duals were more likely to switch between MA plans (OR: 1.5 [95% CI: 1.0-2.2]) and disenroll from MA to FFS (OR: 1.9 [95% CI: 1.1-3.4]). Higher functional impairment (per IADL increase, OR: 1.3 [95% CI: 1.0-1.6]), hospitalization (OR: 1.5 [95% CI: 1.0-2.1]), and nursing home use (OR: 6.2 [95% CI: 1.6-25.1]) were associated with higher likelihood of disenrollment from MA to FFS. Spouse's switch between MA plans (OR: 72.9 [95% CI: 33.0-161.1]) and disenrollment from MA to FFS (OR: 112.4 [95% CI: 23.9-528.2]) was associated with higher likelihood of their switching or disenrollment of MA.

Conclusions: Among older adults with dementia, health care use (hospitalization and nursing home use) and spousal disenrollment from MA was associated with their MA disenrollment.

C151 Encore Presentation

Screening for Elder Abuse in the Veterans Health Administration: Results from a Nationwide Evaluation

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Background: Elder abuse (EA) is common and has devastating health consequences yet is rarely detected by healthcare professionals. Veterans are at high risk for EA, and the Veterans Health Administration (VHA) has experience screening for complex psychosocial phenomena including intimate partner violence. While the VHA has national policy regarding mandatory reporting of EA cases, little is known about the extent to which VHA sites currently screen for EA in a standardized fashion and what approaches are used. Our goal was to describe current EA screening practices across VHA sites.

Methods: We conducted a national survey of all 170 parent station VHA medical centers from January to August of 2021. Surveys were distributed electronically to the Social Work Chief at each site, as social work is responsible for interpersonal violence response in VHA. The survey assessed the presence and characteristics of EA-specific screening practices as well as general abuse/neglect screening conducted with patients of all ages, including older adults. Follow up emails were sent to sites who reported conducting screening requesting additional details not included in the initial survey.

Results: Overall, 138 sites (81%) responded to the survey. Among respondents, 3% reported screening older adults for EA using a previously published tool, while 2% reported screening for EA with an unstudied or locally developed tool. Forty-three percent reported doing general abuse/neglect screening using unstudied questions/tools for patients of all ages, and 41% reported no EA screening at their site. Screening frequency, clinical setting where screening occurred and provider type performing screening varied significantly between sites.

Conclusions: The wide variability in current EA screening practices in VHA presents an important opportunity to standardize and improve EA detection practices for Veterans. Lessons learned in VHA could help advance the evidence base for EA screening more broadly.

C152

From the Other Side of the Window: Care Partner Reflections on Post-Acute Care Experiences During COVID-19

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Background: The COVID pandemic posed unique challenges to those residing in skilled nursing facilities [SNFs]. Many facilities instituted restrictions during the pandemic with untold effects. This study investigates the perceptions of care partners of patients with dementia in post-acute facilities during the COVID-19 pandemic.

Methods: This is a single-institution, retrospective analysis. Eligible participants were care partners of patients with dementia admitted to our institution and discharged to a skilled nursing facility [SNF] from March 1st, 2020 through March 1st, 2021. Included patients were over age 60 years of age, had received a Geriatrics Medicine inpatient consult, had a diagnosis of dementia, and were discharged to SNF for post-acute care. Primary contacts were administered an IRB-approved survey assessing their perceptions of their loved one's care trajectory while admitted to SNF.

Results: Preliminary analysis of the first 20 participants. Among those contacted for the study, participation rate is greater than 90%. Two-thirds of the respondents had power-of-attorney or guardianship responsibilities. Common themes in the qualitative responses included poor communication, perceived neglect and concerns for overmedication. Results of patient outcomes are summarized in the table.

Conclusions: This is an early analysis of an ongoing study. The majority of care partners of patients with dementia discharged to SNF report negative experiences during visitor restrictions and reported further decline upon discharge from skilled nursing. Participants provided a rich variety of personal responses demonstrating perceived impacts of the restrictive policies on patient care, family trauma and iatrogenic harm that can help inform future visitation policies.

Primary Patient Outcomes

Noted upon discharge from SNF:	Percentage reporting:
Increased depression/anxiety	60%
Mobility decline	90%
Increased assistance needed with personal care	85%
Increased memory/behavioral problems	65%
Weight loss	65%
Able to return home following SNF discharge	50%

C153

Provider Experiences with Deprescribing versus Continuing Bisphosphonates in Nursing Home Residents with Dementia

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Background: Few guidelines address fracture prevention medication use in nursing home (NH) residents with dementia. We sought to identify factors that influence prescriber decision-making regarding use or deprescribing of bisphosphonates.

Methods: We conducted 12 semi-structured interviews with prescribers who care for older adults with dementia in NHs using snowball recruitment. Interviews focused on experiences treating fractures, benefits and harms of bisphosphonates, and experiences with deprescribing. Coding was guided by the social-ecological framework including **patient-level** (intrapersonal) and **external** (interpersonal, health system, community, and policy) influences.

Results: Most (83%) prescribers were physicians; 75% were female and 75% were White. Most (75%) spent less than half of their clinical effort in NHs and half were in the first decade of practice. Among **patient-level influences**, providers uniformly agreed that a prior bisphosphonate treatment course of several years, emergence of adverse effects, and changing goals of care or limited life expectancy were compelling reasons to deprescribe. **External influences** were most often discussed as barriers to deprescribing. At the interpersonal level, prescribers noted that family/informal caregivers are diverse in their involvement in decision-making, and frequently concerned about the adverse effects of bisphosphonates, but perceive deprescribing as "withdrawing care." At the health system level, providers felt that frequent transitions make it difficult to determine duration of prior treatment and to implement deprescribing. At the policy level, prescribers highlighted the lack of guidelines addressing residents with limited mobility and dementia as well as deprescribing.

Conclusion: Prescribers identified multiple influences on bisphosphonate deprescribing decisions, including health system factors and family caregiver dynamics, that may influence future guidelines on bisphosphonate use in NHs. Further research is needed to evaluate the residual benefits of bisphosphonates in medically complex older NH residents.

C154

"It made me not just give up": Implications of participation in Alzheimer's and Dementia Care-ECHO in primary care settings

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Background: Alzheimer's and Dementia Care-ECHO (Extension for Community Healthcare Outcomes), or AD-ECHO, is based on a nationally renowned model of specialty care education and consultation that focuses on building and disseminating dementia expertise among specialty neurologists and primary care teams. We sought to identify knowledge gaps and workforce implications based on the implementation of AD-ECHO in primary care.

Methods: We conducted 24 hours of direct observations during two AD-ECHO series comprised of a total of 24 sessions that included 27 practices and 140 participants. We are currently conducting qualitative interviews with primary care participants about the impact of participation on their practice (n=8). Data was analyzed using qualitative coding and thematic analysis.

Results: During interviews, participants identified the following implications: (1) Improved communication with primary care team members and specialists around dementia diagnosis and care- e.g. better able to ask the "right" questions; (2) Empathy and reassurance from specialists and other PCPs was powerful and confidence-building; (3) Knowledge was gained about diagnostic tools, atypical dementias, medications (prescriptions and polypharmacy), community resources, and other clinicians' approaches; (4) PCPs identified approaches to disseminating knowledge learned during AD-ECHO, including weekly meetings, emails, changing protocols, building new training programs, and better triage approaches; (5) Most participants wanted mechanisms for ongoing interaction with the AD-ECHO network.

We thematically classified questions raised by PCPs during AD-ECHO sessions to identify knowledge gaps: diagnostic workup (e.g. how to use diagnostic tools), medical management (e.g. symptom management, dementia in the context of substance abuse), behavioral symptoms (e.g. aggression and agitation), social services (e.g. access to services), education and support (e.g. caregiver burnout), and communication (e.g. discussing disease progression).

Conclusions: AD-ECHO helped PCPs with a range of practice areas. Lessons learned in AD-ECHO sessions can be expanded through formal and informal networking among PCP communities to improve care and communication.

C155

Wandering behavior is associated with an increased risk of acquiring SARSCoV-2 infection in VA CLC residents

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Background: SARSCoV-2 infection results from contact with virus laden aerosols or fomites. Congregate settings and behaviors such as wandering may amplify this infection risk. We aimed to assess the whether wandering behavior increases SARS-CoV-2 infection risk in Community Living Centers (CLCs), i.e., nursing homes for Veterans

Methods: We evaluated CLC residents from 9/2019 to 12/2020 in this observational retrospective cohort study. We indexed wandering behavior upon the first test confirming SARSCoV-2 infection and compared this to a random negative test in residents without SARSCoV-2. We identified Veterans with wandering from MDS 3.0 assessments nearest to the index date before SARSCoV-2 test. For adjustment, covariate selection was assisted by LASSO regression analysis. We assessed the association between wandering and SARSCoV-2 infection in the overall cohort and in the ADRD only stratum.

Results: Of 9995 Veterans, 4% were female, 71% white and averaged 73 years old. Of 379 wanderers, N=72 (19%) developed SARS-CoV-2 compared to N=1176 (12%) in those without wandering behavior. The adjusted RR (95% CI) of SARS-CoV-2 in wanderers compared to non-wanderers in the overall cohort was 1.34 (1.04,1.69). CLC residents with dementia who wandered had an adjusted RR of 1.19 95%CI (.91,1.52) for SARS-CoV-2 infection.

Conclusions: Wandering behavior is associated with an increased risk of SARS-CoV-2 infection in nursing homes. As infection risk is shared with that of underlying dementia, these may conflate risks

specific to wandering with that of direct contact with caregivers due to greater caregiving needs. Further study is warranted to determine if residents who wander need different management considerations to reduce spread of contagious infections like SARS-CoV-2.

Table 1: Association of wandering behavior and risk of SARSCoV-2 infection in VA CLC veterans

	Overall Cohort	ADRD Only	Without ADRD
RR (95% CI)	1.55 (1.21, 1.96)	1.33 (1.03, 1.07)	2.33 (.92, 4.76)
aRR* (95% CI)	1.34 (1.04, 1.69)	1.19 (.91, 1.52)	2.07 (.81, 4.26)

***adjusted for Age, marital status, psychoses, TBI, Tumor, DM, Drug abuse, ADL score, Anemia, and pulmonary comorbidities**

C156 Encore Presentation

Scope of Practice Laws for Nurse Delegation and Turnover of Licensed Practical Nurses in Home Health

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Background: Nursing turnover can compromise the quality and continuity of home health care. An important driver of job satisfaction among nurses is autonomy, defined as a nurse's ability to make decisions that are informed by their education and experience. Scope of practice laws, which determine the tasks nurses are allowed to perform and delegate, are a key element of autonomy and vary considerably across states. Yet, it is unclear whether scope of practice is associated with turnover among nurses. In this study, we used human resources records from a multi-state home health care organization and considered a key measure of scope of practice: whether registered nurses can delegate tasks to unlicensed aides.

Methods: Our primary data source was proprietary, administrative data provided by one of the largest home health care organizations in the U.S. We obtained human resources records tracking the hiring date and termination date (if applicable) for employees between January 2016 and December 2018. During this time period, the organization operated in more than 30 states and managed over 200 home health agencies. Our dependent variable was state-level turnover rates in 2016, 2017, and 2018 for RNs and LPNs. The independent variable of interest was the number of tasks that could be delegated to unlicensed aides, which is tracked by AARP's Long-Term Services and Supports State Scorecard. We used weighted least squares, weighting observations by the number of nurses working in that profession-time-year and interacting the task delegation variable with profession (RN or LPN).

Results: Our final study sample included 1,820 LPNs, 1,033 (57%) of whom separated from their position, and 3,309 RNs, 2,081 (63%) of whom separated from their position. There was no significant relationship between task delegation and turnover among registered nurses, but more task delegation was correlated with lower turnover rates for licensed practical nurses.

Conclusions: These results suggest that the ability of RNs and LPNs to delegate tasks to unlicensed aides relates more to workload of LPNs than to the autonomy of RNs and LPNs themselves. These results point to a potential and unexplored benefit of expanding scope of practice for nurses.

C157 Encore Presentation

Adult Day Health Center Ownership, Staffing, and Participant Outcomes

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Background: Growing demands for specialized care for older adults living with disabilities and for caregiver respite have resulted in rising use of adult day health centers (ADHCs). ADHCs vary in size, ownership, participant demographics, and services offered, with many operated by multi-site chain organizations and for-profit companies. This study examines whether ADHC ownership is associated with services, staffing, and outcomes.

Methods: We used facility-level data from the restricted-use 2014 National Post-Acute and Long-Term Care Study (NPALs) Adult Day Services Center module. Outcome variables were measures of ADHC ownership and staffing, and rates of participants' emergency department visits, hospitalizations, and falls. The first part of the analysis was descriptive, focused on participant and staffing patterns. We then estimated multivariate regressions to examine staffing differences when controlling for ADHC characteristics such as size, region, and other services offered. We also estimated Poisson regression models to measure differences in rates of emergency room visits, hospitalizations, and falls.

Results: We found little difference in staffing or participant outcomes between for-profit vs. not-for-profit ADHCs. Chain-affiliated ADHCs had lower proportions of Black participants. Chain-affiliated ADHCs reported fewer licensed nurse hours per participant day than did independent ADHCs. They also reported fewer social workers and activity staff per participant day. In multivariate regressions, total staff hours per participant day were significantly lower among chain-affiliated ADHCs (p=0.012). Chain-affiliated ADHCs had lower average percentages of participants with emergency department visits and falls than independent ADHCs, and no difference in hospitalization rates. In the Poisson regressions, chain-affiliated ADHCs had fewer emergency department visits and falls than independent ADHCs. The percentages of Black and Hispanic participants were associated with lower staffing but not worse outcomes.

Conclusions: Our results suggest that chain-affiliated ADHCs have lower staffing but better participant outcomes than independent ADHCs. Future research should examine the intersection between participant population, staffing, and outcomes to identify potential causes of the relationships identified in this study.

C158

Use of Real Time Clinical Video Telehealth to Home by Primary Care Providers within the Veterans Health Administration during the first wave of the COVID-19 pandemic: variability across VA stations and with time

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Introduction: Early in the COVID pandemic, the Department of Veterans Affairs encouraged use of Clinical Video Telehealth to Home (VT2H) appointments instead of in-person visits whenever possible. To what extent primary care providers embraced this policy and used VT2H during the pandemic is not known.

Objective: To determine the extent to which use of VT2H for primary care LIP visits (PCLVs) varied over time and across the Veterans Health Administration (VA) during the first 18 months of the COVID pandemic, and if there was an association between VT2H usage and VA station-related factors.

Materials and Methods: All outpatient encounters (n=12,143,456) for Veterans (n=4,373,638) that had VA PCLVs during the period of observation were categorized as conducted by VT2H, in-person, or phone. The change over time in the percentage of total PCVs conducted by VT2H was plotted and associations between

VA station factors and VT2H usage were analyzed using simple statistics and negative binomial regression.

Results: Between March 2020 and mid-August 2020, VT2H visits increased from <2% to 13% of all VA PCLVs. However, VT2H usage varied substantively by VA station and declined system-wide to <9% of PC visits by July 2021. VA stations that serve a greater proportion of rural Veterans were found less likely to use VT2H.

Discussion: The VA was highly successful in increasing the use of VT2H for PCLVs during the first phase of the COVID Pandemic. However, VT2H usage varied widely by VA station and over time. Beyond rurality, it is unknown what other station factors may be responsible for the observed variance in VT2H use.

Conclusion: Future investigation is warranted to identify the unique practices employed by VA stations that were most successful in using VT2H for PCLVs and whether they can be effectively disseminated to other stations.

C159

Boarding of Older Adults: A Concerning Trend in the Emergency Department

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Background: Emergency department (ED) boarding is the practice of holding admitted patients in the ED due to the lack of inpatient beds or space in other facilities where the patient can be transferred. We identified one ED in our health system with a high rate of boarding. We sought to identify factors associated with ED boarding in this rural community hospital ED by comparing it to a similar urban community hospital ED.

Methods: We conducted a retrospective observational study during the period of 1/7/2021 to 6/30/2022 comparing a rural and an urban community hospital in our 16-hospital health care system in Wisconsin. Boarding was defined as a patient waiting eight hours or more in ED for disposition. The rural hospital (99 beds) was chosen as it was identified by the health care system as having a much higher percentage of boarders, particularly older adults. The urban hospital (275 beds) was chosen for comparison due to a similarity in the number of patients seen in the ED with a similar age demographic. Both hospitals have geriatric ED accreditation and have a virtual geriatrics consultation service. Data was obtained for older adults, 65 years and older, from the electronic health record consisting of deidentified, aggregate data. Acuity of patient illness was calculated by EHR on a scale of 1 to 5 where lower scores indicate higher acuity.

Results: The total number of patients seen in the rural ED was 21,167; 34% were 65 years or older and 99% of the older patients were white. In the urban ED 23,814 patients were seen; 28% were older adults; 96% of older patients were white. The rural ED had a slightly higher acuity score (2.83) compared to the urban ED (2.62) which indicates a slightly lower complexity. Overall, the rural ED had a proportionately higher number of boarders compared to urban ED (8% vs 2% of all patients). Of these, a much higher percentage were older compared to the urban ED (42% vs 28%).

Conclusion: When compared with the urban ED, the rural ED had a larger proportion of boarders, particularly older adults. ED boarding does not appear to be related to patient characteristics (such as a higher proportion of older adults or higher complexity of patients) but may instead be influenced by system and community factors, such as number of inpatient and nursing home beds available. In the future we plan to work with leadership to further determine these factors.

C160

Reach, Adoption, Implementation and Maintenance of STEADI in Outpatient Rehabilitation

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Background: Falls are a leading cause of morbidity and mortality among older adults ≥65 years.[1] The Centers for Disease Control and Prevention (CDC) developed the STEADI (Stopping Elderly Accidents, Deaths, and Injuries) initiative to promote falls screening, assessment, and interventions for prevention in primary care.[2] Recently, a health system implemented STEADI in outpatient rehabilitation. This retrospective implementation evaluation describes the implementation outcomes of falls screening and assessment using the RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) framework.

Methods: De-identified Electronic Health Record data from January 2018 to December 2021 was obtained from the health system. Using the first episode only for older adults, the working sample was 65,399. Data were analyzed using SAS 9.4. Frequencies and percentages described categorical data and means and standard deviations described continuous data.

Results: STEADI was implemented in 34 rehab clinics starting in Dec 2017. The majority of older adults had one episode of care per year (84.9%) and were seen by a PT (88.1%). Forty-four percent screened at risk for falls. The majority of older adults were Caucasian (86.4%), and female (63.3%). Table 1 delineates RE-AIM definitions and outcomes.

Conclusions: STEADI was implemented in outpatient rehab clinics throughout a large health system. Screening and functional assessment rates were higher compared to those in primary care in the literature[3,4] but declined over time. This study provides evidence that STEADI is implementable in outpatient rehabilitation. Formal implementation studies would be beneficial to identify barriers, facilitators, and appropriate implementation strategies to support the breadth of assessment and interventions and fidelity to STEADI in this setting.

Table 1. RE-AIM constructs, operational definitions, and results

RE-AIM domains	RE-AIM definition	Study operationalization	Results
Reach	The number, proportion, and representativeness of older adults who were screened for falls	-Percent of adults ≥ 65 with valid screening STEADI Stay Independent Questionnaire (SIQ) score	Mean 76.4%
Adoption	The number and proportion of: a) clinics; and b) therapists who screen and assess older adults for fall risk according to the STEADI initiative	-Percent of physical therapists (PTs), Occupational Therapists (OTs), and Speech and Language Pathologists (SLPs) who attempt to complete a SIQ -Percent of PTs, OTs, and SLPs who complete a SIQ appropriately -Percent of PTs, OTs, and SLPs who complete a balance or gait functional outcomes measure on an at-risk patient	-Mean 90.3% -Mean 76.4% -Mean 52.7%
Implementation	At the setting level, implementation of the STEADI initiative	Process of implementing STEADI initiative	-Mandate -EHR revisions -Email with instructions -Educational sessions -Clinical lead -Clinic champions -Chart audits
Maintenance	The extent to which the STEADI initiative is sustained, and becomes part of the routine organizational practices and policies. Includes proportion and representativeness of clinics and providers that continue the intervention	Changes in clinic-level and provider-level adoption from 2018 to 2021	-Valid screenings decreased from 78.3% in 2018 to 73.7% in 2021 -Functional assessments decreased from 56.2% to 49.9%

C161

Government-Owned Nursing Home Outcomes in the COVID-19 Pandemic

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Background: Government-owned nursing homes constitute around 6% of all nursing homes in the U.S., compared to for-profits, which are approximately 70% of the total, and not-for-profits, which are about 25% of nursing homes. The purpose of this analysis was to compare ownership models of nursing homes on various COVID-19 outcomes.

Methods: Public data with variables on COVID-19 outcomes, provider traits, and staffing were obtained from the Centers for Medicare and Medicaid Services. Data were stratified by year (2020 and 2021). There were 973 government-owned nursing homes identified in 2020 and 966 government-owned nursing homes in 2021. Linear regression analyzed government ownership of resident COVID-19 cases and COVID-19 case fatality rate (CFR). Covariates included the number of beds in the nursing home, overall quality rating, and clinical staff hours per day. The 2021 model also included resident and staff vaccination rates as covariates.

Results: Compared to for-profit and not-for-profit nursing homes, government ownership of nursing homes was significantly associated with preferable outcomes in resident COVID-19 care. In 2020, nursing home ownership accounted for about 22% of the variance in COVID-19 cases {R2= .215, F(5,68721)=375, p=<.001} and about 10% of the variance in resident CFR {R2=.01, F(5,68579)=147.6, p>.001}. Specifically, there were 70% fewer cases of COVID-19 and 9% lower CFR in government-owned facilities than in for-profit facilities. Positive outcomes in government-owned facilities were sustained in 2021. Again, ownership accounted for 36% of the variance in COVID-19 cases {R2=.36, F(7,7528)595.6, p<.001} and about 3% of the variance in CFR {R2=.03 F(7,7528) p>.001}, even after controlling for staff and residents' vaccination rates. There were 80% fewer cases of resident COVID-19 as compared to for-profits and a 9.6% lower CFR.

Conclusions: Controlling for nursing home size, staffing, quality, and vaccination of residents and staff, government ownership was associated with fewer resident cases of COVID-19 and lower resident CFR. This trend is observed throughout years 1 and 2 of the pandemic. Notably, ownership of facilities accounted for more than a third of the variance observed in the number of cases of COVID-19 among residents.

C162

Opioid and Substance Use Disorder Services in Nursing Homes: Survey Development through Delphi

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Background: Despite increasing demand for opioid and substance use disorder (OUD/SUD) services in nursing homes (NHs), the access to and quality of services in NHs are largely unknown and controversially measured. We utilized a modified Delphi method to develop a consensus-based survey that measures the availability, organization, and delivery of OUD/SUD services in NHs. **Methods:** A three-round Delphi survey was conducted online from Oct-Dec 2022. We reported results from Round 1. The Delphi panel rated 55 questions (63 unique items) from the National Substance Use and Mental Health Services Survey (N-SUMHSS) on the applicability for NHs using a 9-point scale where 9="extremely applicable". Panelists rated the degree to which survey questions assessed OUD/SUD care needs of NH residents and operational conditions of NHs. Items were organized into 16 subdomains that captured OUD/SUD services availability, delivery, financing, etc. Consensus was assessed by comparing interpercentile range with/without adjusting for symmetry, following the RAND/UCLA Appropriateness Method. Items were deemed "applicable" if median ≥7 without disagreement. **Results:** The Delphi panel included 34 expert clinicians, social workers, administrators, and non-clinician researchers from geriatrics, addiction medicine, SUD services regulation, NH operations, managed care, and addiction public health from 13 states. Twenty-five panelists participated in Round 1 (73.5%). Most panelists were female (72.7%), white (68.2%), aged 31-45 (59.1%), and served NH residents (56%) for average 10.3 years (SD=8.2). Disagreement existed in 4 items (6.3%). Of the other 59 items, the median ranged from 7 to 9, suggesting "applicable". We observed statistically significant differences by gender, race, age, for some but not all items. We did not observe significant differences by prior NH care exposure. Suggestions for survey modification included: OUD/SUD services subcategories and client subgroups uncommon in NHs, clarifying target population, adding items that assess NH's staffing and partnership with local OUD/SUD providers. **Conclusions:** A multi-stakeholder interdisciplinary panel reached consensus in Round 1 that the N-SUMHSS can be adapted for NHs. This study provides evidence on the construct of survey measures of OUD/SUD care access and quality in NHs. Next steps are analyses for Rounds 2 & 3.

C163

The impact of the COVID-19 pandemic on psychosocial well-being and cognitive functioning in healthy older adults

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Background: The detrimental effects of quarantine and isolation on mental health due to the COVID-19 pandemic are widespread. However, there is little research on how quarantine and isolation have impacted the psychological and cognitive functioning and related outcomes of community dwelling older adults in the United States, who are at a disproportionate risk for hospitalization and death related to COVID-19 diagnosis and thus have a greater need for physical isolation. This study aims to evaluate the prevalence of isolation and subjective mood complaints due to the pandemic in a sample of healthy older adults and further aims to explore associations between mental health and performance on objective cognitive measures.

Methods: Data were drawn from the Development of Novel Measures for Alzheimer's Disease Prevention Trials (NoMAD) study (NCT03900273). Participants are enrolled in the study for 1 year and receive a battery of cognitive measures and a self-report questionnaire designed to assess the impact of the pandemic on cognitive and psychological health at 3 timepoints. A total of 187 older adults who are cognitively healthy or have early mild cognitive impairment (eMCI) (mean age 70.11±6.45, 65.24% women) and had completed a COVID-19 Questionnaire (CQ) were included in our initial analyses. We additionally examined the association between psychological health and global cognition in a subsample that completed Mini Mental Status Examination (MMSE) within 3 months of a CQ.

Results: Among 187 older adults, 32.62% experienced isolation, 31.02% anxiety, 21% fatigue, and 20% depression. After adjusting for age, gender, and education, results from multivariate analysis of covariance did not reveal significant associations of global cognition scores with depression, fatigue, anxiety, or apathy. However, those who endorsed isolation scored lower on the MMSE at the trend level, compared with those who did not endorse isolation (mean 28.12±1.74 in isolation vs. 28.78±1.04 in those without isolation, p=.06).

Conclusions: Our results are consistent with the literature, suggesting high prevalence of isolation, anxiety, fatigue, and depression due to the COVID-19 pandemic in older adults. Our preliminary results on global cognition prompt future research to identify how mood changes and isolation related to the COVID-19 pandemic may have lasting effects on the cognition of older adults.

C164

Sleep Habits in Older Veterans with OSA and Insufficient PAP Use: An Important Target for Intervention

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Background: Obstructive sleep apnea (OSA) is common in older adults, with adverse effects on health and quality of life. More than 50% of patients (particularly older adults) with OSA are not using positive airway pressure (PAP) a year or more after initiating this first-line OSA therapy. We compared middle-aged (MA, 50-64.9yrs) and older adults (OA, ≥ 65yrs) with OSA and insufficient PAP use a year or more after diagnosis to explore whether advanced age is associated with differences in sleep symptoms or PAP behavior.

Methods: A random sample of 107 MA (n=49, mean age=58) and OA (n=58, mean age=75) veterans diagnosed with OSA and prescribed PAP within the prior 1 - 5 years, who were identified from administrative data at one urban VA medical center, completed a structured telephone questionnaire to assess sleep-related symptoms and habits, and PAP-use behavior over the past month. Analyses compared MA and OA using independent samples t-tests and logistic regression.

Results: There were no significant differences between MA and OA in symptoms of difficulty falling asleep, staying asleep, or waking up earlier than desired ($.19 \leq \chi^2 \leq 1.44$, $p > .05$), with a similar number endorsing ≥1 symptom between age groups ($38 \leq n \leq 54$). There were also no differences between groups in frequency of PAP use (hours of use and number of nights used; $-.03 \leq t \leq -.11$, $p > .05$). Among respondents who had discontinued PAP, OA did not differ significantly in their willingness to try PAP again compared to MA ($\chi^2 = .86$, $p > .05$), with 60%-71% of both groups endorsing willingness to use PAP.

Conclusions: Compared to MA, OA with previously diagnosed OSA and insufficient PAP use had no differences in sleep-related symptoms or habits, or PAP-use behavior. The majority expressed a willingness to try PAP again, which identifies an important target population for future intervention.

C165

Dysfunctional Beliefs That Interfere with Sleep in Middle to Old Age: The Role of Age, Pain, and Other Factors.

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Background: Prior psychological research has proposed an association between advanced age and certain beliefs that affect a range of health-related behaviors, which may limit access to appropriate behavioral treatments. There has been limited research on whether there are age-related changes in beliefs about sleep that impact an individual's sleep patterns and response to behavioral treatment. This study explored whether advanced age and other factors that impact attention/processing speed (e.g., pain, insomnia symptoms, daytime sleepiness) are associated with dysfunctional sleep-related beliefs in middle aged- and older adults with sleep disturbance.

Methods: Secondary analysis was conducted in a sample (N=459; mean age 63 years [range 50 – 87], 44.3% White, 22.1% African American) of veterans referred to a sleep disorders center in a large Veterans Administration urban health system. Measures included Dysfunctional Beliefs About Sleep (DBAS), Geriatric Pain Measure (GPM), Epworth Sleepiness Scale (ESS), and diagnostic criteria for insomnia disorder. Multiple regression analyses predicted DBAS score, with the inclusion of theoretically justified covariates (e.g., education level).

Results: The regression model predicting DBAS was statistically significant (F (7, 452) = 33.62, $p < .001$) and accounted for approximately 34% of the variance in scores. In this analysis, age was not a significant predictor of DBAS scores. However, subjective pain severity, insomnia symptom threshold, and daytime sleepiness predicted higher (worse) DBAS scores ($-.56 \leq b \leq 44.89$, $.16 \leq SE \leq 5.38$, $p < .001$).

Conclusions: In a large sample of middle and older-aged veterans with sleep disturbance, potentially modifiable factors such as pain, insomnia and daytime sleepiness (but not advanced age) predicted dysfunctional beliefs that impact sleep patterns and response to behavioral treatment. These findings suggest important targets for future behavioral interventions, regardless of age.

C166

Reliability of Voice, Smartphone-based Cognitive Assessment in a Natural Environment

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Background

Smartphone-based cognitive tests that are self-administered within a patient's natural environment offer an opportunity to assess cognition repeatedly over time and generalize findings to real-life situations, such as day-to-day variations that may occur in older adults taking hypnotics. We measured the test-retest reliability of a voice-based cognitive assessment app and associations between app memory test scores and traditional cognitive tests of global and executive function.

Methods

Individuals aged ≥55 years with a history of hypnotic use enrolled in a hypnotic deprescribing trial completed 4 weekly tests (s1, s2, s3, s4) of working and episodic memory on a smartphone in their natural environment, including maximum Digit Span Forward (DGS-F) & Backward (DGS-B) reached and Verbal Paired Associates (VPA) total and delayed recall errors. Session averages were compared to global cognition, processing speed, and executive functioning on traditional face-to-face testing including Mini-Mental State Examination (MMSE), Digit Symbol Substitution (DSS) and Trails A & B. Test-retest reliability and correlations between app and traditional testing were calculated (Spearman's r).

Results

19 individuals (mean age 65.6 sd 6.7) completed 2 or more sessions; 11 completed 4 sessions. Test-retest reliability (r) was .63 (s1,2), .82 (s1,3), and .45 (s1,4) for DGS-F and .05 (s1,2), .21 (s1,3), .45 (s1,4) for DGS-B. Test-retest reliability for VPA total errors were .59 (s1,2), .52 (s1,3), .78 (s1,4) and for delayed recall VPA errors were >.63 for s1 vs s2-s4. Correlations between DGS and VPA and MMSE, DSS, and Trails tests were not significant (all p values >.12).

Conclusions

Voice, smartphone-based memory testing is a promising method of assessing cognition within a natural environment, with good DGS-F and VPA test-retest reliability, and may capture unique aspects of cognitive functioning. Performance in this small sample was not significantly correlated with global cognition, processing speed, or executive functioning assessed traditionally, but the power to detect such relationships was limited by range effects and sample size.

C167

Subjective report of executive dysfunction is associated with worse neuropsychological performance and more severe cognitive diagnosis

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Background: The prevalence of cognitive decline is increasing. While self-reported memory complaints are somewhat predictive of future cognitive decline, patients with dementia also present with deficits in executive functions, such as problem-solving, task organization, and anger regulation. The Behavior Rating Inventory of Executive Function-Adult (BREIF-A) is a quick self-reported measure of executive dysfunction. However, the relationship between the BREIF-A and neuropsychological performance remains unclear. The current study sought to clarify this question.

Methods: Participants were 116 older adults (age>60) broken down into groups including Alzheimer's Disease (AD; *n*=9), mild neurocognitive disorder (mNCD; *n*=58), and elderly controls (EC; *n*=49). Participants completed neuropsychological testing and the BREIF-A. Cognitive composites were created by averaging z-scores on measures within a cognitive domain. Linear regression between BRIEF-A subscales and cognitive composites were conducted.

Results: The BRIEF-A Global Executive Composite (GEC; *p*=.032) and Metacognition Index (MI; *p*=.013) scores significantly predicted language. The BRIEF-A working memory scale significantly predicted immediate recall (*p*=.013), delayed recall (*p*=.048), language (*p*=.017), and executive functioning (*p*=.018). The BRIEF-A planning/organization scale significantly predicted immediate recall (*p*=.028), delayed recall (*p*=.049), executive functioning (*p*=.026), language (*p*=.003), and processing speed (*p*=.029). The BRIEF-A GEC (*p*=.004), MI (*p*=.012), and BRI (*p*=.004) scores significantly predicted participant diagnosis.

Conclusions: Overall, findings revealed that executive and self-regulation complaints on the BREIF-A were consistent with worse performance on neuropsychological measures and more severe cognitive diagnoses. Importantly, the questionnaire assesses for day-to-day difficulties beyond memory complaints. Thus, the BREIF-A may be a quick, low-cost screening measure for cognitive decline.

C168

Characterizing caregiver health-management support to older adults with multimorbidity: the critical roles of collaboration and conflict

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Background: Community dwelling older adults are living longer with multiple chronic conditions (MCC) and often work with family members to manage their health. Little is known about the health-related assistance caregivers provide to older adults with MCC. We sought to characterize the assistance caregivers provide and identify factors that influence the provision of support.

Methods: We conducted semi-structured qualitative interviews with 25 caregivers to older adults with MCC. Transcripts were analyzed using the framework method.

Results: Caregivers were 61.4 years old; most were Black (52%), female (68%) and were either children (44%) or spouses (40%) of older adults. Caregivers helped older adults manage MCC in medical settings (hospitalizations, accompanied to outpatient visits, communicated with clinicians) and at home (self-management support, monitoring symptoms, health coaching). Caregivers also supported the older adult's psychological well-being and assisted with instrumental ADLs (e.g., grocery shopping). Regarding provision of support, some caregivers disagreed with how older adults perceived their health problems or managed MCC. This emerged as a significant theme and caregiving relationships were categorized as conflicted (significant disagreement) or collaborative (mostly agreement). Caregivers in collaborative relationships provided more assistance managing MCC, used sophisticated organizational systems to track older adult's health, had a positive emotional connection to caregiving and self-reported good health. In conflicted relationships, caregivers perceived caregiving as an obligation, encountered significant resistance from patients in accepting assistance (patients desired to maintain autonomy) and commonly reported the older adults' undertreated mental health hindered the provision of care.

Conclusions: Caregivers to older adults with MCC fulfill diverse roles and conflict was related to more barriers and less involved caregivers. Clinicians should be aware that conflict between family caregivers may be a risk factor for worse self-management of MCC and could consider attempting to facilitate alignment of health beliefs and behaviors between patients and caregivers, when possible.

C169

Characterizing and Detecting Delirium with Clinical and Computational Measures of Speech and Language Disturbance

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Background. Delirium is an underdiagnosed syndrome affecting over 50% of hospitalized older adults. Few studies have characterized speech and language disturbance in delirium, and none have evaluated digital speech biomarkers. Our objectives were to 1) describe speech and language disturbances in delirium and 2) in relation to a dimensional measure of cognitive dysfunction, and 3) explore the detection of delirium using computational speech and language features.

Methods. Hospitalized older adults above age 75 (n=33) underwent delirium assessment (confusion assessment method, CAM, long form, and CAM-long form severity scale, CAM-S) and provided recordings while completing language tasks. Speech and language disturbances were rated using standardized clinical scales. Recordings and transcripts were processed using an automated pipeline to extract acoustic and textual features. Binomial elastic net machine learning models were used to predict delirium status with demographics alone, demographics and clinical speech ratings, demographics and computational speech features, or all of these.

Results. Of 33 participants, 10 met criteria for delirium. The Delirium(+) group scored higher on total language disturbances (p=0.05, d=0.81) and incoherence (p=0.001, d=1.41), and lower on the category fluency task (p=0.02, d=-0.97). Both groups scored lower on category fluency than the normative population (Delirium(-): p<0.001, d=-1.22; Delirium(+): p<0.001, d=-2.20). Dimensional cognitive dysfunction (higher CAM) was correlated with higher total language disturbance (r=0.41, p=0.02), incoherence (r=0.58, p<0.001), loss of goal (r=0.36, p=0.04), and lower score on category fluency (r=-0.41, p=0.02). Delirium status was best predicted by demographics and computational speech features (accuracy 78%, kappa 0.4, AUC 0.90).

Conclusions. Delirium status and dimensional cognitive dysfunction were related to overall language disturbance, incoherence, loss of goal, and category fluency score. This foundational study, is the first to use computational speech and language features to detect delirium in hospitalized older adults. Computational speech and language features may be promising as accurate, non-invasive, and efficient biomarkers for detecting delirium.

C170

Knowledge and attitudes of the patient safety attendants (PSA) for the management of delirium and neuropsychiatric symptoms (NPS) of dementia

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Background:

PSAs are employed as direct 1:1 sitters for close observation of the hospitalized patients with delirium and NPS of dementia. At our institutions, PSAs are certified nursing assistants. During the pandemic, PSAs demonstrated varied interactions with patients. It was identified that their role could help in the management of delirium and NPS. Little is known about PSAs level of knowledge on these two topics. The aim of this study was to characterize PSAs' work-related knowledge and attitudes.

Objectives: To assess PSAs' knowledge and attitudes in their care of delirium and NPS of dementia after two years of COVID -19 pandemic.

Methods: Anonymous paper/online survey created after informal interviews of nurses, PSAs, and their supervisors. Items asked PSAs on Likert scale if they have skills in 6 common situations (e.g. confusion, aggression), engage in 9 activities expected in the care of delirious patient (e.g. reorient/assure disoriented patients), and 5 items measured job satisfaction, including an item on impact of COVID-19 pandemic. The survey was offered to all PSAs working at the Johns Hopkins Bayview Medical Center (JHBMC) from April to June 2022.

Results: The survey was completed by 88% (66/75) of eligible respondents, 45 hospital-employed and 21 from an outside agency. Majority (88%) were female, black (79%), and 25-44 years of age (59%). Most (>80% across all items) felt they have adequate skills and engaged in 9 expected activities (>74% for each item). Most (96%) were interested in additional training and 60% felt like a valuable member of inpatient team. Nearly half (48%) agreed that COVID-19 pandemic affected job satisfaction. Responses did not vary significantly between PSAs employed by JHBMC or an outside agency.

Conclusions: PSAs can play an important role in the management of delirium and NPS of dementia. With interest for more training and support, we recognize the need to engage them and provide more education. Next steps include focus group interviews with PSAs to assess educational needs for patients with delirium and those with NPS of dementia. Due to the challenges recognized during COVID-19, we will explore how the hospital system can engage PSAs to feel more valued and identify challenges faced during COVID-19 and the impact on them.

C171

Increasing primary care referrals to dementia caregiver resources

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Background: Many caregivers of older adults with dementia suffer from caregiver stress, with 35% of caregivers reporting that their personal health suffers due to care responsibilities. While many primary care physicians and specialists are familiar with pharmacologic therapy for dementia, many are not aware of community resources or how to refer to these resources. As a result, many dementia caregivers do not obtain access to supportive resources. EMR Smart Sets were created via our Geriatric Workforce Enhancement Program (SETx GWEP) efforts to facilitate providers making referrals to a community-based organization; however, uptake by clinic providers has been low. The aim is to increase number of referrals for dementia caregiver community resources from clinic providers by 50% between August 2022 to February 2023.

Methods: Quality Improvement project implemented in three clinics (geriatrics, family medicine (FM), and internal medicine (IM)) in an academic medical center. This project focuses on increasing usage of the EMR referral system through increased provider and patient/caregiver education. Monthly discussions occur at Age-Friendly Health Systems (AFHS) champions clinician meetings starting in August 2022. Patient-oriented flyers/handouts were distributed in participating clinics in November 2022 targeting caregivers. FM, IM, and geriatrics grand rounds were held in November and December discussing dementia and caregiver resources.

Results: Of the patients seen in clinic with dementia 3.86% received caregiver resource referrals from January to July 2022 with a total of 13 CarePartner referrals submitted through EMR in the FM and IM clinics. From August through October 2022, 9 referrals were placed with monthly AFHS Champions reminders. After introducing patient flyers in clinic and grand rounds events, 6 referrals were placed in the month of November. The average number of monthly referrals increased from 1.86 to 3.75 YTD.

Conclusions: Education directed towards physicians and patients on available caregiver resources increased the number of referrals placed. We are on track to reach our goal to increase referrals for caregiver resources by 50% between August 2022 to February 2023.

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C172

Addressing Disparities in Care – Advance Directives: A Performance Improvement (PI) Project

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Background

Advance care planning (ACP) addresses patients' goals and preferences for end-of-life care. We examined potential disparities and barriers in implementation of Advance Directives (AD).

Methods

PI project conducted by fellows in geriatric medicine from September to November 2022 in 3 long-term care (LTC) facilities and outpatient geriatrics clinic (C) in the Bronx under supervision of attending geriatricians. Data collected using a tool; analysis performed with SPSS software.

Results

291 participants, 274 analyzed; mean age 78.9 years (C: 77.8; LTC: 80.0); male 41.2% in C, 37.3% in LTC; average 4.1 comorbidities (C: 3.5; LTC: 4.8).

Conclusions

Our findings provided evidence of non-significant disparities among racial groups regarding ADs implementation in outpatient and long-term care settings.

Females had higher rates of AD implementation, while males required a more individualized approach in ACP discussions.

Most barriers to ACP and disparities in implementation are addressable through a structured and patient-centered approach, incorporating socio-cultural aspects.

AD

Variables	C (97)	LTC (177)
Race, n (%) White (W) African American (AA) Hispanic (H) Other (O)	 19 (19.6) 32 (33.0) 39 (40.2) 7 (7.2)	 50 (28.2) 74 (41.8) 43 (24.3) 7 (4.0)
AD present, n (%) W/ AA/ H/ O	12 (63.1)/ 24 (75.0)/ 27 (69.2)/ 6 (85.7)	46 (92.0)/ 62 (83.7)/ 40 (93.0)/ 7 (100.0)
AD present, M/F, %	67.5/ 73.6	86.3/ 90.9
HCP present, n (%) W/ AA/ H/ O	12(17.3)/24(34.7)/27(39.1)/6(8.6)	34(73.9)/42(67.7)/22(55.0)/3(42.8)
MOLST present, n (%) W/ AA/ H/	1 (8.3)/ 2 (8.3)/ 1 (3.7)/ 0	42 (91.3)/ 47 (75.8)/ 35 (87.5)/ 6 (85.7)
AD addressed/revisited, n (%) W/ AA/ H/ O	19 (19.8)/ 31(32.2)/ 39 (40.6)/ 7(7.2)	48(27.5)/ 73(41.9)/ 41(23.5)/ 7(4.0)
AD Implemented, n (%) W/ AA/ H/ O	7 (41.1)/ 3 (17.6)/ 7 (41.1)/ 0	1 (16.6)/ 4 (66.6)/ 1(16.6)/ 0
Reasons for declining AD, n (%) Religious or cultural beliefs Lack of comfort with topic Prefer doctor to make decisions Family will make decisions without an AD Late stage dementia (unable to implement)	 3 (17.6) 1 (5.8) 4 (23.5) 6 (35.2) 3 (17.6)	 8 (17.0) 12 (25.5) 4 (8.5) 7 (14.8) 16 (34.0)

HCP – Health Care Proxy, MOLST – Medical Orders for Life-Sustaining Treatment, M – male, F - female

C173

An Application of the Minimal Clinically Important Difference Test for the Diabetes Distress Scale

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Background: Minimal clinically important differences (MCID) can establish the smallest meaningful degree of change between time points for a continuous measure and the clinical relevance of observed changes. In a trial evaluating empowering patients in chronic care (EPICC) versus an enhanced form of usual care (EUC) across an older cohort of individuals living with multiple chronic conditions (n=248, mean age= 67.36 years), we measured diabetes-associated distress (DD) using the Diabetes Distress Scale (DDS-17). The present study established a metric for MCID in the DDS-17 for total score and its four subscales using categories for improvement and worsening. We evaluated the role of improvement and worsening in the relationship between treatment group and change in HbA1C levels from baseline to post-intervention (PI) periods of the trial.

Methods: MCID values were calculated using the SEM small effect formula. Baseline to PI changes in DDS score were grouped into 3 MCID categories based on whether raw change corresponded to an MCID value; improved, worsened or no change. Linear regression models examined associations between treatment group and MCID category plus if differences between treatment groups in improvement in HbA1C from baseline to PI varied as a function of MCID category.

Results: MCID values ranged from 0.25 (total DDS) to 0.39 (physician and regimen distress). Relative to EUC, those in the EPICC group were more likely to have improved on the total DDS (i.e., a decrease in DDS score of 0.25 or more, $p = 0.002$) and less likely to have worsened on the total DDS (i.e., an increase in DDS score of 0.25 or more, $p = 0.007$). Although those in EPICC had greater reduction in HbA1c compared to EUC, significant interactions between treatment group and MCID category revealed differences only among those with improvement on the regimen distress ($\beta = -0.23$, $p = 0.02$) and those with no worsening on interpersonal distress ($\beta = -0.22$, $p = 0.004$) subscales.

Conclusion: MCID are a useful metric for determining clinically significant changes in DDS-17 scores as correlated with HbA1C levels. Significant associations between improvement in regimen distress and non-worsening of interpersonal distress indicate the efficacy of peer support and personalized goal-setting interventions for diabetes self-care.

C174

Well-Being Curriculum for Geriatric Fellows

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Background: Psychological, emotional, and physical well-being are necessary for the development of caring and resilient physicians. In the current healthcare environment, medical trainees could be at risk of burnout which has led to the recent promotion of wellness in training programs by the Accreditation Councel for Graduate Medical Education. Our Geriatric Fellowship Program initiated a curriculum to enhance fellow wellness.

Methods: Fellows were exposed to a program called WISER (http://bit.ly/3wiser) in September which introduced bite size well-being strategies that were reviewed daily for 10 consecutive days. After participating in this intervention, the fellows collaboratively picked their favorite well-being activities to focus on. This included 3 Good Things, which is an opportunity to reflect on good things that occur throughout the day, and Moments of Awe, which includes purposeful observation of something that provokes amazement. Fellows are sent surveys via text messaging 4 days per week at 7pm to submit their responses in regard to their 3 Good Things and Moments of Awe.

Results: After completion of the WISER intervention, fellows engaged in 3 Good Things and Moments of Awe and have submitted 59 responses for 3 Good Things during the previous 4 weeks for a response rate of 56.7%. Fellows have also uploaded 14 photos of Moments of Awe. During our weekly fellowship meetings, time has been set aside for discussing wellbeing activities as well as to review co-fellow's submitted responses to the Wiser interventions. Fellows have found the time commitment to be manageable for documenting 3 Good Things and Moments of Awe and have taken pleasure in engaging in these activities. Fellows have also created plans for social activities which have included dinner with inter-professional learners, birthday celebrations and group lunches. The fellowship clinical competency committee has now recommended setting a wellbeing goal for individual fellows as a standard part of the curriculum. Fellow wellbeing will be assessed via survey following the completion of the wellness curriculum in the next 4 months.

Conclusion: We implemented a wellness curriculum in our fellowship program and have observed active participation of the fellows in this curriculum. We will evaluate the effectiveness of the individual components of the curriculum in the next few months.

C175

Caregiver Rating of Dementia Care Quality using the Patient Portal

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Background: Asking family caregivers for their perspectives on the quality of dementia care provided to the person living with dementia is important. The patient portal offers an opportunity to assess these measures and integrate them into clinical practice.

Methods: The Caregiver Rating of Dementia Care Quality Questionnaire is a 10-item survey that focuses on dementia-related assessment and screening, treatment advice, and counseling that caregivers have received in the past year. Response are "yes, no, unsure, or not applicable". This quality improvement initiative attached the questionnaire to an electronic portal message. Messages were sent to family caregivers of patients with dementia who receive primary care from UCHealth Seniors Clinic, have a portal account, and are an active or past participant in the clinic's dementia caregiver support program, Living with Dementia.

Results: Eighty-two family caregivers were sent the questionnaire. Within 10 days, more than half read the message (48, 59%) and 20 (24%) answered the questionnaire. Of the 20 respondents, 7 (35%) were spouses and 12 (60%) were adult children. Thirteen (65%) were active participants of the dementia support program. Caregivers

were mean age 66 ± 13, 80% women, 10% Black, 5% Asian. For the 10-item questionnaire the mean number of 'yes' responses was 6.7 (range 1-10), 'no' responses was 1.2 (range 0-5), 'unsure' responses was 1.4 (range 0-4). The item with the most 'yes' responses (17/20, 85%) was assessment of behaviors, receiving advice about anticipated future problems was highest 'no' (4/20, 20%), advance care planning was most 'unsure' (6/20, 30%), and most common question marked 'not applicable' related to patient driving (9/20, 45%).

Conclusions: Utilizing the patient portal is a quick way to elicit caregiver perspectives of dementia care provided and can suggest additional needs for communication. With one message 25% responded, next steps include attempts through the portal and phone. The caregivers' experiences of the presence, absence, or applicability of services provided may or may not reflect the healthcare teams' efforts. By understanding how dementia caregivers perceive services received better informs and equips healthcare teams to sufficiently care for this population.

C176

Acceptability of Trauma-Informed Care Screening in a Skilled Nursing Facility

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Background

The Centers for Medicare & Medicaid Services (CMS) require all skilled nursing facilities (SNF) to ensure culturally competent, trauma-informed care (TIC) for residents to prevent re-traumatization. Little is known about patient receptivity to being asked about trauma and staff comfort levels in asking about trauma. Our team previously developed a screening TIC questionnaire (TICQ) for staff at 1 SNF in Atlanta, GA. In this quality improvement project, our aim was to assess the acceptability and feasibility of the TICQ using qualitative interviews with patients and staff at this SNF.

Methods

Semi-structured, in-depth interviews were conducted with staff (n=5; all black women) who administered the TICQ and patients (n=15; 67% female; 53% black) admitted in November 2022 at 1 SNF in Atlanta, GA. Interviews explored patient and staff perceptions and comfort regarding the TICQ in 1 SNF setting. Data were analyzed using thematic analysis.

Results

Most patients did not recall being asked the TICQ and gave varying definitions for "trauma." Many patients who did not report trauma during intake later revealed personal histories of trauma during our interviews. Patients identified embarrassment, shame, or not wanting others to find out about their personal traumas as primary barriers to disclosure. Staff commented on the importance of sensitivity and making patients comfortable when administering the TICQ. Staff noted discomfort with asking questions about racial-associated trauma to patients, particularly Black staff members asking this question of White patients. Staff indicated that older patients had different views of trauma than younger patients and difficulty understanding the TICQ, and thus required more tailored or simplified questions. Staff welcomed additional training on TIC and suggested role-playing sessions. Staff noted the presence of trauma could hinder patient rehabilitation progress and requested trauma sensitivity training and resources to help them provide better patient-centered care. Both patients and staff wanted more context about why they were asking about trauma and the importance of building rapport with patients prior to administering the TICQ.

Conclusion

Understanding patient and staff perceptions regarding trauma and trauma-informed care is vital to improving the TICQ and improving patient care while minimizing re-traumatization in the process.

C177

Identifying Med "Wrecks" from SNFs to the Hospital

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Background:

Medication reconciliation is the process of verifying a patient's most up-to-date medication list to prevent errors and is a vital part of the inpatient admission process. Transitions of care, such as hospital admission from a skilled nursing facility (SNF), risk improper medication reconciliation and can lead to patient harm. Standardized approaches to reconciliation have been shown to reduce errors. To prevent med "wrecks" in one academic hospital, we examined the existing procedure in place for medication reconciliation for geriatric patients admitted from SNFs in New York City.

Methods:

We examined the electronic medical records (EMR) of admitted geriatric patients from SNFs who were seen by the geriatric medicine consult service from July to November 2022. We compared the SNF-based medication list, which per protocol is to be scanned into the EMR, to the prior-to-admission (PTA) medication list in the EMR to measure the accuracy of the medication reconciliation at admission. If no electronic or paper lists were available, we contacted the SNF directly to obtain it. The number of errors and what types of medications were incorrectly reconciled were recorded in RedCap.

Results:

Of the 20 records reviewed, only 3 (15%) medication lists were imported into the EMR. Of the 17 charts without electronic copies of the medication list, only 4 (23.5%) had paperwork in the physical chart. We compared the documented PTA medication list to the SNF record and found 12 (70.5%) with errors. The average number of SNF-based medications was 10.7 and average number of errors per record was 3.8. Psychoactive and thyroid medications were the most common medications with errors.

Conclusion:

Transfer paperwork from SNFs were not consistently imported into the EMR, leading to frequent medication discrepancies. The current institutional process for recording transfer paperwork from SNF would benefit from an easy to use and reliable procedure. Next steps include an interdisciplinary workgroup to improve the medication reconciliation process in order to reduce errors and maximize patient safety.

C178

Improvement and Maintance in Advance Care Planning Documentation

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Background: The completion of a healthcare directive or Provider Order for Life Sustaining Treatment (POLST) form has shown to increase chances of honoring patients wishes, reduce hospitalizations, and improve end of life care. Successful ACP programs initiate these conversations between providers, patients, and families as well as ensure documentation is easily accessible in the electronic medical record (EMR) for healthcare teams to use in the time of crisis.

Aim: To improve and maintain the percent of patients with completed ACP in a home-based primary care program through provider incentivised quality metric, education, and use of electronic medical record (EMR)

Method: Patients were all part of a home-based primary care program. Criteria for the program was age greater than 65, 2 or more chronic conditions, and an acute care episode in the last 12 months which could include emergency room visit or hospitalization. We implemented ACP as a practice wide quality metric. In order to complete the metric, patients needed to have ACP listed on their

problem list and have a scanned document in the EMR. Providers were given an incentive at the end of the year based on meeting the quality metric. Providers were given education and quarterly reminders throughout the year about importance of ACP with our patients.

Results: In the year prior (2019) to incentivization, ACP completion rate was 84% for 117 patients. 2020/2021 goal were 90% completion for tier 1 incentive and greater than 95% for tier 2. December 2020 completion rate improved to 93% in 293 patients by year end. Year end for 2021 completion of ACP had maintained with slight improvement to 94% for 391 patients. Providers were able to achieve tier 1 incentive but not tier 2 both years. Hospice enrollment and average length of stay also improved in these years as an indirect affect.

Conclusion: Incentive programs for providers can help to improve ACP documentation. While this program continued to enroll more patients, the percentage of ACP completion was still maintained due to awareness and emphasis of importance for providers to have these valuable conversations.

ACP completion

Year	2019	2020	2021
Census	117	293	391
ACP completion	84%	93%	94%
Expired in Hospice	41%	53%	53%
Avg Hospice length of stay (days)	33	54	70

C179

Developing a "Best Possible Caregiving History" for use in a geriatric emergency department

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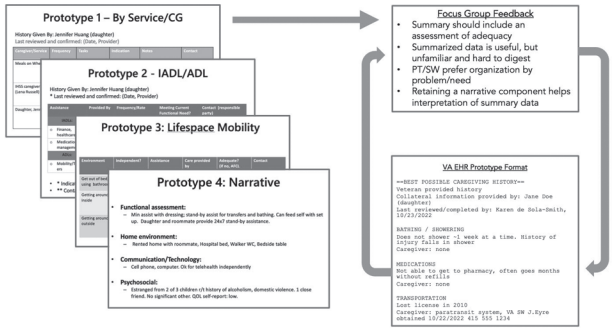
Background: Better discharge planning and care coordination could address many issues presenting in a geriatric emergency department (ED; eg, falls, wandering behaviors), but this requires an understanding of patient's caregiving context to plan interventions. We thus sought to develop a method to standardize how we collect data on a patient's caregiving context.

Methods: Using Human-Centered Design, we are developing a process for collecting and displaying information about patient caregiving contexts, which we call the "Best Possible Caregiving History" (BPCH). Using semi-structured interviews and focus groups, we queried key informants (social workers, geriatric nurses, physicians, geriatricians) on what would be helpful for documenting caregiving contexts, ideated and developed several prototypes, and solicited feedback.

Results: From semi-structured interviews, major themes included preferences for organization by functional need, need for brief narrative with summarized data, and assessment of adequacy of caregiving. In feedback sessions, users wanted data to be systematized and organized but some struggled to see how the BPCH would be used and wondered who would collect the data. In response, we updated prototypes to mimic the local health record and iterated further on systematic BPCHs.

Conclusion: Human-Centered Design methods have helped us rapidly prototype and solicit feedback on a BPCH. Next prototypes will 1) test systems for organizing caregiving data, 2) test how to present when caregiving is insufficient and 3) balance comprehensiveness with expedient data collection.



C180

Impact of post-SNF discharge interventions on readmissions during the COVID pandemic

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Background: To assess impact of follow-up calls and 0-14 day appointments following skilled nursing facility (SNF) discharge on readmissions before and during the pandemic. Increased access to follow-up appointments and follow-up calls would help improve patient outcomes.

Methods: Patients discharged from one Michigan hospital to 4 SNFs in 3 periods were included: pre-COVID (July 1, 2019-March 31, 2020), early COVID (April 1, 2020-March 31, 2021), and late COVID (April 1, 2021-March 31, 2022). Interventions: follow-up phone call and follow-up appointment within 14 days after SNF discharge. Outcome: 30-day readmission. We assessed for differences using logistic regression and tested for changes among the three periods. We tested for interactions between interventions and period effects.

Results: 485 patients were discharged from the hospital to SNFs and then discharged home; 104 in pre-COVID, 194 in early COVID, and 187 in late COVID periods. Median age of patients was 74 (range 22-101) with 53% female. The percentage of post-SNF discharge follow-up appointments within 0-7 days was 63%, 52%, and 74% in pre-COVID, early COVID, and late COVID periods respectively, and within 8-14 days was 15%, 19%, and 16% in pre-COVID, early COVID, and late COVID periods respectively; the proportion of follow-up calls after SNF discharge was 30%, 81%, and 84% ($p<0.001$). Post-SNF discharge 30-day readmission was 9%, 13%, and 11% ($p=0.44$). Compared to pre-COVID, in early COVID there was no significant difference in receiving a 0-7d (RRR=0.60; $p=0.09$) or 8-14d follow-up appointment (RRR=0.88; $p=0.75$), however, patients were more likely to receive a follow-up call (RRR=9.99; $p<0.001$). Compared to pre-COVID, patients in late COVID were more likely to receive a 0-7d (RRR=2.57; $p<0.01$) and 8-14d (RRR=2.29; $p=0.06$) follow-up appointment as well as to receive a follow-up call (RRR=12.32; $p<0.001$). While readmission rates were higher in early and late COVID compared to pre-COVID, these differences were not statistically significant.

Conclusions: An increase in follow-up calls and appointments after SNF discharge was observed during COVID compared to pre-COVID, however, no associated decrease in readmissions was noted. We anticipate larger studies will show beneficial outcomes from increased follow-up among vulnerable patients discharged from SNFs.

C181

Exploring the Impact of Medication Reconciliation Process Change in a Post-Acute Care Setting

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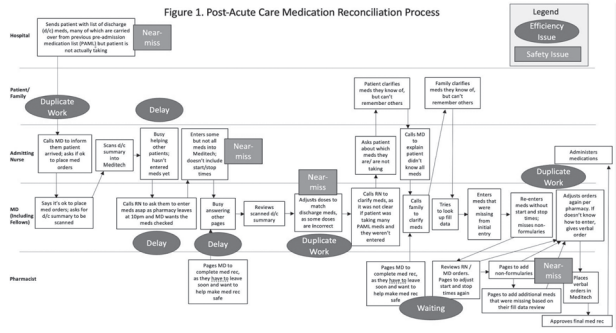
Background: Transitions between acute and post-acute care (PAC) settings remain a national challenge, despite advances in electronic health records (EHRs), communication tools, and targeted resources. Regulatory focus on medication reconciliation (MR) highlights the importance of prioritizing high-quality MR systems in PAC settings. After an EHR update and change to the admission MR process at our PAC site, we explored its impact on MR efficiency, patient safety, and provider satisfaction.

Methods: A process map was made depicting a new MR system highlighting inefficiencies and safety concerns. Also, a qualitative survey was conducted within the first 45 days of implementation to elicit physician experiences with the new MR process.

Results: The process map highlighted the steps that led to issues in patient safety and workflow efficiency. Thematic analysis of the qualitative survey of fellows' experiences demonstrated issues in the following domains: role confusion in MR between nursing, MDs, and pharmacists; increased number of steps involved; increased burden of nursing work and decreased nursing satisfaction; increased opportunity for medication errors; work duplication; collaboration between stakeholders.

Conclusion: After experiencing a changed MR structure, a process map and qualitative survey were used to identify issues in patient safety, workflow efficiency, and provider satisfaction. Process maps of complex processes, such as MR, can help stakeholders proactively prepare for changes and direct iterative efforts toward patient safety, interprofessional collaboration, and professional satisfaction, ultimately improving the quality of patient care.

Figure 1. Post-Acute Care Medication Reconciliation Process



C182

Optimizing Gradual Dose Reduction of Psychotropic Medications in Nursing Home Patients

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Background: Psychotropic medications are utilized frequently in skilled nursing facilities (SNFs) as a tool to manage symptoms of anxiety, depression, and behavioral and psychological symptoms of dementia (BPSD). While these medications can positively impact symptom management, overuse poses an increased risk of adverse events and mortality. The Centers for Medicare and Medicaid Services (CMS) has created initiatives to improve SNF care through the application of a gradual dose reduction (GDR) program, outlining recommendations on when and how to taper these medications. However despite these initiatives, GDR remains an underutilized intervention. This data-driven quality improvement (QI) project aimed to identify gaps in GDR attempts to promote more consistent tapering practices.

Methods: An analysis was conducted to understand prescribing and GDR workflow at 2 SNFs. This included focus groups of stakeholders and a baseline chart analysis of 85 medical records comprising a total of 127 psychotropic medications. A multipronged intervention was developed using the DMAIC process strategy.

Results: A total of 97/127 medication events were analyzed, with 30 disqualified due to external management of psychotropic medications. Baseline characteristics demonstrated a patient age range of 36 to 100 years, with the average age of 83 years (SD 12.1). The most prescribed class of psychotropic medications was SSRIs (30%), followed by other antidepressants (23%), SNRIs (18%), and benzodiazepines (11%). The most common indication for psychotropic use was major depressive disorder (54%). 68% of cases had never undergone GDR in the past and 50% of medications were listed as contraindicated for GDR. Only 64.5% of medications listed as contraindicated had a reason specified in their medical record.

Conclusions: Gradual dose reduction of psychotropic medications is often underutilized and inconsistently documented within the medical records of SNF residents. Concern of worsening psychiatric symptoms and lack of skills and resources has proven to be a concern of medical staff in the SNF setting. A simple, guided care process model with structured documentation prompts reduced instances of GDR contraindication. This intervention holds potential for widespread dissemination and study.

C183

Are We Providing Equitable Geriatric and Palliative Care?

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Introduction: Advance Care Planning (ACP) is a process that supports individuals in discussing and documenting their preferences for medical care, especially in the event of debilitating illness or at the end-of-life. A clinical tool used to identify patients most appropriate for ACP is the "Mandatory Surprise Question (MSQ)" which asks providers to indicate whether they would be surprised if their patients died in the next 6 months. The Electronic Medical Record (EMR) prompts consideration for Geriatric or Palliative Care (PC) consultation for patients with an MSQ value of "No". Data show health disparities in ACP participation among patients from historically disadvantaged groups. As such, we sought to explore the relationship between race and primary language among patients with an MSQ value of "No" who received a Geriatric or PC consultation during their hospitalization.

Methods: Using the EMR, we gathered data for patients aged ≥ 18 years old whose MSQ value was "No" and had a Geriatric or PC consultation during or in the six months preceding admission to a medicine unit at an academic medical center between January 1 and September 22, 2022.

Results: Of the 1141 patient encounters with an MSQ value of "No", 56.0% had a PC consultation while 19.0% had a Geriatric consultation. English was listed as primary language in 74.4% of these encounters. Of the encounters with a listed race of Asian 61.4% received a PC consultation compared to 60.5% Black, 53.1% White, and 58.6% Other. Of the encounters with a listed race of White 21.5% received a Geriatric consultation compared to 19.0% Asian, 7.9% Black, and 15.7% Other. PC and Geriatric consultation were similar among English and non-English speaking patient encounters, 57.5% versus 55.5% and 18.9% versus 18.6%, respectively.

Conclusion: Our results suggest that language does not constitute a barrier to receiving Geriatric or PC consultation, however, racial differences may exist. Additional research is needed to investigate racial differences in ACP documentation and strategies for improving the delivery of equitable ACP interventions.

C184

Chronic care management: Real-time reports improve capture

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Background

The University of Utah Health (UUH) Madsen Geriatric Clinic (MGC) has an interdisciplinary care team (CT) that includes nurse care management, clinical pharmacy, and social work. The CT provides assistance to older adult patients with complex care needs primarily through non-face-to-face (FTF) outreach. Despite the benefits, reimbursement opportunities for these activities are limited. One avenue of reimbursement is the Chronic Care Management (CCM) program offered by the Centers for Medicare and Medicaid Services (CMS) and commercial insurance.

Reimbursement for CCM services requires documentation of patient consent to participate, program enrollment, a written care plan and tracking of time spent performing non-FTF activities within a calendar month. Each of these activities is a manual process in the electronic health record (EHR). The paucity of real-time data confirming requirements has hindered our ability to review and improve the CCM workflow.

Methods

Data managers pulled relevant information from the data warehouse for validation. Criteria for validation included: patients with documented consent to enroll in CCM who had a clinic interaction in the previous week, which CT members or providers were associated with the interaction(s), time tracked and enrollment status. Comprehensive data validation was completed and a weekly automated report was produced to identify gaps in enrollment and time tracked for the previous week. Based on the report, the CT implemented a check list to identify actionable tasks to complete by the end of the billing cycle.

Results

There was an average of 90 enrolled patients during the validation process. Ages ranged 64 to 94 years and included patients identifying as white or Caucasian, black or African American, Asian and other race, not Hispanic/Latino, and Hispanic/Latino ethnicity. Without changing patient enrollment volume, there was a 280% increase in wRVUs and 200% increase in revenue attributed to CCM after implementation compared to the prior two years.

Conclusions

Validation and review of the weekly CCM report allowed the CT to double CCM revenue capture for services already being provided. Data validation remains under development due to changes in CMS enrollment criteria and EHR forms. Next steps include creation of additional reports to improve service provision, guide enrollment of additional patients, and improve the enrollment process.

C185

A Collaborative Pilot for Age Friendly Hospital Care

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Background: The Age Friendly Health System initiative aims to improve healthcare delivery for older adults through four evidence-based practices known as the "4Ms": 1) what Matters 2) Medication 3) Mentation and 4) Mobility. This project aimed to pilot a multidisciplinary care model based on the 4Ms at a large academic hospital.

Methods: A care model was developed using the Plan-Do-Check-Act model:

Plan: A multi-disciplinary stakeholder group identified best practices addressing each of the 4Ms. Discipline-specific education was provided to physician, occupational therapy, social work, nursing, and pharmacy champions.

Do: The specific 4M interventions were implemented in April '21 for inpatients ≥ 65 years old on 2 inpatient units (medical, surgical), including: 1) inclusion of "what Matters most" in nursing rounds and documentation; 2) daily pharmacy review of high-risk medications; 3) mobility documentation by nursing; 4) Age Friendly provider patient list in electronic health record (EHR) with 4Ms data and; 5) delirium rounds on surgical patients. To demonstrate impact of 4Ms an interactive dashboard with evaluation metrics was made.

Check: Uptake of 4M interventions was monitored via dashboard. Multi-disciplinary feedback was sought from champions and nursing staff focus groups.

Act: Feedback led to EHR revisions to flowsheets, provider patient list, and delirium rounding note. A 4Ms patient flyer was added.

Results: From Dec '21-Oct '22, 1,039 (73%) older adults received 4Ms care on the 2 units. This data resulted in our hospital being recognized as Committed to Care Excellence by the Institute of Healthcare Improvement. Stakeholder feedback during the pilot was positive. Data revealed low provider utilization of the patient list template and lower than desired provider-initiated adaptations to the care plan.

Conclusions: Implementing a multi-disciplinary, Age Friendly Care model was feasible and acceptable to staff at our hospital. The pilot is being expanded to a second hospital within our system and efforts to improve provider utilization of the patient list template are underway. The Age Friendly dashboard data shows consistent consideration of each of the 4Ms for patients on the pilot units. Future evaluation will determine the impact of these 4M interventions on patient outcomes, including delirium incidence and length of stay.

C186

Reduction of Rehospitalizations with Addition of Geriatric Consult Team

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Background

Older adults are high risk for hospitalization due to increased medical complexity and frailty. In 2018, 16.9% of hospitalized Medicare recipients were readmitted within 30 days[1]. 35% of hospitalized older adults lose an Activity of Daily Living[2]. We proposed that a Geriatrics consultation would reduce hospital readmissions for specific patients.

Methods

Retrospective chart review completed of subjects age 65+, diagnosed with encephalopathy/delirium, dementia, falls, or failure to thrive during their index hospitalization, and were discharged to a nursing facility. The consult service began February 2022. Pre-intervention data was collected from March-September 2021 through a deidentified local database, HERON[3]. Post-intervention data was collected from March-September 2022 by chart review for patients seen by the Geriatrics consult service. The primary outcome was 30-day rehospitalizations.

Results

Rehospitalization rates decreased by 51%, from 33.6% (35/104 of control group) to 17.3% (18/104 of patients seen by the consult team), P <0.0067. Characteristics of control and intervention groups were similar in average age (79.5 vs 80), most common primary team (Internal Medicine), and top two admitting diagnoses (encephalopathy, falls). They were different in gender (43% vs 62% men, 57% vs 38% women) and one admission diagnosis (UTI vs respiratory failure).

Conclusion

We found that Geriatrics consultation is associated with reduced hospital readmissions for patients discharged to nursing facilities. Limitations included inability to capture readmissions to other hospitals.

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C187

Take the Pressure Off: Team Approach in Optimizing HTN in a Primary Geriatrics Clinic

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Background: Hypertension is an independent risk factor for cardiovascular disease and mortality yet continues to prove challenging to control in geriatric patients. Per the SPRINT Trial (2015), evidence supports that patients who are non-diabetic and >50-year-old have reduction in all-cause mortality and major cardiovascular risk with intensive systolic BP control. As per our healthcare system's Primary Care Institute, the HTN management goal is blood pressure of <140/90 in ≥75% of patients. Our objective is to utilize a Quality Improvement methodology to create a dedicated HTN model embedded within our healthcare system's primary care clinics to reach our goal to meet the benchmark of BP control <140/90.

Methods: In a pilot study at our geriatric clinic, 63 patient encounters across 5 days were observed and 30 patients with BP>140/90 mmHg were identified. We currently have an interdisciplinary protocol, which incorporates Medical Assistants, Nurses and Physicans in our clinic site to evaluate, educate and treat poorly controlled HTN patients. Our current intervention is a Nurse led dedicated lifestyle modification teaching session for patients identified with BP>140/90 in our pilot study. Patients will be tracked weekly for 4 weeks via telephone calls, and measures will be tracked via home BP monitoring.

Results: Baseline measures for our sample are: mean age (+/-SD)84.13 +/-7.56, 70% were female, 41% identified as White, 31% Hispanic, 17% African American, and 11% were Asian. 14% of the patients were not on any antihypertensives, while 28% were on one medication and the rest were on 2 or more medications. We are working with an interdisciplinary team of MAs, nursing staff and clinicians to develop education material for dedicated lifestyle modification teaching for patients identified as hypertensive during our observation period. Outcome measures will be collected via weekly telephone follow-up and home BP monitoring data. This data will be available by April 2023, prior to the AGS annual meeting.

Conclusions: Many challenges of HTN control in the elderly are due to patient, system-wide and clinic design factors. An interdisciplinary team-based approach incorporating patient education and home BP monitoring may help improve BP control. Final data will be presented at the AGS conference.

C188

Improving Access to and Utilization of Language Services in Skilled Nursing Facilities using a Handheld Speech-to-Speech Translator Device

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BACKGROUND: Language barriers, including lack of interpreter services for people with limited English proficiency (LEP), are associated with poor health outcomes, increased morbidity and mortality, and higher healthcare costs. Federal regulations require healthcare facilities to provide access and use of professional interpreter services (PIS). Data on its use and outcomes in skilled nursing facilities (SNF) are limited. The objectives of this pilot study were to assess the feasibility of using smart handheld translation devices in SNFs and its impact on the quality of care on LEP patients.

METHODS: Administrators from three SNFs were interviewed pre-implementation to understand current practices. A pilot study was then conducted at one SNF with a high prevalence of LEP patients. Therapists were provided HIPAA compliant, handheld, speech-to-speech translator devices and asked to anonymously complete a standardized survey after each session where the device was utilized. Therapists rated ease-of-use, desire to continue use, and satisfaction on a 5-point Likert scale. A random sample of therapists and patients were interviewed post-implementation using a standardized questionnaire.

RESULTS: Twenty-one surveys were collected from December 2020 to March 2021. Translated languages included Spanish, Russian, Korean, and Mandarin. Survey participants were physical therapists (67%), occupational therapists (29%) and speech language pathologists (5%). Results showed that the device was easier to use 91% of the time and translations were easy to understand. 95% of participants wanted to use the device with more patients and felt that the device improved patient care.

CONCLUSIONS: This pilot study showed an innovative way to utilize existing smart technology to improve care and address inequity for LEP patients in SNFs. While these devices should not replace PIS for complex discussions or care, the translator devices were well received and positively impacted care and satisfaction among patients with LEP and staff. Future directions include expanding device use to SNF nursing staff and assessing its impact on health and safety outcomes.

C189

Improving Osteoporosis Treatment Rates in Older Adults with Recent Fragility Fracture Discharged to SNF via the Creation of an EHR Template

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BACKGROUND: Osteoporotic fragility fractures cause significant morbidity/mortality and financial impact on the health care system (1). In the US, there are 432,000 hospital admissions and 180,000 nursing home admissions for fragility fractures annually (2). The cost of fragility fractures in the U.S. is estimated to increase to $25 billion by 2025 (1).

Older adults with recent fragility fractures are often discharged to skilled nursing facilities (SNFs) and a majority do not receive any treatment (3). In this QI project involving patients with fragility fractures discharged from hospital to SNFs, we aim to increase the percentage of older adults who are counseled on osteoporosis treatment to over 80%.

METHODS: Baseline data following fragility fractures were collected from two community nursing homes in the Greater Los Angeles area. Chart review was performed utilizing the terms "osteoporosis," "bisphosphonate," and "fracture" to search for documentation

of osteoporosis management. We created a SmartPhrase with appropriate management of osteoporosis following a fragility fracture, including labs, vitamin D and calcium supplementation, and bisphosphonate initiation. We collected data on the number of patients counseled and treated following fragility fracture.

RESULTS: In total, 33% of older adults with fragility fracture admitted to the two SNFs were taking a bisphosphonate. Of these older adults not on a bisphosphonate, only 36% of patients had documentation that they were counseled on the diagnosis of osteoporosis and/or offered treatment. Our preliminary data show providers utilized our smart phrase in 43% of cases. We saw an improvement in the documentation of osteoporosis in the EHR to >90%.

CONCLUSIONS: SNFs are excellent locations to initiate osteoporosis treatment after acute fragility fractures. Our intervention demonstrates a potential for facilitating provider diagnosis and management of osteoporosis.

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C190

Preliminary investigation of the psychometric properties of the Psychological Consequences of Screening Questionnaire (PCQ) adapted for cognitive screening in primary care

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Background: Patient-reported outcome measures with high content validity are needed to adequately determine effects of screening for cognitive impairment to inform clinical practice guidelines. The objective of this investigation was to examine the psychometric properties of the Psychological Consequences of Screening Questionnaire (PCQ), a measure of both negative and positive psychological impacts of medical screening, adapted for cognitive screening in primary care.

Methods: A total of 129 adults aged 65 and older completing cognitive screening as part of their Medicare Annual Wellness Visit (AWV) within the past 3 months completed the adapted PCQ measure. Scale structure, internal consistency, construct validity, and discriminant validity were analyzed.

Results: Participants were on average 73.2 (SD 5.6) years old; three-quarters were female, and approximately 30% were of a racial minority. The majority were at least college educated. All had a negative cognitive screening test result. Principal component factor analysis yielded a single factor for both negative (Eigenvalue 4.37; Factor loading ranges 0.29-0.83) and positive scales (Eigenvalue 6.12; Factor loading ranges 0.44-0.88). Both scales had Crohnbach's alphas >0.70. Spearman correlations between the negative scale with the Impact of Events Scale-Revised (IES-R), the Spielberger State-Trait Anxiety Inventory (STAI-6), the Perceived Stress Scale (PSS), and the Kessler 10-item Distress Scale (K10) were significant and ranged from 0.20-0.40. The negative scale discriminated between those with and without a self-reported cognitive complaint (Mean 3.2 vs. 0.90, $p < 0.001$), and was predictive of medical visit satisfaction ($r = -0.20$, $p = 0.03$). The positive scale was predictive of willingness for future screening (Mean 8.6 vs 3.3, $p = 0.04$).

Conclusions: Findings suggest the PCQ is a valid measure of psychological impact of cognitive screening among older adults in primary care. Future studies are needed to further understand PCQ performance among more diverse samples and those with positive test results following cognitive screening.

C191

Designing a New Behavioral Reporting Tool for Long-Term-Care-Residents with Dementia

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Background. Behavioral and psychological symptoms of dementia (BPSD) develop in up to 90% of dementia patients. There is no gold standard for assessing BPSD in long-term care. We aimed to develop a new behavioral reporting tool for LTC.

Methods. Phase 1– Needs assessment: Reviewed behavioral logs from the Long Island State Veterans Home (New York) for 4 months to determine the most common symptoms and percentage completion. We searched PubMed and Embase for validated BPSD instruments, the most commonly reported BPSD, and non-pharmacological interventions. **Phase 2 – Designing the tool.** *2.1 Reason for initiating the tool:* we established new and readmission, behaviors, unit transfers, peer conflict, or psychotropic dose adjustment as reasons to start the tool based on Phase 1 findings. *2.2 Behavior and Intervention code:* we included 20 behaviors to choose from and 14 different interventions. *2.3 Assessment:* We included the time, trigger (if noted), and frequency of BPSD during the shift, the intervention, and the response. Residents must be reassessed every shift (day, evening, night) and documented even in the absence of behaviors for up to 7 days. **Phase 3 – Feedback:** We described the new tool (Tool A), Cohen-Mansfield Agitation Inventory (Tool B), and Direct Observation System (Tool C) to MDs, physician assistants (PAs), and registered nurses (RNs). We asked to complete the three tools for any patient on the unit who exhibited behaviors during that day, followed by an anonymous survey comparing the tools in different categories. We did a descriptive statistical analysis of the responses.

Results. We designed a tool that establishes a behavior baseline and prospectively assesses BPSD and response to interventions in LTC residents. A novel aspect of our tool is the inclusion of non-pharmacological measures as part of the assessment. Sixteen providers were surveyed; 62% were RN, 25% were MDs, and 13% were PAs.

Conclusions. Our tool was preferred by MDs and RNs for documentation, establishing patterns, and addressing behaviors. However, it is less likely to be completed entirely and more challenging to learn than other tools, indicating that further improvement is required to make it more straightforward. Our report system is a promising tool for assessing BPSD and intervention response in LTC residents. Further validation is required

C192

Increasing Medicare Chronic Care Management Patient Enrollment in a Primary Care Geriatric Clinic

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Background:

Medicare Chronic Care Management (CCM) allows providers to receive reimbursement for non-face-to-face care provided to Medicare beneficiaries with multiple chronic conditions. In order for providers to receive reimbursement for CCM services, providers must obtain written or verbal patient consent, complete a chronic care plan for the patient, document time spent on CCM, and bill for CCM services. In our urban, academic primary care geriatric clinic, we identified low rates of Medicare CCM enrollment.

Methods:

We implemented multiple interventions using Plan-Do-Study-Act cycles to increase CCM enrollment. Our approach involved developing a written consent form for staff to provide to patients; offering regular education on CCM workflows during staff huddles; and creating friendly competition among staff members from multiple

disciplines to obtain verbal and written patient consent. Interventions began in May 2022. CCM enrollment rates were prospectively collected to assess the impact of these interventions.

Results:

In May 2022, 64.6% of clinic patients eligible for Medicare CCM were not enrolled despite eligibility (n= 1,909), compared to 35.4% patients enrolled in CCM (n= 1,048). After the multi-pronged approach, a total of 137 patients were newly enrolled into CCM from May-October 2022. From August 2021-October 2022, total provider time spent on caring for patients eligible for Medicare CCM, ranged from 10,394-16,791 minutes per month.

Conclusion:

Medicare CCM offers a way for clinics to be reimbursed for non-face-to-face care provided to chronically ill Medicare beneficiaries. Such reimbursements can potentially finance infrastructure needed for primary care clinics to provide coordinated care to complex patients. Our findings suggest the importance of executing a multi-pronged, multi-disciplinary approach to increase Medicare CCM enrollment. Additional interventions, such as obtaining patient consent via use of the electronic medical record, may further increase CCM enrollment.

C193

Perceptions of ACE Unit Nurses Regarding Implementation of a Mobility Protocol

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Background:

Older adults suffer a disproportionate amount of harm in acute care settings. Acute care of the elderly (ACE) units mitigate harm by implementing protocols that emphasize the 4Ms of high-quality care of older adults: mobility, matters most, mentation and medications. As part of a quality improvement initiative, a multidisciplinary approach is taken to adopt the 4Ms model of care within our institution's ACE unit, starting with a mobility protocol.

Methods:

This is a single-institution study conducted in an ACE unit comprised of 26 beds staffed by an internist and geriatrician with daily interdisciplinary rounds. A presentation on the 4Ms and planned mobility protocol were given to nursing staff. Pre- and post-surveys evaluated agreement with several statements (see Table) using a Likert scale from 1-5, with 1 indicating lowest and 5 indicating highest level of agreement. The survey also contained open-ended questions to assess nursing concerns and comments. Pre- and post-survey responses were compared using paired T-tests.

Results:

A total of 32 nurses and patient care technicians participated. Responses are summarized in the table below.

Open-ended questions revealed time, staffing and equipment concerns as barriers to improving patient mobility.

Conclusions:

Education on the 4Ms and the importance of mobility improved nursing knowledge and decreased hesitancy in their ability to mobilize patients on the ACE unit. This study supports the aim of continued education and use of a mobility protocol to further improve nursing confidence in promoting patient mobility, which may ultimately improve patient care.

	Pre-Test Mean	Post-Test Mean	P Value
I am familiar with the 4Ms framework of an age friendly health system	3.3	4.3	0.0002
I am familiar with the bedside mobility assessment tool (BMAT)	3.7	4.2	0.0004
Mobility should be a high priority for older adult patients	4.4	4.6	0.0030
Older adults are at high risk for falls	4.4	4.5	0.4229
The unit does an excellent job of caring for older adults	4.1	4.0	0.3741
The unit does an excellent job of promoting patient mobility	3.3	3.7	0.0030
Mobility protocol will increase the risk of falls	2.4	2.5	0.7738

C194

Medication discrepancies in residents at SNF

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Background:

Medication errors are a significant health care problem, especially when patients transition between different providers. At least one medication discrepancy occurs in 75% of hospital to SNF admissions. Maintaining an accurate, comprehensive, and up-to-date medication list can reduce medication errors. Medication discrepancies are responsible for more than 1.5 million adverse drug events, costing the US health care system over $3.5 bill.

Method:

We randomly picked 20 residents at one of the SNFs in Dane County, WI, that had 120 beds. We reviewed and compared medication lists in health system electronic medical records (EMR) and SNF medical records. We identified frequent discrepancies. Creation of a process map identified factors that contributed to those discrepancies. With input from relevant stakeholders, an intervention in which an additional provider with access to both the SNF and EMRs reconciled medication lists on a regular basis. Following the implementation of the intervention, we randomly picked 20 residents and compared their medication lists in the EMR and SNF records. We compared the results before and after intervention.

Results and discussion:

Primary review showed 6 patients (30%) had one discrepancy, and 11 patients (55%) had 2 or more discrepancies.

Factors that contributed to discrepancy includ:

Limited time on the part of rounding physicians to attend to medication reconciliation between the EMR and SNF records

Lack of access to the SNF medical record by consulting physicians from the heal

On-call physicians placing verbal orders after hours and on weekends without updating the EMR

Lack of access to the EMR for SNF nurses

After 3 months of intervention, the number of patients with one discrepancy decreased by 33%, and those with 2 or more discrepancies deceased by 72%.

Conclusions:

Assigning the task of medication reconciliation to a single additional provider with access to both the EMR and the SNF medical records successfully reduced medication discrepancies during the intervention period. However, this critically important yet unbillable activity alone would not easily justify the hiring of an additional provider. Locally, efforts to improve on-call documentation of medication orders may reduce medication discrepancies. More globally, better reimbursement of nursing home care on a national level could improve staffing and the available workforce to address discrepancies between health systems and nursing facilities to ensure safer care.

C195

Recovering What Matters Most, Lost and Forgotten with Cognitive Impairment

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Background: "What matters most" has been identified as one of the 4Ms of geriatrics, yet it is not known how often or well this has been put into practice. It is particularly important to document patient goals and values in those with cognitive impairment as the window of opportunity to assess goals may be limited by their disease progression. Thus, we investigated how often and to what degree "what matters most" was documented in clinic notes of patients with and without cognitive impairment seen in a single geriatrics clinic.

Methods: From August to October 2022, we conducted chart reviews of patients seen in a single geriatrics clinic of one VA Medical Center. From the problem list overview, the patient's age, gender, and cognitive status were ascertained. Clinician notes were reviewed to see whether the 4Ms of geriatrics were documented and if so, what patients described as "what matters most" was extracted. Of those patients with a dementia diagnosis, functional assessments available in patients' charts were used to stage the dementia by FAST scale. FAST scale 4 was classified as mild, 5 as moderate, and >6a as moderately severe dementia.

Results: A total of 30 patients with a mean age of 85 years (range 68-90+), 93% male, were included for study. Overall, 67% of the patients had "what matters most" documented. Of those without documentation, 90% had some form of cognitive impairment (60% had diagnosis of dementia, 30% mild cognitive impairment). Of those diagnosed with dementia without "what matters most" documented, most had moderately severe dementia (67%). Of those diagnosed with dementia who had "what matters most" documented, 44% were mild, 22% were moderate and 33% were moderately severe. Things that mattered most included independence (25%), comfort/happiness (20%), health (15%), family (10%), with 10% stating a combination of family, comfort, and health, and 5% identified family and independence. While "what matters most" was documented, a plan of action to achieve these goals was not.

Conclusions: Addressing and documenting "what matters most" for our older adult patients, especially for those with cognitive impairment needs improvement. Next steps will be to use a pamphlet on Brain Health to engage patients and their caregivers to consider "what matters most" as well as plans of action to achieve their goals.

C196

Osteoporosis Treatment in Homebound Patients Using FRAX Score

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Background:

The UCLA Medical Home Visit Program care for a geriatric population at high risk for osteoporosis who would be eligible for bone density screening. The patients in the program are mostly homebound and traveling to obtain a DEXA is challenging. Homebound patients might be under-diagnosed & under-treated for osteoporosis. Therefore, they might be at increased risk for fractures.

Methods:

Sample of 30 most recently seen patients from UCLA Medical Home Visit Program panel were reviewed. Inclusion criteria included age >65 years old, participant of UCLA Medical Home Visit Program, and homebound status. Exclusion criteria included current diagnosis of osteoporosis by DEXA or fragility fractures, and being on hospice. FRAX score (age, gender, weight, height, previous fracture, parent fractured hip, smoking, glucocorticoids use, rheumatoid arthritis, secondary osteoporosis, alcohol use) was calculated for each patient. Treatment was recommended for each patient meeting the following criteria: FRAX >=20% for major osteoporotic probability of fracture, or >= 3% for hip fracture, no previous osteoporosis treatment, and no active cancer diagnoses.

Results:

There were 5 males and 25 females with the average age of 87.33 years old. 1 patient has deceased, and 1 patient was on hospice. 14 patients were previously diagnosed with osteoporosis by DEXA or fragility fracture. Of those, 3 patients have not had osteoporosis treatment discussed. All 3 had fragility fractures with no DEXA on record, with elevated FRAX scores > 40% risk for major osteoporotic fracture. There were 14 patients with no DEXA, or had osteopenia seen on DEXA. Of those, 5 patients have elevated FRAX scores. 2 of these 5 patients (6.7% of the sample) were < 90 years old (FRAX is validated for age 40-90), therefore meeting criteria for treatment recommendation.

Conclusion:

Patients who receive DEXA are appropriately treated for osteoporosis if found. Patient with fragility fractures but without DEXA scans might not receive osteoporosis treatment. For patients who have not had fragility fractures and are not able to undergo DEXA scans, FRAX scores might be a useful tool to determine osteoporosis treatment.

C197

Racial/Ethnic Differences in Low-Value Care Among Older Adults In A Statewide Health Plan

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Background

Low-value care includes services where benefits do not exceed the harms in specific clinical scenarios. Prior studies suggest racial/ethnic differences in low-value care among older adults, but evidence is mixed. Therefore, this study aims to describe differences in low-value care by race/ethnicity using a contemporary sample.

Methods

We conducted a cross-sectional study of 2019-2021 claims of members 55 years and older of a statewide health plan, who received a potentially low-value service. Our primary outcome was receipt of any low-value service. Secondary outcomes were low-value preventive screening, diagnostic testing, prescription drugs, and preoperative testing. We used multivariable logistic regression models to examine the association between race/ethnicity and receipt of low-value care, controlling for age, sex, site of care, and time.

Results

Over the 3-year period, 18,872 members received 88,555 services. The mean age was 62 and 57% were female. Non-Hispanic White older adults comprised 56% of the sample, followed by Asian (17%), unknown race (10%), Hispanic/Latino (9%), non-Hispanic Black (5%), other race (2%). The risk-adjusted probability of receiving any low-value care was 27%, which was lower among non-White older adults ($p<0.001$). Compared to Whites, Black and Latino older adults were less likely to receive low-value preventive screening ($p<0.001$). The risk-adjusted probability of low-value prescriptions was higher among Black compared to White older adults (62% vs 40%, $p<0.001$). White older adults were more likely to receive low-value preoperative tests (61%), compared to Asian (50%), Black (46%), and Hispanic/Latino older adults (51%, $p<0.001$).

Conclusions

In a statewide employer health plan, non-White older adults were less likely to receive low-value care, which was driven by fewer low-value preventive screening and preoperative tests. However, Black older adults were more likely to receive low-value prescriptions. These findings emphasize the need to use clinically relevant measures over composite outcomes, which obscure underlying differences in low-value care and may result in potentially harmful and inequity-producing interventions.

C198

Implementation and Evaluation of a Social Risk Screening Initiative within a Veterans Affairs Geriatrics Primary Care Clinic

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Background: Social determinants of health have a significant impact on the health and well-being of older adults. The Assessing Circumstances and Offering Resources for Needs (ACORN) initiative was designed to systematically screen Veterans for health-related social needs (HRSN), provide clinical care teams with real-time information about Veterans' needs, and address identified needs by providing Veterans with resources and referrals. A pilot evaluation of ACORN was conducted in the Central Arkansas Veterans Healthcare System (CAVHS) Geriatric Patient-Aligned Care Team (GeriPACT). While ACORN has been implemented in a number of VA clinical settings, the CAVHS GeriPACT is the first geriatrics-specific clinical site.

Methods: The ACORN screening template was adopted for use in the electronic health record (EHR) at the facility. GeriPACT Veterans were screened by a social worker for HRSNs (food security, housing, utilities, transportation, education, employment, legal needs, loneliness/social isolation, and access to technology). Screening was conducted during an initial or follow-up visit, and available resources were provided to Veterans for the HRSNs identified. Veteran demographic information and screening results were extracted from the EHR and analyzed descriptively.

Results: ACORN screens were conducted with 42 Veterans. The Veterans had a mean age of 79 years, and 93% were men. The majority (88%) lived in urban areas. More than half (62%) of participants were non-Hispanic White, and 28% were non-Hispanic Black. There were no Hispanic Veterans in the cohort. Twenty-three (55%) participants screened positive in at least one ACORN domain. The most common HRSNs identified included access to technology (27%), food insecurity (21%), and loneliness/social isolation (14%). Geographically tailored resources were provided to Veterans for all HRSNs identified.

Conclusions: ACORN was a feasible way to systematically screen older Veterans for HRSNs in the GeriPACT. Opportunities to expand the program within GeriPACT and other CAVHS clinics are being explored.

C199

Evaluating Patient Pathways to the Emergency Department: Qualitative Study to Reduce Emergency Care in Older Patients

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Background: Older adults represent a large portion of Emergency Department (ED) encounters. Older adults are at increased risk of adverse events in the six months following an ED visit including functional decline, hospitalization, repeat visits, and death. Many projects have attempted to intervene on older adults' ED visits; however, most studies fail to demonstrate a successful intervention. Our project builds a process map of events contributing to older patients' arrival in the ED and identifies potential areas for intervention.

Methods: Clinic electronic medical record data was reviewed to understand the current state of ED usage among patients at an academic geriatric clinic. Semi-structured interviews were conducted with identified groups including clinic nurses, patient call line nurses, and ED providers. Field notes from interviews were evaluated using rapid qualitative analysis. The multi-stakeholder perspectives were used to develop a process map of ED use and possible interventions for future QI work. Overall, the process map was created using a learning health system framework including developing goals and strategies and evaluating the current culture around ED use and prevention.

Results:

The academic geriatric clinic serves approximately 4,497 patients. From 7/2021 to 6/2022, there were 1,119 ED visits from this cohort that did not result in admission. Of these ED visits, 15% (174 of 1,119) were lower acuity, Emergency Severity Index 4 or 5. From 7/2021-12/2021, a centralized patient call line had a disposition of "escalated due to no clinic access" 10% of the time, meaning these patients were sent to the ED due to lack of available clinic follow-up. Notably, 73% (823 of 1,119) of these ED visits have an arrival time between 8 am and 5 pm, when clinicians and nurses are available to patients. Themes from stakeholder interviews included: need for access to primary care, increased after-hours options, and close follow-up after ED visits. Participants discussed inconsistency in scheduling follow-up with a primary provider after an ED visit due to variable care coordination staffing in the ED.

Conclusions: Working to reduce ED visits in older adults remains a challenge. A successful intervention will include a multifaceted approach using the developed process map to pinpoint areas for improvement, such as streamlining the process to schedule clinic follow-up after an ED visit.

C200 Encore Presentation

Improving Gait Speed in HRHN Veterans

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Background: High-Need, High-Risk Veterans have worse clinical outcomes, and higher healthcare utilization. These patients tend to be older, suffer from multimorbidity, disability, and frailty. Gait speed is associated with survival in older adults and represents a good indicator of functional status and well-being. The aim of our study was to assess for improvements in gait speed and SPPB after targeted recommendations and interventions.

Methods: This is a prospective, before and after study design of HNHR Veterans who were identified through VA quarterly reports generated using predictive analytic models. 54 eligible patients were enrolled in the clinic. Patients' socio-demographics were collected through VA databases. Our team evaluated patients' functional status and gait speed during clinic visits. Patients underwent a comprehensive geriatric assessment followed by targeted interventions including counseling on resistance exercise training, adherence to Mediterranean diet; and referrals to physical therapy as indicated. Gait speed was measured six months after the initial visit. We analyzed categorical variables with Chi-Square, continuous variables with t-test, Mann-Whitney U test, and related-samples Wilcoxon Signed Ranked Test, p values <0.05.

Results: Participants' median age was 74.5 years, 96.3% were males (n=52), 55.6% African American (n=30), 5.3% (n=5) Hispanic, and 63.0% disabled n=30). 85.2% (n=46) completed an initial evaluation of gait speed and 46.2% (n=25) completed a follow-up gait speed assessment. There were no differences in those who had completed testing versus those missing gait assessments except for older age in those with missing data. The initial mean gait speed was 0.70 m/s (SD=0.3). The patients' gait speed improved to 0.82 m/s after 6 months of follow-up, a 0.12 m/s increase (p value<0.01). The initial SPPB was 7.50, SD=2.67. SPPB increased by 0.833, which was statistically ($p<0.001$) but not clinically significant. **Conclusions:** In our study we found clinically and statistically significant improvements in gait speed. There were no statistically significant changes in the SPPB. Our findings suggest that targeted lifestyle interventions to high-need, high-risk patients may lead to improvements in gait speed, which are likely associated with better survival, function, and well-being in this population.

C201

Update from GHELP-TC: A Pharmacist-Driven Initiative to Identify and Improve Errors in Care Transitions After Hospital Discharge

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Background: GHELP-TC is a VA pharmacist-driven initiative to identify and improve errors in transitions of care following hospital discharge. Earlier results were presented for the first 26 patients enrolled (see AGS22 abstract C80). The objective of this abstract is to present new, more extensive data and analysis of transitions of care errors of participants enrolled in the first 13 months of GHELP-TC.

Methods: This is a descriptive study conducted at the Salt Lake City VA. From August 2021 through September 2022, 90 participants were enrolled in GHELP-TC. They were chosen by the inpatient team during hospitalization due to complexity (socially and/or medically). Errors were identified by examining discrepancies between medication and appointment list pre- and post-discharge involving direct contact with the SNF and participant. We classified errors as medication or appointment follow-up errors and on severity. Medication error severity was classified according to AHRQ medication error scale. Appointment errors were classified as being made before discharge, and if the patient went to the appointment. We surveyed SNF staff members to see how discharge orders could be improved, implemented changes, and repeated the survey.

Results: For the first 90 patients enrolled, there were a total of 160 errors during the transitions from hospital to SNF and back home for an average of 1.8 errors per patient. The average age of participants was 76 years. 62% of medication errors were classified as less serious (<D) and 38% were classified as serious (>E) on AHRQ medication error scale. 7.8% of errors were life- or limb- threatening and we identified 1 preventable death. From our surveys with SNF staff members regarding discharge orders, more than half reported the discharge medication list and orders were not clear. After implementation of new SNF discharge orders, staff members reported improved clarity of orders.

Conclusions: Transitions of care after hospital discharge are complex and have the potential for life-threatening errors. Identification and quantification of errors has allowed us to improve communication during care transitions by implementing new SNF discharge orders and through demonstration of the need for a care transitions team to minimize errors, including preventable deaths, after hospital discharge.

C202

CAN Advance Care Planning Documentation Increase With Electronic Reminders? A NYC VA Quality Improvement Project

J. Scher,[1,2] F. Ajose,[1] T. Gartmond,[1,2] S. Shetty,[1,2] S. Maheswaran.[1,2] *1. New York VA Medical Center, New York, NY; 2. Division of Geriatric Medicine, NYU Langone Health, New York, NY.*

Background: The Care Assessment Need (CAN) score (0-99) is a statistical model used to identify Veterans at high risk of death or hospitalization and should prompt goals of care and code status discussions. The Veterans Affairs (VA) utilizes a standardized advance care planning (ACP) format called the Life Sustaining Treatment (LST) plan which includes both code status and related goals of care. While electronic prompts have been shown to be effective in improving the rate and timing of code status discussions (CSD) in oncology, the impact of electronic triggers for geriatric ambulatory patients with high CAN scores and subsequent LST documentation is unknown. We aimed to determine if using an electronic reminder would improve LST documentation for patients with higher CAN scores.

Methods: Clinic nurses reviewed CAN scores daily for all Veterans with an appointment in a VA Geriatric Clinic from 3/1/22-9/30/22. Patients without a documented LST plan and with CAN scores of 98 and 99 were eligible for intervention. Nurses created a note in the chart which was co-signed to the scheduled provider alerting them of the score and lack of LST documentation. We measured LST completion and for those not completed, we inquired why.

Results: During the study period we identified 127 patients as having CAN scores of 98 and 99. Thirty-nine of 127 patients had prior LST documentation. The nurse notified the provider about 45 eligible patients. For the other 43 patients, 23 did not show for their appointment and 20 did not have a nurse notification. Of the 45 patients who had electronic triggers, 100% of the notes were co-signed by the provider. The provider completed a LST plan for 30 (67%) of these patients. Nurses cited difficulty with the CAN interface, competing priorities without a structure to ensure notification and competing clinical responsibilities as reasons for non-notification.

Conclusion: Nurses utilizing the CAN as a screening tool to trigger electronic reminders to providers improved the rate of LST documentation in a geriatrics clinic. Future interventions will include structured implementation and increased real time queues (such as compliant chat functions) at the time of the visit to increase communication between nurse and provider and subsequent LST documentation for high-risk patients.

C203

Medication-reconciliation quality improvement with a reverse hand-off at a nursing home

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Background: Med-Rec errors commonly occur during the transition of care from a hospital to a skilled nursing facility. We aim to improve Med-Rec by using an EMR chat function to initiate a reverse hand-off between providers.

Method: We created a process map to identify the areas contributing to Med-Rec errors. We categorized the pertinent processes. A: Error in the discharge documents. B: Error in the administrative process. C: Error of final Med-Rec at the skilled nursing facility. 42 admissions from a single hospital partner were reviewed from 9/2021-9/2022.

Results: 42 patient records were reviewed. Errors in discharge documents were present in 30.9% of admissions. Examples included discrepancies between the discharge summary and the medication list (A). Errors in the administrative process were present in 2.3% of cases. Examples included patients at the skilled nursing facility with missing hospital discharge documents (B). The admission orders differed from the discharge documents medication list in 26.1% of cases, including intentional changes by admitting providers. Admission order errors related to discharge documents were identified in 11.9% of cases, whereas the independent errors not related to discharge documents were only 2.3% (C).

Conclusion: 30.9% of skilled nursing facility admissions had errors in hospital discharge documents; 61% of those cases were identified by the accepting providers and corrected on admission. The corrections were identified by the accepting providers by accessing the hospital medical record directly or by calling the hospital provider to clarify. The process of the accepting provider calling the sending provider ("reverse hand-off") was very effective, especially when there were concerns about discharge documents error (A). However, a reverse hand-off was done in only 30% of the 10 most recent admissions. For this reason, a secondary option for performing a reverse hand-off was selected as an intervention: using an EMR chat function. We surveyed the providers at the skilled nursing facility, and it revealed that 40% of the providers did not know the EMR chat function. We had a workshop for the providers to demonstrate how to use the EMR chat function. We are planning to measure the improvement of the reverse hand-off completion rate (process measure) at the end of 11/2022. Error rates in Med-rec are expected to decrease over time.

C204

Improving Advanced Care Planning Documentation in a Geriatric Clinic

y. shindo,[1] I. Lin,[1] J. Jiao,[2] M. Koren,[2] I. Hao,[2] J. Fogel,[1] C. Iwuaba,[3] J. Cescon,[3] E. Rosen.[3] *1. Geriatrics, Mount Sinai Health System, New York, NY; 2. Palliative Care, Mount Sinai Health System, New York, NY; 3. Internal medicine, Mount Sinai Beth Israel Hospital, New York, NY.*

Background: Our quality improvement project is unique because it aims to formulate an effective intervention to improve Health Care Proxy (HCP) completion rate as a starting point for further ACP discussion based on the data collected through the extensive chart review and physician's survey.

Method: We collected baseline data on the prevalence of HCP completion in our geriatrics clinic. A standardized chart review protocol was used, and five investigators conducted an extensive chart review of patients who were seen from 8/22/2022 to 8/26/2022. Any scanned ACP-related documents were reviewed. We also surveyed to explore provider barriers to completion of HCP at the time of appointments.

Results: 85 patient charts were reviewed. 74% of patients had a form registered under either "Proxy" or "HCP." 93% of those documents were valid (67% of total patients). A total of 11 providers out of 15 responded to the survey (response rate of 73%). The survey was a multiple-choice, multi-selection survey asking about the obstacles to completing an HCP. 91% of providers reported "time," and 73% said "competing concerns (patient has other issues to discuss)" as barriers to ACP completion.

Conclusion: The physician's survey revealed providers do not complete HCP because of "not having enough time" and "patient's other competing concerns." Interventions to streamline the process with early introduction of the form at the time of the visit will address this Distribution of the HCP form during patient registration/check-in with a simplified brochure will be the first step. We hypothesized that this could facilitate the discussion during the encounters. The brochure was created based on the New York State HCP guide. We also set our aim as "INCREASE the rate of valid HCP form scanned by 20% for the patients at geriatrics clinic by February 2023." Repeated chart reviews will re-evaluate the HCP completion rate as an outcome measure. Provider feedback can assist in further interventions.

C205

On Site Radiographs at an Assisted Living Facility Reduce Emergency Room Visits

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BACKGROUND: Emergency department (ED) overuse is not only costly, but also leads to crowding that can adversely affect patient care. Many studies have shown that overcrowding is associated with delays in initiation of care, increased mortality, and decreased patient safety. One of the ways to decrease burden placed on EDs is to increase patient access to outpatient testing in order to triage patients. With our growing aging population, triaging patients more effectively to avoid ED visits will improve patient care, avoid unnecessary exposure to disease, and decrease treatment time. Our aim is to decrease ED visits and possible hospitalization for residents in our ALF by offering on-site radiographs the same day of an "event.". This should not only decrease ED burden and cost, but also lead to efficient treatment.

DESIGN: A review of the electronic medical record (EMR) at an ALF was performed to obtain residents that had on-site radiographs between January 1st, 2021 and October 31st, 2022. Any radiograph that was ordered for an acute reason was included. Two reviewers independently assessed the eligibility of these studies and assessed follow-up. Residents that underwent multiple radiographs from a single event were recorded as "one" radiograph.

RESULTS: Twenty-nine radiographs for acute events were performed on-site at the ALF between January 2021 and October 2022. This included 19 musculoskeletal x-rays (66%), 9 chest x-rays (31%), and 1 abdominal x-ray (3%). Three of the residents (10.7%) were sent to the emergency room based on the results of the radiographs while twenty-six residents (89.3%) were able to remain at the ALF.

CONCLUSION: At our ALF, on-site radiographs assisted to triage residents and rule-out diagnosis that otherwise may have required ED visits. The majority of patients who received on-site radiographs remained at the ALF for management. Limitations of this study include possible missed events not linked to a diagnosis in the EMR and sample size. Further review of on-site radiographic data is needed to determine how effectively they reduce ED overcrowding, improve treatment outcomes, and decrease cost.

C206

Guidelines for Deprescribing Antipsychotics in Dementia Residents in Long-term Care Settings: A Literature Review

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Background: Long-term care residents with behavioral and psychological symptoms of dementia (BPSD) are often prescribed antipsychotics (AP) to manage these symptoms despite modest efficacy and potentially significant side effects. Expert recommendations call for periodic AP discontinuation (DC) or dose reduction (DR) attempts despite an absence of universally accepted guidance on the process and timing of deprescribing attempts. We conducted a literature review focused on deprescribing in residents with BPSD to identify the most successful methods for DC/DR of APs.

Methods: We conducted an English language literature search using key words "dementia", "major neurocognitive disorder", "deprescribing", "antipsychotics", and "long-term care" which identified 4 prospective observational cohort studies and 4 randomized controlled trials (RCTs). Two reviewers independently assessed the eligibility of these studies.

Results: Successful DR/DC was variably defined as a lack of increase in BPSD or in resuming any psychotropic medication following AP withdrawal. Eligibility criteria for participants undergoing dose reduction varied across studies. The 4 prospective studies (n=35 to n=10,601) demonstrated 74-95% of residents had successful DC. Of these studies, 3 reported DR rates with success between 6.3-30%. Among the 4 RCTs (n=47 to n=100), 67-95% of residents had successful DC. No DR results were reported for the RCTs. 7 of the studies provided information about how APs were tapered ranging from immediate DC to 50% DR every 2 weeks. The most common tapering schedule was 50% DR every 2 weeks with the average time to DC of 4 weeks. DC/DR was more successful for residents who required lower AP doses or whose BPSD were better controlled on APs and for residents identified for AP DC/DR per clinician recommendation vs. random selection.

Conclusion: Successful DC of APs occurred in 67-95% of residents and DR in 6.3-30% of residents without worsening BPSD. Several resident related factors predicted DC/DR success. Limitations of this review include restricting articles to the English language, publication bias, inconsistent follow-up periods across studies, and lack of consistent definitions of success with DC/DR. Unanswered questions regarding AP DC/DR include the optimum timing and speed of DC/DR and clarification of which resident and non-resident factors predict successful DC/DR.

C207

Increasing Frailty Screening: A Quality Improvement Initiative

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Background: Frailty is a common geriatric syndrome that increases the risk of hospitalization, institutionalization, and death. Early identification of frailty status through standardized assessments can allow for interventions to reduce morbidity. We previously demonstrated the feasibility of assessing frailty in a busy academic geriatric outpatient clinic; however, those practices were not widely adopted. The purpose of this process improvement project was to expand routine frailty assessments across the clinic in order to allow practitioners to identify high risk patients.

Methods: An Electronic Medical Record (EMR)-based geriatric frailty assessment was developed independent of this project that included the five components of Fried's frailty phenotype and timed-up-and-go test (TUG). Starting July 2022, our team of three geriatric fellows piloted this EMR-based frailty screening during new patient clinic visits. We employed the "Plan-Do-Study-Act" method of Quality Improvement research to improve screening efficiency. Our first cycle involved optimizing the efficiency of administering the frailty screening by minimizing assessment components. Our second cycle involved receiving feedback from the clinic's nursing and physician staff to develop an adapted patient intake form which incorporated measures from Fried's frailty screen.

Results: During PDSA 1, time constraints hindered assessment completion and the decision was made to eliminate the TUG and to focus screening efforts on components defined by Fried's frailty phenotype. Full completion was defined as assessment of all five of Fried's validated criteria. Three geriatric fellows used the frailty flowsheet 30.8% of the time and had 16.5% completion from July to November 2022. Of incomplete assessments (n=10), grip strength (n=6) and gait speed (n=7) were the most frequently incomplete components. PDSA 2 is in progress, as feedback is being sought from nursing and physician staff regarding the shorter frailty screen.

Conclusions: We observed that EMR-based frailty assessments are infrequently completed. Our next step will be to incorporate frailty measures into the patient rooming process for nursing staff. Further study is needed to assess if expanding frailty assessment allows for early identification of prefrail and frail patients.

C208

Interprofessional Development of At Risk and Delirium Order Set to Improve Delirium Outcomes

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Background: Delirium is associated with poorer outcomes and effective interventions must be interdisciplinary and multipronged. Our institution uses the Confusion Assesment Method (CAM) to screen for delirium every shift. Assessing rates of delirium using ICD codes has been shown to underestimate the prevalence. As part of an interprofessional delirium committee, we assessed baseline delirium rates, LOS and mortality and developed an order set for patients deemed to be At Risk for delirium and an order set for patients that have Delirium, defined as +CAM.

Methods: We performed retrospective chart review to assess percentage of non ICU patients with +CAM score, presence of an ICD 10 code for delirium, length of stay (LOS) and mortality for the 12 months prior to order set deployment. We assembled an interprofessional committee including nursing, pharmacy, therapy, case management, and providers from geriatrics, psychiatry, hospital medicine and neurology to review templates and create an At Risk and a Delirium Order set.

Results: Baseline data from 7/2021 – 6/2022 showed prevalence of delirium defined as + CAM as 8% with 44% of those having an ICD 10 delirium code. LOS and mortality shown in Image 1.

The At Risk and a Delirium Order set included nonpharmacologic nursing interventions, prompts to notify provider teams for +CAM in effort to increase recognition, pharmacy and occupational therapy consult, and diagnostic and treatment guidance for providers. During the first month of use, there was 108 distinct usages of the order sets, 87 At risk and 21 Delirium by a total of 64 different providers. Providers were mostly hospital medicine attendings and advanced practice providers.

Conclusion: Our baseline data shows a discrepancy in patients with +CAM score with an ICD10 diagnosis for delirium and significantly higher LOS and mortality rates. Our interprofessional team was successful in implementing hospital wide order sets with initial evaluation indicating increasing uptake. Further analysis of order set use and effect on delirium recogition and reduction will help inform improvements in the order sets, EHR mechanisms for increasing usage, and future quality improvement projects.

C209 Encore Presentation

Improving Care Transitions and Self-Efficacy in Skilled Nursing Facility Patients and Caregivers

V. Teppone,[2,1] G. Mattson Huerta,[2] S. Dehom.[2] *1. Family Medicine, Loma Linda University Health, Loma Linda, CA; 2. Nursing, Loma Linda University, Loma Linda, CA.*

Background: Effective transitional care interventions for skilled nursing facility (SNF) patients continue to be a challenge. Overwhelmed patients and caregivers often the lack necessary skills and direction in chronic condition management upon discharge to home. These factors may lead to preventable acute care episodes and increased distress during care transitions. The aims of this study were to (1) to assess SNF's transitional care quality metrics before and after the intervention, (2) to adopt a self-efficacy education program for SNF patients and caregivers, (3) to assess for change in the level of self-efficacy levels after training, and (4) to collaborate with the Transitional Care Management (TCM) team after SNF discharge to provide support through the transition period.

Methods: This QI study examined the adoption of a five-week self-efficacy training program for ten SNF patient and caregiver groups based on Kate Lorig's self-efficacy training concepts and nursing skill training. Mary Naylor's Transitional Care Model was also implemented during the SNF stay and in the immediate post-SNF-discharge period. The study outcomes were evaluated over six months, comparing scores of two Likert measures of perceived self-efficacy and one Likert measure of the quality of care transitions.

Results: There was a significant increase in patient and caregiver self-efficacy scores based on two measures (by 8.18%, $p=0.005$ and 21.5%, $p<0.001$) as well as in the quality of care transition survey scores (20.2%, $p= 0.002$). As part of the intervention, patients were assisted in scheduling primary care appointments, hence patient follow-up with primary care providers increased. The ED visits decreased during the first 30 days after SNF discharge.

Conclusions: Evidence-based self-efficacy training and structured transitional care follow-up are significant in improving the quality of care transitions. SNF providers and nurses are uniquely positioned to champion these interventions in the setting and can guide patients and caregivers during clinical encounters in anticipation of care transitions. Future research would need to focus on assessing behavior changes post-SNF discharge and exploring healthcare information technology applications to improve self-efficacy levels and guide patients and caregivers through care transitions.

C210

"I just take my white pill": The Multi-disciplinary Pharmacy Focused Care to Older Adults Program

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Background

The program was created to provide pharmacy-focused visits to patients in a large safety-net health system who were identified to have a high risk for uncontrolled chronic disease states and polypharmacy. The objective of the program was to improve diabetes, hypertension, and polypharmacy-related adverse outcomes in vulnerable older adults. The program also had a broader goal: decreasing urgent care (UC), emergency department (ED), and hospital utilization within a large urban safety-net health system.

Methods

Referral criteria were identified by multi-disciplinary team and included older adults with: poorly controlled diabetes and hypertension, polypharmacy with five or more medications and low healthcare literacy, or a recent hospital admission. A total of 71 charts were retrospectively reviewed after intervention. Demographic data included age, gender, comorbidities, and race. The number of interventions provided by the pharmacist and the number of interventions accepted by the providers was recorded to assess the acceptance rate of the recommended interventions. Pre- and post-intervention clinical outcomes related to glycemic control and hypertension were collected. Pre- and post-intervention hospital utilization was also assessed by reviewing patients' ED visits, UC visits, and hospital admissions.

Results

Reductions in the average A1c (10.3% to 9.3% over 246 days) as well as systolic blood pressure (147mmHg to 133mmHg over 235 days) were observed. An average of 1.8 polypharmacy related interventions was provided by a pharmacist per encounter and interventions were accepted at an 89% rate. The number of ED visits, UC visits, and hospital admissions within 90 days of the index date were all reduced. These preliminary results do not yet demonstrate statistical significance. As data collection continues, we anticipate reaching statistical significance for all end points.

Conclusions

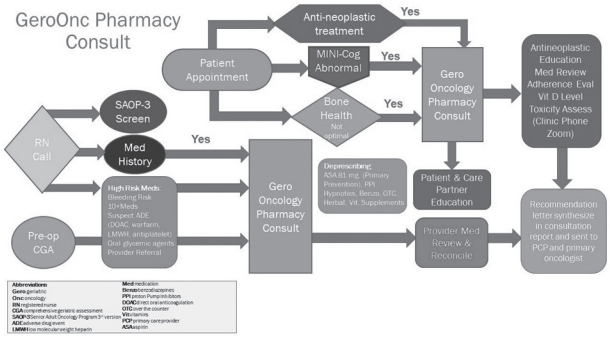
This program demonstrates that multi-disciplinary care, with focused pharmacy visits, to frail older adults trends towards an improvement in patient clinical outcomes and reduction in high-cost healthcare utilization within a safety-net system.

C211

Development of criteria in geriatric screening to prompt a clinical pharmacy consult: AFHS geriatric oncology clinic medication pilot project

C. Vonnes, K. Lombardi, R. Mintz, L. Poiley, M. Al-Jumayli. *Geriatric Oncology, H Lee Moffitt Research Institute and Cancer Center, Tampa, FL.*

Older patients with cancer use 3-fold more medications than younger patients. No consistent polypharmacy (PP) definition exists to provide trigger for geriatric oncology pharmacist (GOPh) collaboration. Purpose was to develop criteria in geriatric screening to trigger GOPh consult for high-risk medications, deprescribing, polypharmacy, and bone health management. New patients ≥70 years were screened with Senior Adult Oncology Program 3rd version (SAOP-3) Nurse screening call includes medication history. The following medications prompt GOPh consult: high-risk medications (ie. anticoagulants, proton pump inhibitors (PPI), aspirin (primary prevention) diabetic medications, greater than 10 medications, and combination hypnotic/benzodiazepine. Consults are ordered prior to visit to facilitate consultations with GOPh. These also included bone health evaluation/prescribing, deprescribing, medication review, and anti-neoplastic education. These were conducted live, telephone or via zoom. Total 1159 unique patients screened, 925 (80%) prompting a GOPh consult. Female (n= 816) mean age 77.28 and male (n=343) mean age 78.11. GOPh consult breakdown: Bone health/Vit D correction n=418; antineoplastic education n=573; deprescribing (included PPIs, aspirin primary prevention) n=134; high-risk medication n=126; visits for medication review n=125. Category of consultation not mutually exclusive. GOPh identified multiple needs for consult. Indications not clearly delineated on order and samples were underestimated. Development of template for consults with discreet fields can improve the report. Accurate medication histories and specific consultation criteria may allow electronic entry for streamlining geriatric screening.



Geriatric Oncology Pharmacy Process

C212

ACO-High Utilizers and the Impact of Care Coordination on Reducing Emergency Department Visits

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Background:

It is widely known that healthcare costs are concentrated among a small group of 'high-cost' patients. These high utilizers account for 21-28% of Emergency Department (ED) visits. ED care accounts for as much as 10% of healthcare spending and has been estimated at $38 billion per year. These statistics suggest that high-cost patients are a logical group for quality improvement and cost reduction interventions. The aim of this study is to determine if care coordination interventions can reduce ED visits and hospital readmissions in high utilizers.

Methods:

We screened Accountable Care Organization (ACO) patients with three or more ED visits within one year prior to screening at New York City safety net hospitals. Our intervention was to assign a care coordination team to approach and enroll these patients to identify their needs and assist with care gaps. Our team called each patient to assess barriers to care such as limited transportation; medication adherence; and attendance at appointments.

Results:

We identified 47 high utilizers and enrolled 37 patients. Among these 37 patients, 30 (81%) were 65 years or older and 15 (40.5%) were males. As a group, they had 286 ED visits within one year prior to the intervention. The total number of ED visits during the first 6 months after initiating the intervention was 112. Averaging over the year, there was a 21.7% reduction in ED visits.

Conclusion:

Care coordination seems to reduce ED visits in ACO high utilizers. We are six months into the intervention at the time of data collection and will reassess the impact one year after the intervention.

C213

Promoting Provider Adherence to the Medication M of the Age-Friendly 4Ms Framework

L. Kantamneni,[1] U. Ohuabunwa.[1,2] *1. Geriatrics, Emory University School of Medicine, Atlanta, GA; 2. Grady Memorial Hospital, Atlanta, GA.*

BACKGROUND: The Age Friendly Health Systems (AFHS) initiative promotes use of the 4Ms Framework centered around 4 core components: What Matters, Medication, Mentation & Mobility. We sought to evaluate provider adherence to protocols addressing the medication M of the framework and patient outcomes

METHODS: The project was conducted among patients > 65 yrs treated in inpatient (IP), outpatient (OP) & emergency departments (ED) of Grady Memorial Hospital (GMH), a 953-bed safety-net hospital.**Procedure:** We implemented 2 approaches to improve provider prescribing among older adults 1) Using a clinical decision support tool via the electronic health record Epic Systems® a best practice advisory(BPA) offered individual provider feedback regarding potentially inappropriate medications(PIMs) ordered and offered safer alternative medications that could be ordered with one click in the EHR. 2) A pharmacist-led daily medication review was conducted with provider feedback on PIMs in the Acute Care for Elderly (ACE) Unit. **Primary outcome:** Percentage of PIMs discontinued. **Secondary outcomes:** Percentage of BPA vs pharmacist recommendations accepted by providers, discharge PIMs, length of stay (LOS), mobility scores, nudesc delirium scores, Katz scores, 30-day readmission rate

RESULTS: 8270 BPA alerts fired for 3291 patients, mean age 73.7yrs with 5709 BPAs in IP, 1462 in ED & 1083 in OP settings. Providers responded to alerts by accepting BPA with no further action (4%) overriding BPA (10.2%) canceling BPA (60.4%) removing alerted PIM (20.6%) or ordering an alternative medication (3.5%). BPAs for NSAIDS and antipsychotics, were the most canceled, while muscle relaxants, antipsychotics & benzodiazepines were PIMS most removed. Comparing the ACE & General Medical Unit (GMU), there was no significant difference in provider responses to BPAs & secondary outcomes in patients with removed or retained PIMs though there was a trend to improved LOS, nudesc delirium & mobility scores in patients with discontinued PIMs. With the pharmacist-led intervention, providers on the ACE Unit accepted 47.2% of recommendations, with 17.9% of the PIMs discontinued; 19% of ACE & 1.1% of GMU patients were discharged without any PIMs. The 30-day readmission rate was 19.1% (ACE) vs 27% (IMU) (P = 0.31)

CONCLUSION: There was a higher provider acceptance rate with the pharmacist-led intervention but no significant difference in PIM discontinuation rate.

POSTER SESSION D (STUDENTS & RESIDENTS)

Friday, May 5
2:45 pm – 3:45 pm

D1 Resident Presentation

Aspiration-Induced Cardiac Arrest in Hospitalized Patients: A Case Series

C. A. A Prestwood,[1] S. Jenkins,[1] A. Joglar,[2] M. Berman,[1] E. Hommel.[1] *1. Internal Medicine, The University of Texas Medical Branch at Galveston, Galveston, TX; 2. Medical School, The University of Texas Medical Branch at Galveston, Galveston, TX.*

Background: Aspiration is an under-recognized potentially preventable harm in hospital settings that can be fatal. Aspiration risk increases with anatomic mechanical impairment, neurologic impairment, and altered consciousness, all common in the geriatric patient population. Screening, diagnosing, and treating patients for increased risk of aspiration may be vital to patient safety during hospitalization.

Methods: At our 450-bed university hospital, mortality reviews are performed on all patients admitted to the general medicine wards who expire during their hospitalization. Over a six-month period, we identified three cases of aspiration-induced cardiac arrest. A summary of each case and contributing factors is provided.

Results: A 90-year-old female with heart failure and emphysema was admitted with delirium and subdural hematoma after a fall. Though believed at risk for aspiration, she declined an objective dysphagia assessment and was fed a pureed diet. She developed acute respiratory failure due to aspiration pneumonitis and succumbed to her injuries.

A 76-year-old male with heart failure, chronic kidney disease, and prior stroke was admitted for Steven Johnson's Syndrome due to drug reaction. A nasogastric tube was placed for enteral nutrition due to initial mucosal involvement and then persistent delirium and dysphagia. Despite clinical improvement, he suffered fatal cardiac arrest following an episode of emesis and aspiration.

A 75-year-old male with heart failure, obstructive sleep apnea and chronic kidney disease was admitted for diastolic heart failure and acute kidney injury. After an episode of excessive coughing, he suffered cardiac arrest with notable gastric contents in the airway. His event also proved fatal.

Conclusions: These cases highlight the risk of mortality from aspiration during an acute hospitalization, independent of the admitting diagnosis. Awareness of aspiration risk, an appropriate dysphagia screening and diagnostic approach, and implementation of evidence based therapeutic interventions may allow prevention of future cases.

D2 Resident Presentation

Hope for the Best, Plan for the Worst: An Approach to Palliative Care While Awaiting Transplantation

R. A. Aggarwal. *Internal Medicine, Johns Hopkins University, Baltimore, MD.*

Background: The standard practice for transplant candidacy today prioritizes a patient's physiologic age over chronologic age, resulting in a higher proportion of patients awaiting transplantation who are over 65. This case of an elderly patient requiring transplantation illustrates a unique approach to advanced care planning.

Case: Mrs. L is a 67-year-old woman with a past medical history of colon cancer treated with right hemicolectomy and chemotherapy, cirrhosis likely secondary to chemotherapy exposure, end stage renal disease due to hepatorenal syndrome, and gastric bypass surgery who was admitted for decompensated cirrhosis, renal failure, and consideration for dual organ transplant. She experienced significant weight loss and malnutrition that resulted in hypotension requiring midodrine, anasarca in the setting of hypoalbuminemia, and severely impaired mobility requiring acute rehabilitation on discharge. The transplant committee concluded that she was not a candidate unless her functional and nutritional status improved. Her estimated 3-month mortality was 20% based on MELD score.

Discussion: Addressing malnutrition for this patient was challenging due to the limited supplementation options available to her. She could not meet her caloric needs orally and required nasoduodenal tube placement. The palliative care team assisted with advanced care planning given poor prognosis. While she was motivated to be a candidate for transplant, it was also important for the care team to understand her goals should she ultimately pursue hospice care. This constituted a balanced conversation that focused on her ability to increase oral intake in the hospital while also introducing the idea of end-of-life care. This model of providing palliative care in parallel with disease-directed therapy eventually decreased symptom burden, enhanced the patient's relationship with the care team, and preserved her motivation to improve her nutritional and functional status.

Conclusion: Advanced care planning for elderly patients awaiting transplant presents many challenges due to the unpredictable nature of transplant itself. An aging cohort of patients awaiting

transplant implies a higher level of complexity both medically and psychosocially that could affect patient outcomes. This case demonstrates that transplant evaluation for elderly patients should always be coupled with a palliative approach to advanced care planning.

D3 Student Presentation
Lingering Fever in a Geriatric Patient, Looking Beyond the Urinalysis
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Background:

Fevers of unknown origin (FUO) account for 3% of all hospital admissions (1). The diagnostic protocols vary depending on all additional symptoms. In the wake of the pandemic a fever related to SARS-CoV-2 is common. In our patient's case, the fever was persistent for a month and after multiple emergency department visits renal cell carcinoma was suspected after a CT of the abdomen was performed. Our patient was admitted to hospice where the fevers eventually subsided.

Methods:

This is a retrospective case study.

Results:

The patient was assumed to have renal cell carcinoma which would most likely characterize the high fever, lack of response to treatments, and recurrent visits to the emergency room. The renal cell carcinoma took an atypical presentation, with the patient having normal creatinine levels and no urinary incontinence. The patient did have WBCs in her urinalysis and was treated with Cephalexin for presumed urinary tract infection (UTI). Ultimately, after multiple lab tests, the patient returned to the emergency department with a fever of 104 deg F, where CT of the abdomen showed a right renal mass. After choosing not to pursue diagnostic confirmation of the malignancy, the patient was discharged. Our patient returned the same day to the emergency department with a 105 deg F fever, and this time ultrasound showcased a solid and cystic mass (Image 1). This added support that the patient's condition was renal cell carcinoma.

Conclusions:

Renal cell carcinoma can be found incidentally on imaging. Its presentation can take many forms, with the classical symptoms showcasing flank pain, hematuria, and palpable mass (2). In our patient's case, her primary symptom was fever without the normal prodrome of renal cell carcinoma. Ultimately, abnormal imaging led to a suspected diagnosis of renal cell carcinoma.

References:

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D4 Student Presentation
Growing GI Gripes
M. Anderson, C. Wehling. *University of Nebraska Medical Center, Omaha, NE.*

A 75-year-old woman with history of small hiatal hernia on omeprazole for gastroesophageal reflux disease (GERD) presents to clinic with one year of occasional fecal urgency and incontinence. Rectal exam and lab workup are normal. Abdominal CT reveals herniation of the stomach, colon, and mesocolonic fat into the left chest. The patient, a good surgical candidate, undergoes robotic repair, and recovers without incident.

There are four types of hiatal hernia, classified by degree of intrathoracic herniation. Type IV involves intrathoracic herniation of stomach and other abdominal organs. Presenting symptoms include chest pain, dyspnea, GERD, bowel obstruction, and acute nausea and vomiting. Type IV make up less than 5% of cases and are often discovered following workup of presenting symptoms more commonly caused by other etiologies.

Guidelines indicate surgical repair for symptomatic type IV hernias, while asymptomatic repair depends on age and comorbidities. Type IV hernias are at increased risk of progressing to obstruction requiring emergent surgical treatment. Geriatric patients have increaesd risk of large hiatal hernias and of mortality during emergent hernia repair as compared to elective. There are no current guidelines for surveillance of hiatal hernias. There may be benefit to surgical repair of type IV hernias in asymptomatic, otherwise functional, geriatric patients to decrease future risk of hernia and surgical complications, as was done in this patient. As the population ages and more cases are identified, clearer guidelines may be developed.

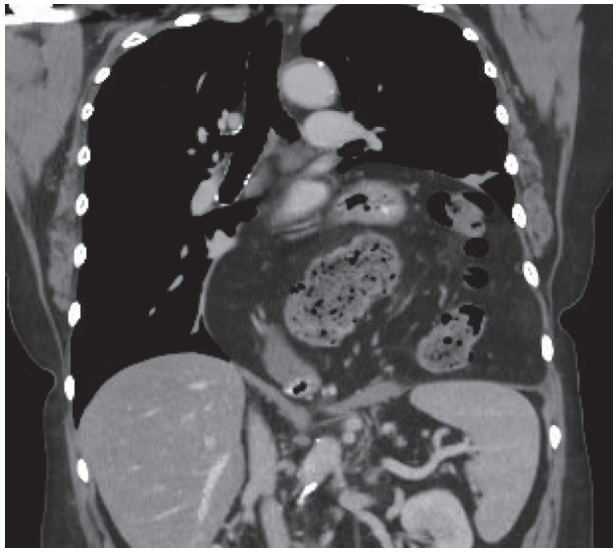

Image 1. CT abdomen showing type IV hiatal hernia

D5 Resident Presentation
Addressing Polypharmacy in Geriatric Patient Population through an Interdisciplinary Care Approach: A Case Report
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Background

Polypharmacy can be defined as the simultaneous use of multiple medications in an individual for the treatment of one or more health conditions. In most cases, more medications are administered than clinically indicated, resulting in unnecessary drug use. Increasing age, multimorbidity and involvement of multiple providers are common risk factors for polypharmacy. Polypharmacy has been associated with an increased risk for adverse drug events, physical and cognitive impairment, and overall poor health outcomes. Comprehensive medication reviews can serve as the initial step in identifying and addressing polypharmacy. This report represents a complex case of polypharmacy, as identified through a multidisciplinary comprehensive health assessment program performed at a geriatric primary care clinic.

Methods

At the University of California Irvine (UCI) Senior Health Center, patients with complex medical conditions present for a comprehensive multidisciplinary Health Assessment for Seniors (HAPS) program. Patients are evaluated by multiple specialists, including a geriatrician, clinical pharmacist, neuropsychologist, registered dietician, occupational therapist, and social worker who identify gaps in care and improve health outcomes through necessary interventions.

Case Presentation

A 76-year-old male with multiple comorbidities presented for HAPS program. Patient brought a total of 23 medications, including 10 psychoactive drugs. Upon interviewing the patient and his wife, discrepancies between the current regimen became apparent, as well as reports of medication hoarding as evident by photos of the patient's medicine cabinet.

Results

As part of the pharmacy consultation portion of the HAPS assessment, interventions were made to reduce pill burden and address a potential prescribing cascade. A home visit was also recommended to sort through and eliminate discontinued medications.

Conclusions

Given the complexity of polypharmacy in the patient case, evaluation by a clinical pharmacist was essential in identifying medication related issues and making necessary interventions to reduce polypharmacy.

D6 Resident Presentation

Worsening Delusions Secondary to GI Complaints

C. Blanchett, H. Virk, S. Sprabery. *Psychiatry and Behavioral Sciences, East Tennessee State University, Johnson City, TN.*

Background: This case study serves to highlight a valuable inpatient treatment approach toward an elderly, female patient with a previously diagnosed primary psychotic disorder who was experiencing a new delusion in conjunction with a complex medical presentation. We show the application of ethical treatment principles and demonstrate how prioritization of appropriate medical care may lead to improved outcomes. Prior studies have suggested that improved medical care may reduce mortality in patients with mental health comorbidities.

Methods/Design: The patient was being treated with a long-acting injectable antipsychotic medication. She had a history of medication induced parkinsonism which was currently stable. When she acutely presented to the hospital, she had been abstaining from food secondary to delusions that God was instructing her to do so. Along with these delusions, she was experiencing an acute exacerbation of chronic diarrhea, weakness, abdominal pain and had related lab abnormalities. In addition to her primary team consulting for psychiatric evaluation, she was also seen by GI, Surgery, OB/GYN, Nutrition, and Physical Therapy.

Results: For her immediate care and to address the delusions, it was decided to treat her underlying medical conditions along with establishing rapport and providing brief supportive psychotherapy, rather than making immediate changes to her psychotropic medications. She had a history of related side effects which were controlled with a brain stimulator. Hers was an unusual case of a psychotic exacerbation without delirium which was ultimately due to a medical condition and achieved remission after addressing the underlying medical etiologies.

Conclusion: The patient was an elderly female whose presentation was complex given her acute and chronic medical and psychiatric conditions. In conclusion, this case study supports the established importance of addressing somatic wellness in instances of delusion, while also being novel in enhancing the understanding of the balance between treatment of psychiatric and medical concerns in geriatric patients, especially when both matters are complicated. Further, this case study aims at discerning appropriate treatment prioritization and risk versus benefit evaluation applicable to geriatric populations with comorbid psychiatric illnesses. This understanding is crucial in order to provide the best possible care for such patients.

D7 Student Presentation

Legionella is an Increasingly Common Cause of Community-Acquired Pneumonia

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Case:

A 72-year-old previously healthy man presented with one week of fatigue, cough, dyspnea on exertion, and diarrhea. He was febrile to 39C, tachycardic, tachypneic, with an spO2 of 94% on room air. Initial labs showed hyponatremia (Na 131), and mildly elevated AST, ALT, and lactate. Nasal PCR testing for COVID-19, influenza and RSV was negative. Chest x-ray showed right upper lobe consolidation. In the ED, sepsis fluids and broad-spectrum antibiotics were administered. The patient was admitted to the geriatric unit and tested positive for Legionella with a urine antigen test (UAT). He was narrowed to azithromycin, completing a seven-day course. He denied recent travel or exposure to water sources associated with *Legionella,* such as hot tubs or humidifiers. The case was reported to the local health department for investigation of exposure source.

Discussion:

Legionnaires' disease is an increasingly diagnosed cause of severe community-acquired pneumonia (CAP), secondary to *Legionella spp*, a Gram-negative bacteria associated frequently with fresh water. Reported cases have increased nine-fold in the US from 2000-2018[1]. This parallels the regional trend at this North Carolina quaternary care center. Factors contributing to this include increased testing and reporting, an aging population (peak age-specific incidence = 75-84[2]), aging plumbing infrastructure, and changing climate[1].

Legionnaires' disease can present with cough, dyspnea, high fevers, and extrapulmonary symptoms, including diarrhea or altered mental status[3], and low serum sodium[4]. Diagnosing Legionnaires' early is essential, as delaying treatment is associated with increased mortality[5]. *Legionella* UATs can expedite initiation of first-line antibiotic coverage: macrolides or fluoroquinolones. UATs are not sensitive to every strain of *Legionella,* but detect serogroup 1 (specificity 99%, sensitivity 74%[6]), which is the cause of 80-95% of Legionella pneumonia in the US[7].

Conclusion:

In older patients with CAP, particularly those with extrapulmonary symptoms or severe features of pneumonia, testing for *Legionella* is increasingly relevant due to increased incidence. UAT provides rapid results and can prevent delays in treatment, which are associated with increased mortality. While *Legionella* UATs do not detect all bacterial strains, they are sensitive to serogroup 1, identifying most cases.

D8 Resident Presentation

Goals of Care Discussion in Advanced Dementia

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Background: Dementia is the seventh leading cause of death. Advanced dementia is defined as profound cognitive impairment, inability to communicate verbally, and complete functional dependence. Goals of care (GOC) discussion is the communication between the patient, their surrogate decision maker, and clinicians for the anticipated healthcare management. We present a patient with advanced dementia whose management changed from maximal to comfort measures after GOC discussion.

Method: A single patient case report conducted after IRB approval.

Result: 90 years old Spanish Speaking Hispanic female with history of multiple comorbidities, dementia and recent surgery of total abdominal hysterectomy/bilateral salpingo-oophorectomy one year ago presented to the geriatric clinic to establish care. Her

daughter provided collateral information since the patient was non-verbal. Patient was diagnosed with dementia for at least a couple of years. She was not able to do any Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADL). She did not recognize any family members nor cooperate with the care, refused to eat, and could not communicate any of her needs. Her BMI was 15.8, noted temporal wasting and decreased muscle mass globally. Albumin level of 1.8. After discussion about GOC, the daughter wanted the patient to avoid pain and provide comfort. Code status was changed to Do Not Resuscitate and Intubate (DNR/DNI), no artificial nutrition, and referred to hospice.

Our patient had been diagnosed with dementia for a couple of years but never received GOC discussion despite following up with her doctors or being hospitalized for a major procedure. She may have had a different experience if she understood their GOC earlier. Studies show that GOC intervention in nursing home residents with advanced dementia, conveys to clinically significantly more palliative care content in treatment plans, including choice of comfort as the primary goal, and half as many hospital transfers[1]. Therefore, GOC discussion would reduce patient and their family suffering and limit interventions that do not change patients' life expectancy.

Conclusion: The early GOC discussion is important in patients with advanced dementia.

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D9 Resident Presentation

"Parathyroid Activity" - The high incidence of parathyroid adenomas in a rural academic clinic in Louisiana

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Background: Parathyroid adenomas are responsible for 80-85% of cases of primary hyperparathyroidism. It has been documented that hyperparathyroidism is a disease which has a significant increase in incidence with age and is commonly encountered in the elderly population. It is the most common cause of hypercalcemia, however, it is often underdiagnosed and undertreated. Literature is limited on the diagnosis and treatment specifically for parathyroid adenomas in the elderly, and it is thought to have an incidence of around 100,000 Americans per year.

Methods: Our primary care and geriatrics clinics in Lafayette, LA are seeing above average rates in the diagnosis of parathyroid adenomas in patients > 60. The purpose of this study is to conduct a retrospective multi-case review of clinical and laboratory data to identify the incidence of parathyroid adenomas in our patient population compared to the standard national average.

Results: Our outpatient population has shown double the incidence of parathyroid adenomas proportionately when compared to the national average percentage and we attribute this to lifestyle (diet, substance abuse) and environmental factors.

Conclusions: We believe showcasing this information can encourage geriatricians to be diligent in their medical workup and guide them towards expedited diagnosis and precise management of parathyroid adenomas in our geriatric population.

D10 Resident Presentation

Identification of euglycemic diabetic ketoacidosis with beta-hydroxybutyrate: a case report.

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Introduction: Euglycemic diabetic ketoacidosis (euDKA) is a well-documented life-threatening complication increasing in prevalence due to the use of sodium-glucose cotransporter-2 inhibitors (SGLT2i);but guidelines on the management of euDKA are not well defined. We present the case of an 89-year-old female with euDKA and highlight a potential role of beta-hydroxybutyrate in euDKA management.

Case Description:An 89-year-old female presented to the ED with lethargy one week after left hip arthroplasty. Postoperatively, she had poor oral intake with fluctuation of her blood glucose (30 to 600 mg/dL). Medications included Sitagliptin and Empagliflozin. Initial laboratory studies demonstrated DKA with elevated glucose (639 mg/dL), anion gap (>30), beta-hydroxybutyrate (BHB) (16.77mM), and decreased bicarbonate (6.4mmol/L). Her anion gap, glucose level, and bicarbonate level normalized after 12 hours of resuscitation with IV fluids and an insulin drip. Insulin drip was continued for 48 hours until levels of BHB normalized. She was discharged on Glargine and Sitagliptin and SGLT2i therapy was discontinued.

Discussion:Under current ADA guidelines, it is possible to remain in a state of ketosis despite resolution of DKA. DKA resolution criteria include glucose < 200 mg/dL with two of the following: serum bicarbonate level ≥ 15mEq/L,pH > 7.3, or anion gap ≤ 12mEq/L. Our patient remained in a state of euglycemic ketoacidosis, likely from a combination of starvation and SGLT-2i use, despite normalization of the aforementioned parameters. We used BHB levels to guide management as levels greater than 1.5 mmol/L have a sensitivity and specificity approaching 100% and 85% respectively for DKA diagnosis. Furthermore, BHB levels correlate better than ketone levels with overall degree of ketosis. Hence, we suggest that levels of BHB may be of use in euglycemic ketoacidosis surveillance.

Conclusion: Euglycemic ketoacidosis may persist in patients despite formal resolution of DKA by current guidelines. Levels of beta-hydroxybutyrate correlate well with residual ketoacidosis and may represent a way to monitor high-risk patients, such as those with SGLT2i use.

References:

1. Colacci, M., et al., Sodium-Glucose Cotransporter-2 Inhibitors and Risk of Diabetic Ketoacidosis Among Adults With Type 2 Diabetes:A Systematic Review and Meta-Analysis. Can J Diabetes, 2022.46(1): p10-15. e2.

D11 Resident Presentation

Multicomplexity of a Protein

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BACKGROUND: Amyloidosis is defined as amyloid fibril deposition in the extracellular space, leading to organ damage and eventually failure. When such deposits occur in the myocardium, cardiac amyloidosis results. The transthyretin protein (TTR) is a transmembrane protein that transports thyroxine and retinol to the liver. It is also a major amyloidogenic protein. There are two forms of TTR, leading to amyloidosis: ATTRv (hereditary) and ATTRwt (wild-type). Here, we present a patient who came to us with multiple geriatric syndromes due to a new diagnosis of ATTRwt cardiac amyloidosis.

CASE: A 76-year-old lady with hypertension and wrist pain presented with confusion, self-neglect, depression, fall, and shortness of breath. The initial concern was failure to thrive due to multiple new diagnoses: atrial fibrillation, heart failure, pulmonary emboli,

depression, and possible dementia. However, it was an echocardiogram that tied everything together. It showed an ejection fraction of 20%, hypertrophied left ventricle and septum, and restrictive filling pattern in ventricles. These findings, along with low voltage QRS on EKG, were suggestive of infiltrative cardiomyopathy. Cardiac amyloidosis was confirmed by SPECT/CT which showed increased uptake of technetium pyrophosphate (99mTc-PYP) by myocardium, proving transthyretin-related amyloid deposition. Genetic test showed that it was ATTRwt. Unfortunately, the patient continued to deteriorate and died under hospice care.

DISCUSSION: Our patient had a few urgent care visits due to wrist pain and she was diagnosed with carpel tunnel syndrome (CTS). Wrist pain is not generally associated with cardiac amyloidosis. However, in a case series of patients with systemic ATTRwt antemortem, CTS was the most common initial feature of ATTRwt amyloidosis. The patient's initial presentation of wrist pain and carpal tunnel might have been due to amyloid deposits in the wrists. Unfortunately, it was not until she presented with geriatric syndrome that the appropriate underlying diagnosis was made. This case demonstrates joint pain in an older adult is not always due to osteoarthritis and that one protein can lead to multicomplexity in a frail older adult.

CONCLUSION: The ATTRwt protein can manifest as a multitude of problems, including carpal tunnel syndrome, cardiac amyloidosis, geriatric syndrome and even death in older adults.

D12 Student Presentation, Encore Presentation
Life Threatening Hypomagnesemia in an Elderly Male
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Introduction: Hypomagnesemia is a rare entity with an incidence of 2% in the general population and is defined as a magnesium (Mg) level below 1.8 mg/dL(normal 1.82 - 2.30 mg/dL). Although scarce in the general population, its incidence in ICU patients is as high as 65%1. Magnesium regulates the bone formation, cardiac excitability, vasomotor tone, and neuromuscular conduction2. Antibiotics and alcohol intake can lead to hypomagnesemia causing muscle weakness, cramps, and spasms. Magnesium distorts the levels of calcium and potassium, which can result in life-threatening arrhythmias, so detecting and treating hypomagnesemia is critically essential.

Case: A 70-year-old male with a past medical history of congestive heart failure on bumetanide, chronic kidney disease stage 3, and recurrent C. difficile infection came to the hospital with sudden onset chest pain after vomiting. He also reported two significant episodes of diarrhea per day, numbness of his hands and feet, and cramping. The labs showed magnesium of 0.2 and calcium of 6.5, and he was given magnesium sulfate and calcium gluconate. He was admitted to the hospital one month prior with similar complaints and was found to have severe hypomagnesemia. He was evaluated by a nephrologist, who ascribed his electrolyte abnormalities to diarrhea. Due to persistent diarrhea, gastroenterology was consulted during this hospitalization, and a colonoscopy was scheduled to rule out other causes of diarrhea.

Conclusion: Severe hypomagnesemia is a potentially fatal condition that is usually overlooked in the elderly and is often coupled with refractory hypokalemia and hypocalcemia. Early diagnosis and treatment of underlying etiologies, as well as improved dietary magnesium intake, can reduce the risk of hypomagnesemia and improve clinical outcomes in susceptible populations.

References

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2) Gröber U, Schmidt J, Kisters K. Magnesium in Prevention and Therapy. Nutrients. 2015;7(9):8199-8226. Published 2015 Sep 23. doi:10.3390/nu7095388

D13 Resident Presentation
Zany Visions on Azithromycin – A Case Report
N. J. Flores, C. Merrick, R. Atif. *Baystate Medical Center, Springfield, MA.*

Background:

Azithromycin has well-known adverse effects such as QTc prolongation and GI disturbance, but there is emerging evidence about the neuropsychiatric effects of macrolides, especially among the elderly. Here we present a case of acute psychosis associated with azithromycin.

Case:

An 83-year-old male with a history of COPD Gold D presented to the hospital for audiovisual hallucinations. He described having hallucinations of animals entering his room and falling out of the ceiling, hearing voices, and feeling at times like he was floating in the middle of his room. Symptom onset was 18 months before admission. The hallucinations occurred intermittently throughout the day, but were most prominent at night, and would make him feel afraid to go to sleep. He had no psychiatric diagnoses or history of substance use, head imaging was unremarkable, and he was not on other deliriogenic medications. CBC, BMP, TSH, UA did not explain his symptoms. Further chart review revealed that he was initiated on azithromycin 3 times weekly for COPD around the time of symptom onset. He was then transitioned from azithromycin to doxycycline in the hospital. Hallucinations stopped after this medication change, and he was discharged. He reported no hallucinations at a 2 week follow-up with his PCP.

Discussion:

The literature suggests that 0.3% of azithromycin users develop psychosis, and the prevalence increases to 4% in the elderly. While the mechanism of CNS toxicity of macrolides is unclear, it is hypothesized that there may be interactions with the glutaminergic and GABA pathways, or drug interactions involving CYP3A4. Psychosis can arise within 48-72 hours after macrolide initiation, and stop within the same timeframe after cessation. Charles Bonnet syndrome was considered in the differential, but patient had macular degeneration for 10 years, denied any recent worsening of his vision, and was following with an eye doctor. Our patient's sudden onset hallucinations after initiation of azithromycin, as well as relief with stopping the drug, points towards azithromycin being the driver of his hallucinations in the absence of any other etiology.

Conclusion:

Given its widespread use as both an antibiotic and an adjunctive therapy for severe COPD, providers prescribing azithromycin should inform their patients about and actively monitor for neurotoxic effects after initiation, especially among the elderly population.

D14 Student Presentation
Age-Friendly Case Study Shares Knowledge between FQHC Rural Health Clinics
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Background: Older adults living in rural areas face significant disparities in health and healthcare. Several evidence-based geriatric care models are used in the United States, however, most do not reach those who could benefit the most, due to difficulties disseminating education and reproducing models in settings with less resources, such as those in rural communities. The Age-Friendly Health Systems (AFHS) movement recognizes that a national response is necessary to improve care for older adults and focuses on a set of evidence-based,

geriatric care elements known as the 4Ms (what Matters, Mentation, Medication, Mobility). Age-Friendly Care, PA (AFCPA) works to improve the care of older adults located in rural Pennsylvania by implementing the AFHS framework. This presentation highlights the impact of a case-based approach to educating healthcare staff in rural settings to facilitate dissemination and exchange of geriatric and age-friendly knowledge and practice skills.

Methods: Healthcare professionals and staff attended the ECHO session, "Mobility: Fall Risk Present- Now What?". A case study of an older adult patient with medical complexities within a level 2 AFHS certified rural medical clinic was applied as a de-identified case discussion within the ECHO session. A post-event evaluation survey was completed by 22/34 participants.

Results: Ninety-one percent of participants rated the information provided during the ECHO session satisfactory or very satisfactory, and 86% indicated the content was relevant to their clinical practice; 77% agreed or strongly agreed that they would make changes to their clinical practice. The most common barriers to making changes were lack of time to counsel patients (55%) and lack of time to assess patients (36%).

Conclusions: Best practices and real-world application of the case pertaining to the 4Ms and AFHS framework were identified and discussed. Key takeaways were shared post ECHO to integrate knowledge into a clinical education tool for staff. When implementing the 4M framework in healthcare sites located in rural settings, case studies are valuable tools to exchange multidisciplinary ideas and empower primary care clinicians to provide high quality care for older adults with complex conditions within the rural communities they serve.

D15 Resident Presentation

Preventing Preventable Physical Deconditioning

Z. Gordon. *Internal Medicine Residency, Florida Atlantic University, Boca Raton, FL.*

Background

Merriam-Webster defines deconditioning as "to cause extinction of". Physical activity and therapy are crucial in minimizing physical deconditioning in the hospital setting. However, patients often remain seated or lying in hospital beds for extended time leading to hospital acquired deconditioning (HAD) or post hospital syndrome. The most susceptible group is the elderly population and this case illustrates this phenomenon.

Case

An 85 y/o female with history of Rheumatoid Arthritis in remission and currently on no prescribed medications, was discharged to a Skilled Nursing Facility (SNF) after 19 days of hospitalization for UTI with malaise. Her hospital course was complicated by newly diagnosed neutropenia, bacteremia, and newly diagnosed Atrial fibrillation. Prior to hospitalization, the patient was independent in all Activities of Daily Living (ADLs). She lived with her husband without hired aids or assistive devices, and even started using a device to count her steps. As the patient was physically independent at baseline, physical therapy was not prioritized for her, and she was allowed to do activities as tolerated. However, for 2 weeks, she remained in bed or seated at bedside. As a result, on discharge, she required maximum assistance in all basic and independent ADLs, and a SNF was recommended for physical rehabilitation. Prior to hospitalization her Frailty Index (FI) was 0.07 which ranked her as robust; on discharge her FI was 0.46 indicating severe frailty.

Discussion

The minimum required physical activity for health benefits in older adults is 150 mins/week, which is equivalent to 30 mins, 5 days/week. The elderly are often sedentary during hospitalization, and more so if fall precautions are ordered. This results in physical deconditioning, increased frailty, and added mortality. The cost of post acute care exceeds $60 billion/year in Medicare. Instead of adding to the cost, resources should be geared towards making Physical Therapy standardized hospital care for prevention of avertible physical decline in the elderly. In the absence of absolute contraindications to activity, this can safely enable them to meet daily physical activity needs.

Conclusion

Raising awareness of hospital acquired deconditioning (HAD), and allocating resources to inpatient physical therapy is important in reducing preventable health decline. This in turn delays the ensue of consequential mortality and morbidity risk factors associated with physical deconditioning in older adults.

D16 Resident Presentation

Fear Not, Fall No More: Addressing Easily Overlooked Causes of Falls

Z. Gordon, A. S. Rackman. *Department of Medicine, Florida Atlantic University, Boca Raton, FL.*

Background

Falls have multifactorial causes in older adults, and aspects of their management can be easily overlooked. The following case describes recurrent falls in an older woman who was referred by her PCP to a geriatrician in the outpatient setting.

Case

A 72 year-old woman with a history of COPD, hypertension, osteoarthritis (OA), and age-related macular degeneration (AMD) presented to her PCP after falling 3 times within 2 months, resulting in shoulder contusions, head trauma without major injury, and an added fear of falling. In the first two falls, she tripped on a kitchen mat. In the third fall, she stumbled in flip flops on her way to the bathroom in the morning after awakening. Her falls were presumed to be mechanical in nature, hence, her PCP ordered Physical Therapy (PT) and home safety evaluations, and encouraged environmental/home modifications. The patient also received a Geriatric Medicine referral. The geriatric consultation revealed the use of over the counter (OTC) doxylamine (neither mentioned nor documented in her prior charts), and 4 glasses of wine nightly for insomnia. Of note, all 3 falls were in the morning after awakening. The patient was also on daily cetirizine for allergy-like symptoms which had already improved after intensified COPD treatment with inhalers. An ophthalmology evaluation was also overdue for her AMD, and on physical examination, she had poor balance and an antalgic gait due to left knee OA.

Results

Multifactorial fall prevention strategies were initiated. Environmental modifications were made by removing kitchen floor mats and educating her on proper footwear. She discontinued doxylamine and cetirizine, and a referral for cognitive behavioral therapy was made for her insomnia. A plan to slowly taper her alcohol intake after the upcoming holiday season was agreed upon based on her wishes. She was referred to PT for poor balance/fall prevention, and an ophthalmologist for vision evaluation. On follow-up visit, falls had not recurred, and her fear of falling diminished.

Conclusions

Multiple modifiable factors that lead to falls are easily overlooked and under-reported, including OTC medications, excessive alcohol intake, home hazards, poor vision, and inappropriate footwear. According to the W.H.O., falls are the 2nd leading cause of unintended injury-mortality globally. Thorough fall evaluation with strategic care is paramount and addresses the understandable fear of falling in older adults.

D17 Student Presentation
Disseminated Salmonella in a Geriatric Patient
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Case: An 82 year old female with a history of spinal stenosis and hip osteoarthritis status-post replacement presented to the emergency department with profound weakness, nausea, vomiting, subjective fever, and bowel and bladder incontinence. At baseline, she suffered from chronic back pain but could ambulate around the home. However, she was now unable to walk or get out of bed due to worsening weakness. Exam was notable for dry mucous membranes, systolic ejection murmur, scattered wheezes bilaterally, and 4 out of 5 strength in bilateral lower extremities. Initial workup revealed a type 2 NSTEMI, thrombocytopenia, and AKI. She was admitted to the hospital and placed on vancomycin and cefepime which was broadened to meropenem after she began to have rigors and hypotension. Blood cultures were positive for pan-susceptible salmonella. She continued to fever and developed septic shock requiring norepinephrine despite appropriate treatment with levofloxacin. MRI L spine was attempted to evaluate for discitis/osteomyelitis, but images were limited due to patient movement as she had severe pain. A TEE was negative for endocarditis. PET-CT identified increased uptake at L2-L3 consistent with osteomyelitis with extension to surrounding tissue including psoas muscle.

Case Discussion: Non-typhoidal Salmonella can cause a wide range of disease including gastroenteritis, osteomyelitis, bacteremia, and endovascular infection. Risk factors for salmonellosis include young and old age, recent antibiotic use, diabetes, malignancy, rheumatologic disorders, HIV infection, and therapeutic immunosuppression. Bacteremia is more likely to occur in immunocompromised individuals, and these hosts are also at increased risk of developing an extraintestinal focal infection (EFI). Therefore, elderly individuals with salmonella bacteremia are at increased risk of developing EFI due to immunosenescence. Thoughtful imaging is essential in elderly individuals with Salmonella bacteremia to ensure proper identification and treatment of the infectious source.

Case Conclusion: This patient began to improve with treatment with ceftriaxone and levofloxacin and was transferred to the floor. She was eventually discharged to a SNF on 6 weeks of oral levofloxacin and has continued to sustain recovery.

D18 Student Presentation
Often Overlooked: A Case of Mixed Dementia Diagnosis
Q. Hu,[1] J. O. Jaeger.[2] *1. University of Connecticut School of Medicine, Farmington, CT; 2. UConn Health, Farmington, CT.*

Introduction: Dementia is the seventh leading cause of death worldwide and significantly contributes to disability and dependency among older adults. Though it is a common diagnosis among older adults, more than half of individuals diagnosed with a specific type of dementia also demonstrate coexisting pathology. This indicates that mixed dementia is greatly underdiagnosed and the prioritization of treatment based on each etiology can be difficult.[1] This is a case of an older adult patient with mixed dementia with multiple possible contributing etiologies including Alzheimer's disease, vascular dementia, normal pressure hydrocephalus (NPH), and parkinsonism.

Case Description: A 90-year-old community dwelling moderately frail male with multiple cerebrovascular risk factors presented to the Emergency Department after an unwitnessed fall at home. Per collateral report, patient had worsening confusion and shuffling gait for one week and progressive memory changes for 8 months prior. Physical exam was non-focal. Labwork was unremarkable. Non-contrast head CT showed cortical atrophy and ventriculomegaly concerning for NPH. Subsequent brain MRI showed chronic left basal ganglia infarct. The patient's mental status improved to baseline without intervention during hospitalization. During outpatient neurology follow-up a resting tremor was observed, Montreal Cognitive Assessment score was 11/30, and mixed dementia was diagnosed.

Discussion: Because of complex overlapping clinical presentations, mixed dementia continues to be a challenge to diagnose and treat. This patient's presentation raised concern for Alzheimer's disease in the setting of memory changes, vascular disease in the setting of multiple risk factors, tremor concerning for parkinsonism, and neuroimaging concerning for NPH. The case highlights the importance of considering multiple dementia etiologies at initial diagnosis and carefully considering treatment options based on each etiology.

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D19 Resident Presentation
What Matters Most: Initiating Gender-Affirming Hormone Therapy in Geriatric Transgender Patients
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Background

There is limited data on the initiation or continuation of gender-affirming hormone therapy (GAHT) in the geriatric transgender population, and many physicians may be unaware of potential considerations when discussing risks and benefits with their patients. We report a case of a patient who was seen in geriatrics primary care clinic to discuss initiating feminizing GAHT.

Case Presentation

A 70 year old patient assigned male at birth with major depressive disorder and heart failure with reduced ejection fraction presented to clinic for recurrent episodes of intense anger. He was taking lamotrigine and venlafaxine prescribed by a physician years ago. He was amenable to psychotherapy, and after several sessions, he realized he had been struggling with his gender identity for much of his life and identified as female (chose to use masculine pronouns at the time). He presented to clinic to discuss his options for feminizing GAHT and the risks and benefits of initiating these hormones with respect to his cardiovascular health. His goals for hormone therapy included breast development, fat redistribution, and face softening. He was referred to endocrinology who recommended initiation of oral estradiol and spironolactone after discussion with cardiology. The risks of thromboembolic disease, liver injury, hyperkalemia, and breast cancer were also discussed.

Discussion

When discussing gender affirmation and initiation of GAHT in an older transgender patient, it is important to consider its potential impact on cardiovascular outcomes, bone density, and cancer risk. Geriatric patients are more likely to have medical comorbidities that may complicate the decision to start hormone therapy, but it is also important to balance the potential risks with the likely benefits of improved mental health and quality of life. We encourage a team-based approach, focusing on "What Matters Most," to provide age-friendly care and support older transgender patients in these decisions. Evaluation by providers with expertise in gender-affirming care, which may include primary care practitioners, mental health providers, endocrinologists, and surgeons, can provide an individualized plan of care for older patients.

D20 Resident Presentation

Not Just Non-Adherence: Exploring Adverse Childhood Experiences in an Older Adult with Poorly Controlled Diabetes

K. W. Lo, H. Schickedanz. *Family Medicine, Harbor UCLA Medical Center, Harbor City, CA.*

Background: Primary care (PC) teams are increasingly screening for ACEs (adverse childhood experiences), particularly in pediatric population. Research suggests the importance of ACEs screening to identify patients at the highest risk for toxic stress, leading to myriad mental, behavioral and chronic health conditions. Patients with high ACEs may benefit from trauma-informed care and interdisciplinary interventions to address the social determinants of health. This report explores the value of ACEs screening for patients of all ages in a community-based family medicine teaching clinic.

Methods: A 65-year-old male (Mr. M) presented to PC clinic for medical clearance for cataract surgery. Mr. M was found to have uncontrolled diabetes with Hgb A1c=15.3% and frequent broken medical appointments. Despite his worsening vision, medical clearance for surgery was not provided due to his elevated A1c.

One month later, his primary care physician (PCP) was notified that Mr. M had several emergency room visits due to mechanical falls at home, sustaining head trauma and spinal compression fractures. When asked about home safety, Mr. M revealed that he lives in a trailer home with stairs and a malfunctioning mini-fridge so he eats mostly canned food, making a healthy diet more difficult.

Meanwhile, the PC clinic had implemented universal ACEs screening. Mr. M's ACEs screening score was noted to be 5, with >4 being a high score. During the visit, Mr. M shared a history of adversity, resulting in continued daily struggles. He shared gratitude for the screening because no provider had ever discussed his trauma. His PCP acknowledged his comments and educated him about the impact of toxic stress on health. Together, they made a plan for social work referral for home health services, care management, meal delivery service, dietician referral, and regular PC follow up.

Conclusion: Mr. M's uncontrolled diabetes, leading to fractures and falls, was more than just medication non-adherence but also myriad stressors and socioeconomic challenges. This case study highlights the role of ACEs screening to help the PC team address the impact of toxic stress on vulnerable older adults, particularly to help Mr. M to engage in his care and enable his PCP to mobilize the interprofessional care team to support his home safety and diabetes control.

D21 Resident Presentation

Nonclassical presentation of Anti-Ku antibody-positive myocarditis and myopathy.

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Case description:

A 62-year-old female with a history of idiopathic chronic hepatitis was admitted initially for elective total knee replacement. She had no history of musculoskeletal pain or skin changes. Her postoperative course was complicated by weakness, fatigue, elevated cardiac enzymes, and complete heart block. Serology testing showed elevated creatine kinase, inflammatory markers, and strongly positive antinuclear antibodies. However, myositis-specific antibodies, neuromuscular antibodies, and infectious workup were negative. Following cardiac investigations including coronary angiography, echocardiogram, and magnetic resonance imaging the patient was diagnosed with myocarditis. While the myocarditis etiology was under investigation, a pacemaker was implanted for the complete heart block. The patient subsequently developed pleural effusion requiring thoracentesis and acute hypoxic respiratory failure, requiring multiple intubations suspected to be secondary to diaphragmatic involvement of the inflammatory myopathy. She was seen by rheumatology and was started empirically on intravenous immunoglobulin (IVIG) and high dose steroids for suspected autoimmune myopathy with myocarditis. Her fever, cardiac enzymes, inflammatory markers, and creatinine kinase levels improved. On further analysis, serology was positive for Anti-Ku antibodies, which, in conjunction with the clinical presentation led to the diagnosis of autoimmune inflammatory myositis. The patient continued to improve with the immunosuppressive therapy and was started on hydroxychloroquine with concern for an overlap of inflammatory myositis and systemic lupus erythematosus. She received a pleural catheter for the recurrent pleural effusion. She was discharged with rheumatology follow-up and plan to continue steroids and monthly IVIG.

Conclusion:

In the clinical picture of inflammatory myocarditis without an accurate diagnosis following basic investigations, an expedited comprehensive autoimmune workup is imperative for early diagnosis of potentially underlying Anti-Ku antibody-positive disease. Immunosuppressive therapy is the mainstay treatment and is often well tolerated in the elderly with a generally good prognosis. Timely diagnosis and multidisciplinary patient-centered approach are especially important before discussion of invasive treatments such as pacemaker implantation.

D22 Student Presentation

A Case of Severe Hydrocephalus and the Challenge of Dementia Diagnosis

E. Mastrobattista, Y. Maghaydah. *UConn Center on Aging, University of Connecticut School of Medicine, Farmington, CT.*

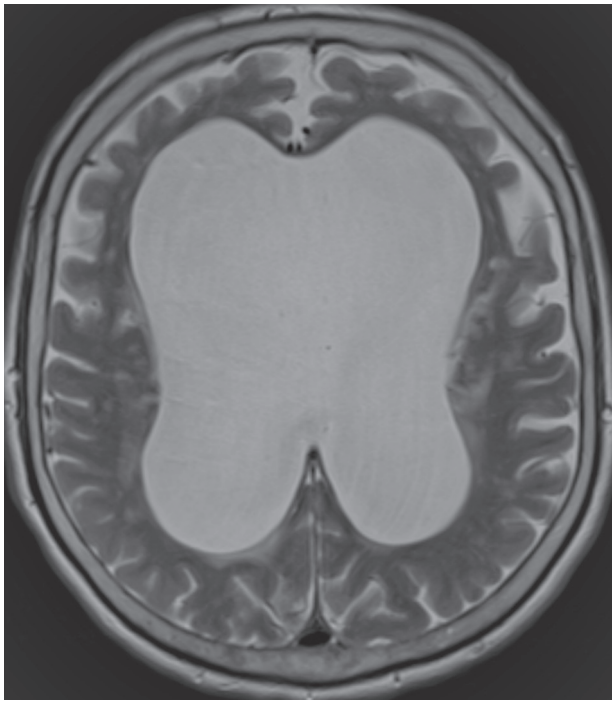
Case: A 77-year-old man with multiple comorbidities and a family history of Alzheimer's disease presented with concerns about cognitive impairment and decline in adaptive function. He was depressed with a Geriatrics Depression Scale-GDS 13/15, and Montreal Cognitive Assessment-MOCA 17/30. Our workup included brain MRI. In his second visit his son shared further decline in his cognitive skills and memory loss and concerns about his safety after a fall. Using the DSM-V criteria for major neurocognitive disorder, we suspected mild mixed dementia. Eventually he had the brain MRI showing hydrocephalus.

Discussion: Hydrocephalus is a condition with multiple etiologies defined by an accumulation of CSF in the ventricles. With suggestive clinical signs and symptoms, hydrocephalus should be in the differential diagnosis for dementia. Evan's index assesses for ventriculomegaly as a ratio of the maximum width of the frontal horns of the lateral ventricles and the maximal internal diameter of the skull being greater than 0.3[1]. For this patient the index was calculated to be .54.

Conclusion: Brain imaging is an important part of dementia work up. MRI of the brain as a structural study can rule out possible CNS causes of cognitive impairment such as brain tumors, vascular pathologies, and NPH.

Reference:

1. Kartal, M.G. and O. Algin, *Evaluation of hydrocephalus and other cerebrospinal fluid disorders with MRI: An update.* Insights Imaging, 2014. **5**(4): p. 531-41.



D23 Student Presentation
Substance Use, Frailty, and HIV within the Context of Poverty and Isolation in an Older Adult with Multimorbidity
L. Meller, B. Han, A. Moore, M. Karris. *University of California San Diego, La Jolla, CA.*

Background: Syndemics are interrelated co-occurring conditions that contribute to excess disease burden and vulnerability while complicating the care for older adults. Here, we present how specific intertwined chronic diseases interact with social isolation and poverty among an older person living with HIV.

Case: A 68-year-old female with HIV, frailty (by Fried criteria), cirrhosis, chronic pain, and a history of stroke presented to the emergency department (ED) for management of a sacral fracture after a fall at home. She reported "20 out of 10" pain, recurrent falls, and difficulty completing her instrumental activities of daily living (IADL). The patient self-managed her pain by doubling prescribed opioids, new cannabis use, and increasing alcohol use (>3 drinks per day). Initial treatment included deprescribing medications (baclofen, fexofenadine, gabapentin, oxybutynin), home-based physical/occupational therapy (PT and OT), and an epidural steroid injection. Clinic follow-up revealed progressive difficulty with IADLs, incontinence, recurrent falls, new syncopal episodes, and ongoing severe pain self-managed with continued increasing use of alcohol, cannabis, and cocaine. She lived alone, lacked any social connections, could not afford assisted living facilities, declined hospice, and wept upon HIV provider-initiated discussion of the program for all-inclusive care of the elderly (PACE), fearing provider abandonment. Upon rejection from PACE due to active "drug use," aggressive case management by clinic social work, the patient was able to obtain state-funded in-home support services, continue home PT/OT, and connect to a local community-based organization focused on women living with HIV. The patient also received ongoing substance use management, including brief intervention by her provider that discouraged the use of cocaine and alcohol for pain management and explored cannabis as a safer alternative while connecting the patient to substance use group therapy targeted for older adults with cognitive deficits.

Discussion: This case highlights how a syndemic profile (substance use, frailty, multimorbidity, and HIV) interacts with social environments to contribute to worsening outcomes among vulnerable older adults. Policy and advocacy efforts may benefit from ongoing consideration of specific vulnerable older adult populations to effectively address their integrated social and medical needs.

D24 Student Presentation
Empiric Antibiotics: Are They Always Helping?
S. Metgud, R. Duardo, E. CHYN. *New Jersey Medical School Department of Medicine, Newark, NJ.*

Case Presentation:

A frail African American female with a past medical history of human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) and metastatic breast cancer was admitted through the emergency department (ED) for dyspnea. In the ED, the patient was alert and oriented to self, place, and time. Physical exam was significant for cachexia and decreased breath sounds in the right lung fields. Laboratory findings were significant for dehydration, malnutrition, pancytopenia without neutropenia. Imaging was only positive for right-sided pleural effusion. Thoracentesis was performed with drainage of serosanguineous fluid. Sepsis work up and empiric antibiotics of Vancomycin, Cefepime, and sulfamethoxazole/trimethoprim prophylaxis were initiated. On hospital day one, she became febrile. Infectious disease was consulted. Vancomycin was stopped and Azithromycin was added. On hospital day two, she became altered and developed bilateral upper and lower extremity myoclonus. There was no focal finding on neurological exam. A family meeting was held to establish goals of care. Family requested comfort measures only based on her past refusal of HIV and cancer therapy. Empiric antibiotics were discontinued and morphine was initiated for dyspnea. On hospital day three, the patient regained consciousness with an improvement of myoclonus. However, she never returned to baseline and passed away on hospitalization day six. Later, bacterial, mycobacterial and fungal cultures, and viral respiratory panels all resulted negative.

Discussion: Antibiotics-Associated Encephalopathy

Frail patients are at increased risk of developing adverse reactions from antibiotics when compared to general population (1). β-lactam antibiotics can cross blood brain barrier and result in overall central excitotoxicity. Symptoms of cephalosporin induced encephalopathy typically present as altered mental status, myoclonus and/or seizures (2). The time course usually begins within days of medication initiation and ends also within days of medication cessation (2). The adverse encephalopathy effect can negatively impact quality of life. Risks versus benefits and the patient's goals of care should be fully explored prior to initiating empiric antibiotics

References:

1. Payne, Lauren E., et al. "Cefepime-induced neurotoxicity: a systematic review." Critical care 21.1 (2017): 1-8.

2. Bhattacharyya, Shamik, et al. "Antibiotic-associated encephalopathy." Neurology 86.10 (2016): 963-971.

D25 Student Presentation
Importance of complete assessment in the work-up of late-onset mania
S. A. Mullen,[1] W. Lyons.[2] *1. University of Nebraska Medical Center College of Medicine, Omaha, NE; 2. Int Med Geriatrics/Palliative Med, University of Nebraska Medical Center, Omaha, NE.*

A female, age 78, with generalized anxiety disorder (GAD), history of major depression, and hypothyroidism presents for mood and anxiety concerns. Her mood is depressed, and sleep, appetite, energy, and concentration are poor. She recently saw a geriatric psychiatrist and described no past manic episodes, psychotic symptoms, or family history of bipolar disorder. No one has concerns about her cognition. She began levothyroxine 150 mcg 3 weeks ago for newly diagnosed hypothyroidism. On exam, she is overinclusive, has almost pressured

speech, labile mood, and lid lag. Neuropsychology testing, CBC, and CMP are normal. TSH is 0.173 (low). She is diagnosed with GAD exacerbated by hyperthyroidism due to over-replaced thyroid hormone causing a hypomanic syndrome. She may have been hyperthyroid prior to burnout and recent hypothyroid state, explaining the length of her manic symptoms. She reports feeling better at follow-up after medication adjustment.

Late-onset mania is a (hypo) manic syndrome in a person 50 or older without a previous history of mania[3]. 5-10% of patients are 50+ years when they experience their first manic episode of bipolar disorder[2]. However, (hypo) manic syndromes can also be due to vascular etiology, dementia, medications, renal failure, and thyroid derangement. One study reports a 2.8% prevalence of organic cause of mania in those >65 compared to 1.2% prevalence in those <65[1]. Organic manic syndromes are underreported, possibly due to a lack of in-depth somatic diagnostics[2].

We recommend neurocognitive testing, medication review, and judicious lab testing to evaluate late-onset mania, especially for those with newly diagnosed comorbidities. Brain imaging should be considered in patients with vascular risk factors. Complete workup will allow us to better treat patients and better understand the etiology of late-onset mania.

1. Almeida, O. P., & Fenner, S. (2002). Bipolar disorder: similarities and differences between patients with illness onset before and after 65 years of age. *International psychogeriatrics*, *14*(3), 311–322.

2. Arnold, I., Dehning, J., Grunze, A., & Hausmann, A. (2021). Old Age Bipolar Disorder-Epidemiology, Aetiology and Treatment. *Medicina*, *57*(6), 587.

3. Sami, M., Khan, H., & Nilforooshan, R. (2015). Late onset mania as an organic syndrome: A review of case reports in the literature. *Journal of affective disorders*, *188*, 226–231.

D26 Resident Presentation
Lognopenic Variant of Primary Progressive Aphasia: A diagnostic challenge

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Primary progressive aphasia (PPA) refers to a group of neurodegenerative disorders affecting language functions in early stages. The lognopenic variant (lv-PPA) is characterized by slowed and disrupted spontaneous language production with relatively preserved motor speech and semantic knowledge. Language deficits are the earliest manifestations, but numerous patients display concurrent, non-linguistic cognitive deficits posing an important diagnostic challenge. We present a case of lv-PPA who received a delayed diagnosis due to confounders with other neurocognitive disorders.

A right-handed female with no past medical history presented to the memory and aging clinic with worsening speech over 1 year. This started as amnestic memory changes. Soon after, she started developing worsening language deficit where she was mispronouncing or skipping over common words. She also had significant problems reading and reciting text. In office language examination was characterized by paucity of words when speaking, significant effort, impaired prosidy, and relatively intact meaning. Lab workup was unremarkable with normal TSH, vitamin B12, and folic acid. In-clinic MoCA was 12/30. MRI brain showed significant cortical atrophy of the left-sided parietal cortex than would be expected for someone of her age. FLAIR studies revealed no evidence of vascular disease. The patient was referred to speech therapy with demonstratable improvement in speech after 10 sessions.

The constellation of language deficits in lv-PPA emerge from primary degeneration of the left-lateralized posterior temporal gyri, temporoparietal junction and inferior parietal lobes. It manifests as difficulty in word-finding, sentence-repetition, and cognitive impairment including orientation, delayed recall and calculations. These findings are also consistent with Alzheimer's disease (AD) posing a diagnostic challenge. However, unlike typical AD, hippocampal regions in lvPPA are spared. In addition, typical AD is characterized by bilateral, relatively symmetric temporoparietal hypometabolism, while the hypometabolism in the left parietal-temporal junction might be more severe in patients with lvPPA. Clinically, aphasia is the most prominent deficit at symptom onset and for the initial phases of the disease. Diagnostic criteria along with PET-CT imaging can aid the diagnosis. Nevertheless, it still requires high index of suspicion

D27 Student Presentation
CT for C2

M. Dagar, T. T. Nguyen. *Banner University Medical Center Tucson, Tucson, AZ.*

Introduction:

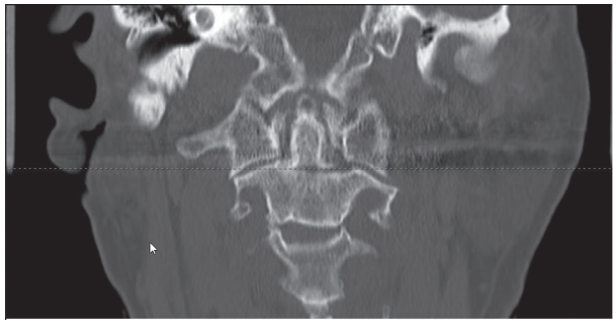
Fracture of the 2nd cervical vertebrae (C2) is the most common cervical spine injury in older adults. The most common type of C2 fracture is of the odontoid process. It has biphasic peak incidence in ages 20s and 70-80. Fracture of the odontoid process is classified into stable (type1), unstable (type II and type III), depending on the location and morphology of the fracture. Type II odontoid fracture is the most common. Patients presents with cervical neck pain worsened by motion. It is less common to have paresthesia and weakness. Open mouth odontoid view xray is the common modality for diagnosis, but a CT scan is the gold standard in diagnosis of this fracture, even when no evidence of fracture is found on plain radiographs (xray).

Case:

86-year-old, cognitively intact, community dwelling, male with multiple comorbidities, who had a fall where he fell forward onto his head without loss of consciousness. He did not seek medical attention for several days. He endorsed neck pain and limited range of neck motion at his clinic visit. An xray of his cervical spine a few days later showed mild OA. Due to continued pain and limited mobility, a CT cervical spine was ordered which showed a type II odontoid fracture with posterior displacement. He was instructed to go to the emergency department where he denied neurological symptoms and endorsed tenderness on C spine. He was placed in a rigid neck brace. Due to the timeline and lack of neurological deficits, neurosurgery advised him to wear rigid collar at all times, avoid heavy lifting, bending or twisting, and to schedule an outpatient neurosurgery follow-up.

Discussion:

Due to high incidence of cervical fractures in older patients, it is imperative to perform prompt imaging. Xrays are quick and widely available though further investigation may be needed if patient experience persistent symptoms. Cervical CT scan is the most sensitive diagnostic tool. Odontoid fractures are treated depending on their classification. Conservative therapy is first line for stable injuries with use of rigid cervical collar. Operative treatment is considered for stable injuries refractive to conservative treatment and unstable injuries. Many older patients are not ideal surgical candidates due to poor bone quality and comorbidities. Promptly identifying an odontoid fracture is key to optimizing patient care



D28 Resident Presentation

Abdominal Cutaneous Nerve Entrapment Syndrome in a Geriatric Patient

C. Nguyen,[1] C. Hamilton.[1,2] *1. Internal Medicine, Baylor Scott & White Medical Center Temple, Temple, TX; 2. Department of Geriatrics, Baylor Scott & White Medical Center Temple, Temple, TX.*

Background

Abdominal cutaneous nerve entrapment syndrome (ACNES) is an uncommon cause of abdominal pain that can result in an extensive work up prior to diagnosis. We present a case of intractable abdominal pain in a geriatric patient who underwent unnecessary work up including multiple subspecialty evaluations and a hospital stay.

Case Description

An 82 year old female with diffuse chronic pain from osteoarthritis and fibromyalgia was admitted for acute intractable left lower quadrant abdominal pain. The pain worsened with weight bearing, impaired ambulation, and was alleviated by laying down. CT abdomen/pelvis showed focal ascending colon wall thickening, an age-indeterminate L1 compression deformity, and incidental left lumbar triangle hernia. Colonoscopy was normal. General surgery felt the pain was not due to her hernia. During her hospital stay she received high doses of IV dilaudid without relief. She was discharged with oxycodone and duloxetine.

At clinic follow-up, the patient reported no improvement in pain with opioids. On examination, there was tenderness to palpation of a 2″x2″ region of the left lower pannus, which led to the concern for ACNES. She was referred to Pain Medicine and received a trigger point injection (TPI) with 10mg dexamethasone with 3mL bupivacaine 0.25%. One month later, she reported 80% relief of her pain.

Discussion

This case demonstrates the value of recognizing ACNES in a patient with acute intractable pain, especially when life threatening causes are ruled out. It also highlights the importance of a targeted physical exam in diagnosing an uncommon case of ACNES in a geriatric patient. ACNES is defined by 4 characteristics: dysesthesia at the painful abdominal area, positive pinch sign, positive Carnett's sign, and response to modified rectus sheath block. Treatment is typically a TPI.

The patient's chronic pain and incidental lumbar hernia confounded the diagnosis of her acute pain's etiology. The discovery of focal tenderness raised suspicion for ACNES, which led to a prompt referral to pain medicine where TPI was both diagnostic and therapeutic. This case shows the importance of understanding and recognizing acute pain syndromes like ACNES amidst multiple chronic illnesses. Early identification can lead to better outcomes while preventing excess workup, polypharmacy, and distress for the geriatric patient.

D29 Resident Presentation

Keeping Mrs. Doubtfire Comfortable - Palliation in Lewy Body Dementia

V. Nguyen,[1] R. Atif.[2] *1. Baystate Medical Center, Springfield, MA; 2. Geriatrics, Baystate Medical Center, Springfield, MA.*

Background: Despite Lewy Body Dementia (LBD) being the second most common form of dementia, it can be challenging to decide when to refer patients for hospice. We present a case highlighting challenges in management of advancing LBD.

Case: A 78-year-old female was diagnosed with LBD after 3 years of memory changes, audiovisual hallucinations, and paranoia. Quetiapine was started for hallucinations and 5 months later, mild bradykinesia was noted on exam. Quetiapine was stopped after 6 months as it was unbeneficial. She was then started on donepezil and risperidone from 2 different providers. While hallucinations improved, she developed marked rest tremor, bradykinesia, rigidity, masked facies, recurrent falls, and reduced speech within the next 2 months. She moved to skilled nursing facility (SNF) due to care needs. The SNF sent her to the hospital repeatedly for falls and "restlessness". The geriatrics team was concerned for akathisia as she seemed to be unable to control her movements. Risperidone was stopped, and propranolol trialed for akathisia. She became less rigid, more vocal, and less "restless" within days, but oral intake did not improve, and she continued to be bedbound. She ultimately died at home on hospice.

Discussion: LBD is often underdiagnosed or misdiagnosed, and medications used to treat symptoms may lead to drastic worsening of cognition and irreversible Parkinsonism. Our patient, like 50% of LBD patients, experienced neuroleptic sensitivity. Lack of knowledge of the disease and having to wait to meet Medicare hospice eligibility criteria for dementia, are 2 known barriers to quality end of life care for LBD patients. Since our patient was diagnosed >4 years ago (median survival of LBD patients after diagnosis), had >10 % weight loss in 2 months, recurrent falls, decreased mobility and communication, decision was made to refer to hospice after discussion with family.

Conclusion: Compassionate care should start with early discussion with patients and families on the precarious balance between optimizing motor symptoms and control of psychosis. Families often feel that providers inadequately discuss expectations regarding LBD with them. Providers should familiarize themselves with LBD symptoms and relatively rapid progression, and should not rely strictly on Medicare hospice criteria for dementia alone when considering hospice referral, to optimize quality of life and support for patients and families.

D30 Resident Presentation

From Twenty-Eight to Eight: One Patient's Experience at a Federally Qualified Health Center's Deprescribing Clinic

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Background: Polypharmacy is associated with greater morbidity and mortality among older adults. We sought to develop an interdisciplinary primary care deprescribing initiative involving nursing, pharmacy, internal medicine residents, and attending physicians at a local federally qualified health center (FQHC) in New Haven, Connecticut. Adults aged 65 and older prescribed ten or more medications were eligible to participate in the initiative, termed the Deprescribing Clinic.

Case Presentation: A 78-year-old retired, community-dwelling female (pronouns: she/her/hers) independent in all activities of daily living elected to participate in the Deprescribing Clinic. Her past medical history was notable for hypertension, type 2 diabetes complicated by retinopathy, primary hyperparathyroidism status post remote parathyroidectomy, osteoporosis, constipation, and seasonal allergies. She had a total of twenty-eight items on her medication list, including five clinic- or hospital administered medications and five medical supply scripts. She presented to her 30-minute reimbursable visit with expired antihistamine eye drops and incorrectly crushed/fractioned chlorthalidone pills. The FQHC pharmacist and a resident team member reviewed her fill history, shared the indications and instructions for each of her medications, and discussed any concerns she had regarding her current regimen. This visit was followed by a brief post-visit discussion between the pharmacist and the patient's primary care provider (PCP). With her PCP's agreement, her medication list was reduced from twenty-eight to eight items. Among those medications discontinued were eye drops, vitamins, topical corticosteroids, and stool softeners. At six-month follow up, the patient's medication list remained at eight items.

Conclusion: FQHCs offer a unique opportunity for interdisciplinary deprescribing initiatives with the availability of on-site pharmacists. This patient had a substantial change in her medication regimen following participation in the Deprescribing Clinic. Additional research is needed to evaluate whether similar deprescribing initiatives improve quality of life and morbidity for older adults in the primary care setting.

D31 Resident Presentation

A Unique Presentation of Bilateral Subdural Hematomas

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Background: Subdural hematomas (SDH) are characterized as a form of bleeding into the space between dural and arachnoid membranes of the brain that often follow a crescent shape. Incidence is currently unknown, however acute SDH are common in severe brain injuries. Usual presentation includes altered mentation, focal or nonfocalneurological findings. Prompt computed tomography (CT) head is most commonly used to identify SDH.

Case: 69 year old male with generalized weakness for 2-3 weeks, previously discharged from acute rehabilitation after a motorized bicycle accident occuring 1.5 months prior. Evaluation by orthopedics and physiatry recommended acute rehabilitation for stable pelvic fractures. On hospital day 6, patient was noted to be increasingly lethargic, displaying decorticate-like bilateral upper extremity hypertonicity, however mental status was intact and he was hemodynamically stable. STAT CT head: acute to subacute bilateral hematomas with midline shift. Thrombus prophylaxis discontinued, prophylactic antiepileptic given and transferred to a facility for successful embolization of bilateral middle meningeal artery. Surgical evacuation recommended however deferred further intervention and requested hospice.

Discussion: The challenge was with unknown etiology and presentation of SDH. The question remains if SDH was delayed post mild traumatic event versus spontaneous event. Additionally, case was unique given decorticate-like upper extremity hypertonicity without altered mentation, pupillary changes, or respiratory depression, all of which occur with cerebral herniation. Common treatment for SDH is surgical evacuation, however invasive and carries multiple complications in elderly individuals. MMA embolization is minimally invasive and a safe alternative in the elderly. Atypical clinical presentations of intracranial hemorrhage are difficult to assess and failure to recognize new onset neurological symptoms in a fully oriented patient may result in potential mismanagement specially in geriatric patients. According to our knowledge this is the first case report of bilateral SDH presenting as chronic generalized weakness with decorticate-like posturing.

D32 Resident Presentation

Dysphagia in Esophageal Cancer and associated complications: PEG tube OR no PEG tube?

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Introduction:

Esophageal cancer (EC) patients mostly present with incurable, locally advanced unresectable or metastatic disease. At later stages, EC can be treated but rarely can be cured. One of the common indications of PEG tube is progressive dysphagia secondary to esophageal cancers. Here we talk about interesting case of EC where PEG tube was initially considered for progressive dysphagia before planned neoadjuvant chemo followed by surgery.

Case Presentation:

79 year old female who presented to ER for acute onset SOB, productive cough and fever chills. She had past medical history of recently diagnosed EC, diabetes mellitus, tobacco use disorder, systemic sclerosis. The symptoms started 2 days ago and were progressively getting worse. Xray and CT chest showed aspiration pneumonia. She was started on appropriate antibiotics and improved within few days. She recently had all the workup for progressive dysphagia and weight loss including EGD and she was diagnosed with stage 3 EC outpatient. She was under evaluation for treatment of the same with neoadjuvant chemo followed by surgery but before that the plan was for PEG tube placement for progressively worsening dysphagia. During this hospitalization she became extremely weak and plan was to discharge her to rehab. Palliative care was consulted for goals of care discussion and symptom management. She was very cachectic and lethargic. Prognosis, treatment options, risks benefit of PEG tube were discussed with patient.

Discussion:

Treatment of EC depends on staging and surgery is the primary curative modality. PEG tube is helpful in maintaining the nutritional requirements of these patients with dysphagia. However, PEG tube insertion in such patients has not been recommended due to risk of tumor implantation at the PEG tube insertion site. Also, there is increased risk of several complications including risk of infection, bleeding, aspiration, pressure ulcers, need for physical and chemical restraints to prevent patients from pulling out feeding tube. For our patient, because of worsening advanced cancer and recent hospitalization goals of care were discussed and hospice care was recommended for better quality of life as prognosis was poor. Patient decided to consider hospice care didn't want to pursue with PEG tube and surgery. We continued to follow her for symptom management.

D33 Student Presentation

Acute Dystonia and Delirium induced by short-term use of Baclofen with a rapid resolution after iv Diphenhydramine

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Baclofen is a GABA-B receptor agonist with dose-dependent bidirectional effects on the dopamine system: low dose increases transmission, high inhibits. Lower doses are used to relieve pain from voluntary muscle spasticity, high doses for alcohol, opioids and polydrug dependency syndrome to reduce craving. Baclofen plays a role in serotonine, norepinephrine and glutamate systems.

A 79 y/o woman presented to hospital with pain and left leg rigidity, delirium, urinary retention. She had a 40-year hx of chronic back pain, multiple comorbidities and was treated with hydrocodone, gabapentin, cyclobenzaprine, metoclopramide, oxybutynin, levothyroxine, valsartan, furosemide, pramipexole, citalopram. She had spinal cord stimulator replacement 2 weeks prior and was seen in ER 24 hrs before admission for worsening pain with spasticity, receiving Baclofen 20 mg Q 6 hours. Son noticed she developed confusion 2 hours after 1st dose. He continued Baclofen, unaware of side effects. Delirium worsened after admission despite stopping polypharmacy. Patient developed worsening rigidity and left foot clonus, tongue protrusion, dysarthria, uncontrolled limb movement, severe body ache. She was diagnosed with acute dystonia from Baclofen with metoclopramide use. Symptoms improved significantly within 30 minutes of receiving diphenhydramine 50 mg iv with complete resolution of all symptoms after 2nd dose 24 hours later. She was also diagnosed with SCS lead migration.

This case shows several problems in the care of complex chronic pain patient.

MD should consider lead migration, the most common complication associated with percutaneous SCS implantation with acute loss of pain coverage. It was unclear if Baclofen was used for muscle spasticity or presumed opioid craving, but dose should be gradually increased Q 72 hours. Multimorbidity and complex longstanding hx of multiple modalities and medications use for pain can blur the clinical picture and mask side effects.

Baclofen adverse effects produce symptoms identical to its therapeutic indications. We should educate on side effects and avoid medications affecting CNS when using Baclofen.

Diphenhydramine increases dopamine levels and is implicated in other neurotransmitter systems. It is an effective drug to treat acute dystonia associated with delirium in older adults.

D34 Resident Presentation

Severe Constipation in a Patient with Alzheimer Dementia at Subacute Rehabilitation

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Background

Constipation is prevalent in the elderly but not well studied in patients with Alzheimer Dementia (AD) (1). Patients with AD at subacute rehabilitation (SAR) are at increased risk for constipation due to polypharmacy, decreased activity, and stressful hospitalization. With impaired memory, they may fail to communicate their toiletry needs (1,2). Delay in the diagnosis and treatment of constipation can lead to detrimental outcomes and costly hospitalization (1).

Case

75-year-old woman with AD (FAST stage 5) was admitted to hospital from SAR due to worsening mental status for 4 days with melena. Patient was bedridden, lethargic, and could not participate in activities as she did the prior week. Laboratory exams revealed acute anemia, leukocytosis, and acute kidney injury. Computerized tomography scans showed a 7x8x9 cm fecaloma pressing on the bladder and colon, causing massive bladder distention with bilateral hydroureteronephrosis and colonic micro-perforations. Intravenous fluids, antibiotics, and aggressive bowel regimen were started. An indwelling urinary catheter and a rectal tube were placed. Patient's mental status and kidney function improved after interventions and tubes were discontinued. Unfortunately, patient began to retain urine and feces again, requiring escalation of bowel regimen. She was discharged to SAR with a urinary catheter.

Discussion

A timely diagnosis of constipation among AD patients at SAR remains a clinical challenge. Caregivers and providers should be educated about this issue and actively identify constipation in this population to prevent complications (3). Assisted scheduled bowel time and stool diaries are useful for the early recognition (3,4). Review of medications, oral intake, and physical activity should be regularly performed. Reversal of underlying risk factors, dietary modification, and drug therapy are part of the treatment (4). Bowel regimens should be individualized, and these range from non-invasive interventions (massage) and oral laxatives to more invasive ones. Digital rectal examinations may be warranted if impaction is suspected (3,4). Prevention and timely diagnosis of constipation are particularly relevant for patients with AD, especially at transitions of care.

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D35 Resident Presentation

A Unique Presentation of Multiple Myeloma with Recurrent Ascites

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Case: 62-year-old man with a past medical history of end-stage renal disease, status post failed kidney transplant x 2, presented with abdominal distention and shifting dullness and pretibial edema on physical examination. Lab assessment showed Anemia (10.2 g/dl), platelets 509,000 per microliter and hypoalbuminemia (1.9 g/dl) and on ultrasonographic examination showed moderate free fluid in the abdomen. Ascitic fluid revealed a mixture of red blood cells, neutrophils, reactive mesothelial cells, macrophages, as well as numerous plasma cells that prompted paraprotein workup which showed an IgA lambda monoclonal protein. Serum lambda light chains were 252 mg/dl; kappa was 32.8 mg/dl, ratio 0.13. Subsequent bone marrow biopsy revealed findings consistent with plasma cell myeloma (50 to 55% plasma cells). CT myeloma screen was negative for any bony lesions. Transjugular liver biopsy was done to check for liver infiltration, which showed fibrosis (mild), portal inflammation (mild), iron overload and severe sinusoidal portal hypertension. Overall his presentation is consistent with myeloma complicated by myelomatous ascites, which per literature review is very aggressive overall, associated most commonly with an IgA lambda paraprotein. Subsequent FISH studies revealed triple Hit MM with translocation 4;14, 14;16, and 14;20 and was started on CyBorD and subsequently bortezomib and cyclophosphamide.

Discussion -Myelomatous ascites is a rare aggressive presentation of multiple myeloma, caused by portal hypertension and is most often associated with IgA lambda monoclonal proteins, which is what this patient demonstrated on SPEP (1). The diagnosis is made by the detection of M peak in protein electrophoresis or demonstration of atypical plasma cells in cytological examination of ascitic fluid. High dose cyclophosphamide has shown improvement in myelomatous ascites (2), and stem cell transplant is another option. Myelomatous ascites is a poor prognostic factor for MM patients with an average survival of about 1-2 months (3) and currently, there is no effective treatment of this condition and new modalities of treatment need to be explored to improve outcome.

D36 Student Presentation

Voluntary Cessation of Screening Mammography in Females over Age 75

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A 78-year-old female with a complex medical history was found to have multiple calcifications of her left breast during a screening mammogram. The findings were described as grouped, pleomorphic calcifications on her diagnostic mammogram. The suspicious lesions were biopsied, identifying grade III ductal carcinoma in situ (DCIS) with comedonecrosis (>95% ER-positive, 27% PR-positive). The patient was seen by the breast cancer multidisciplinary team who provided options for treatment. Despite her concern regarding tolerance for the procedure, she consented to lumpectomy. Following her uncomplicated lumpectomy, the patient was to follow up with her oncologist to review the pathology as well as discuss adjunctive therapies. The patient rescheduled this appointment multiple times and ultimately declined to follow up altogether. The patient made the decision to decline additional therapy due to the potential of exacerbating her chronic symptoms or the potential of additional side effects. This was voiced to her geriatrician who informed the cancer care team.

To date, breast cancer is the most common, life-threatening cancer in women. It is certain that mammography screening is an important intervention that can reduce breast cancer–related mortality and morbidity. It is also known that other than being female, age is the greatest risk factor for developing and dying from breast cancer. Therefore, the USPSTF recommends biennial screening mammography for women aged 50 to 74. This screening guideline has made such a strong impact on women's health, more than 50 percent of women over age 75 continue to be screened with routine mammography. However, very few randomized trials identify the benefits of screening mammography in women older than 75 years. Even though breast cancer can be treated effectively, some women may choose not to proceed with treatment due to increasing medical comorbidity or decreased tolerance for cancer treatment. As patients continue to age, this could explain why a patient would choose to go without treatment.

It is our recommendation that once a female patient who has consistently participated in screening mammograms turns the age of 75, her primary care provider poses the question of whether she would elect for treatment of breast cancer if it were detected. If she would forego breast cancer treatment, then she may voluntarily decline future screening mammograms.

D37 Resident Presentation

Persistent Hiccups: A Case of Large Pulmonary Bullae, Phrenic Nerve Irritation, and the Drug that Stopped the Spasm

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Background

Hiccups, involuntary contractions of the diaphragm and inspiratory musculature followed rapidly by closure of the glottis, can be an exhausting symptom related to gastric distention, carbonated beverages, and stress. Intractable hiccups, those lasting longer than 48 hours, are associated with severe central nervous system lesions, diaphragmatic or vagal nerve irritation, metabolic, surgical, and infectious etiologies, among many others. These spasms can be quite difficult to treat, and though usually perceived as more of an annoyance than severe pathology, also merit an evaluation and treatment.

Case Description

This case presents an uncommon instance of large pulmonary bullae being the likely culprit of intractable hiccups lasting persistently for months and intermittently for years. The bullae were associated with severe COPD and the patient in this case had been hospitalized for shortness of breath with an acute pulmonary embolism. Successful treatment for the hiccups was attained through prochlorperazine, a chemoreceptor suppressant commonly used for nausea. He reported no return of hiccups after this treatment was administered.

Discussion

When hiccups persist for days to months, a closer look into the cause and a meaningful therapeutic approach can make a dramatic difference in a patient's quality of life.

D38 Resident Presentation

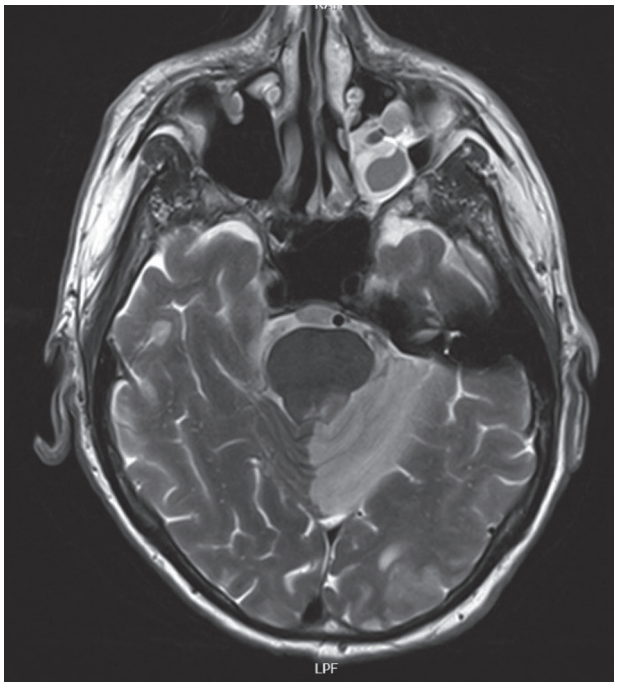
Which Came First? The Chicken or the Egg; the Troponinemia or the Stoke

S. Strohbeen, E. Henricks, A. Beckert. *Medical College of Wisconsin, Milwaukee, WI.*

Background: Cerebellar cerebrovascular accidents (CVA) often present with non-specific findings such as nausea, emesis, vertigo, ataxia, and falls. In multi-morbid older adults, a high index of suspicion is needed to avoid missed diagnosis as the presentation can be misinterpreted and attributed to other causes.

Case: A 73-year-old male with medical history significant for recently diagnosed metastatic non-small cell carcinoma, provoked lower extremity deep vein thrombosis, prostate cancer, chronic kidney disease, obstructive hydronephrosis status post ureteral stent and nephrostomy tube presented to the emergency department after falling. Initial evaluation was significant for non-acute findings on CT head, troponinemia, nausea, emesis, dizziness, and fatigue. The patient was admitted and treated for NSTEMI with medical management. Two days after admission, he began having blurry vision with new onset lateral eye deviation and dysmetria. New imaging revealed a large acute to early subacute cerebellar infarct. The patient was transferred to a nearby facility with neuro-ICU for further monitoring and serial imaging. No further treatment was warranted. Given the significant deficits and impact of the CVA and his comorbid conditions, the patient was transferred back to the initial treating facility for comfort focused care.

Discussion: While cerebellar involvement accounts for only 2% of all CVAs, the mortality rate is disproportionately high. One study found cerebellar infarct associated mortality rate to be 23% compared to 12.5% in CVAs affecting other CNS structures. Given potential contribution of multi-morbid factors and incommensurate mortality rate with non-specific findings such as nausea, emesis, vertigo, ataxia, and falls, it is prudent to keep cerebellar infarct on your differential with prompt identification and treatment.



D39 Resident Presentation

A Curious Case of Recurrent Urinary Tract Infection in Nursing Home Resident

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Background: Urinary Tract Infection (UTI) diagnosis, treatment, and prevention can be a complex in elderly. Bacterial UTIs affect about 1/5th of hospitalized geriatric patients. They can range from asymptomatic bacteriuria to acute pyelonephritis and sepsis. Here we discuss a case of recurrent UTI in elderly female due to underlying pathology.

Case: 82-year-old Caucasian female admitted to post-acute care facility after hospitalization for delusions and UTI. She underwent rehabilitation but given poor therapy progress and dementia, she remained under long-term care. Hypoactive delirium was the only presenting symptom for multiple recurrent UTIs. Patient never had pain and rare episodes with complaint of dysuria were treated in facility with antibiotics. Due to challenges in obtaining history in dementia patient and mostly asymptomatic infections, she was hospitalized multiple times for sepsis due to delayed diagnosis. Each admission, she would receive intravenous antibiotics and discharge back to facility. Patient had persistent leucocytosis even after completion of antibiotics. She was sent to Haematologist who suggested it was due to UTI and wounds. Another episode of hypoactive delirium led to yet another hospitalization and this time nursing home attending provider contacted hospitalist to order CT abdomen and pelvis for further evaluation. Imaging showed obstructive kidney stone managed with cystoscopy and bilateral ureteral stent placement. Urology recommend outpatient nephrostomy tube placement and she was sent back to nursing home. Patient has since remained stable with no reoccurrence of UTI.

Discussion: Recurrent UTIs are very common in Geriatric patients but can be challenging due to atypical symptoms and communication deficits with dementia patients. The incidence of UTI in older women versus men is 2:1. Poor oral intake and dehydration in elderly patients can be precipitating factors. We should always consider underlying cause of recurrent UTIs such as obstructive kidney stones with appropriate risk factors. The clinical presentation of geriatric recurrent UTI is atypical and often asymptomatic and requires diagnostic vigilance.

D40 Resident Presentation
Utility of PEG tube in Unresponsive Older Adult with Subarachnoid Hemorrhage
A. Susheela,[1] S. Jain.[2] *1. MacNeal Hospital, Berwyn, IL; 2. Loyola University Chicago, Chicago, IL.*

Background

PEG (percutaneous endoscopic gastrostomy) tube initially invented in 1979 revolutionized nutrition intake in patients with head and neck cancer, esophageal cancer, neurological deficits and wasting syndrome by acting as a bridge to recovery. We discuss a case of patient with severe acute debility requiring temporary PEG tube as bridge to recovery from subarachnoid hemorrhage.

Case

68-year-old cognitively and functionally independent Hispanic man with history of cerebral aneurysm whose elective neurosurgery was postponed due to COVID-19, was found unresponsive in his home in year 2020. He was admitted for subarachnoid hemorrhage from ruptured aneurysm and received craniotomy with aneurysm clipping. Patient was treated for multiple complications including pulmonary embolism with initiation of Eliquis leading to hemorrhagic conversion of anterior cerebral artery infarct, edema in frontal and parietal lobes and dysphagia with PEG tube placement. He was discharged to rehab in unresponsive state. Hospice was strongly recommended by all staff members and futility of using Medicare A benefits was discussed. However, palliative care nor hospice was consulted to give time for recovery from acute illness and determine patient's new baseline. Patient completed rehab and transitioned to long-term care. His PEG tube was eventually removed. By year 2022, patient holds a conversation, eats full meals by mouth, able to transfer with assistance and occasionally leaves the nursing facility to spend time with family.

Discussion

Oropharyngeal dysphagia is a disorder that is frequent among hemorrhagic strokes but a temporary condition that resolves with speech therapy. Clinical evidence does not support use of PEG tube in advanced dementia, but this has led to its general disapproval in older adults even with previously intact cognition. Hospital delirium, ethnicity, language barrier, severe acute illness and advanced age can lead to premature hospice recommendation and advising against PEG tube insertion. Due to lack of objective and reliable criteria regarding recovery, care is influenced by cultural perceptions of healthcare providers. Assessing patient's pre-hospitalization cognitive status with appropriate intervention through PEG insertion if necessary and giving sufficient time for recovery post-hospitalization until patient reaches a new baseline is crucial in guiding care of older adults.

D41 Student Presentation, Encore Presentation
A Rare Cause of Prosthetic Valve Endocarditis Introduced Post-Dental Procedure
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Introduction:

Prosthetic valve endocarditis (PVE) is a severe infection of prosthetic or reconstructed native heart valves. An emerging source of PVE is the gram-negative, coccobacilli HACEK (*Haemophilus* spp., *Aggregibacter* spp., *Cardiobacterium hominis*, *Eikenella corrodens*, and *Kingella kingae*) group. In particular, *Aggregatibacter aphrophilus* is commonly found in supragingival plaque and salivary microflora, susceptible to systemic circulation entry via dental procedures. Here, we present a case of PVE secondary to *A. aphrophilus* colonization introduced via dental cleaning.

Case Presentation:

A 76-year-old male with a past medical history of severe aortic stenosis 3 years status post transcatheter aortic valve replacement presented to urgent care 2 weeks after a dental cleaning. He reported 1 week of undulating fever, recurrent chills, diaphoresis, fatigue, and night sweats. On physical exam, he was generally ill-appearing, tachycardic, tachypneic, with dry oral mucous membranes and a grade II/VI systolic ejection murmur (SEM). An EKG revealed trace paravalvular regurgitation consistent with aortic stenosis. A chest X-ray revealed no pulmonary infiltrate suggestive of pneumonia. Laboratory evaluation exhibited low Hgb (10.9 g/dL) and iron (20 mcg/dL), along with elevated CRP (139.5 mg/L), ESR (48 mm/hr), and ferritin (907.22 ng/mL), consistent with acute infection. Follow-up transesophageal echocardiogram was unremarkable for valvular lesions. However, blood cultures successfully cultivated *A. aphrophilus*, despite prophylactic amoxicillin taken before his dental work. Accordingly, he was treated with IV ceftriaxone (2 g) daily for 6 weeks with resolution of his presenting symptoms, though a grade I/VI SEM can still be appreciated on his most recent exam.

Discussion:

We capture a rare instance in which routine dental cleaning resulted in transient bacteremia, inducing PVE despite prophylactic antibiotic use. Among those with late PVE (occurring >12 months after valve replacement), HACEK microbes account for a sizable minority (up to 8%) of infections. Importantly, PVE treatment depends on the causative agent, and cephalosporins are preferred for HACEK microbes. Thus, for vulnerable valve replacement patients who undergo dental procedures, prophylactic antibiotics that are prescribed should be sure to cover components of common oral microflora, such as *A. aphrophilus*.

D42 Resident Presentation
Heart of the Matter: The Diagnosis Beyond Heart Failure
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Case History:

An 81 year old man was admitted for three weeks of worsening dyspnea. CT chest revealed bilateral pleural effusions. Echocardiogram four months prior showed moderate to severely increased left ventricular wall thickness and grade I diastolic dysfunction, and normal ejection fraction. Repeat echocardiogram revealed left ventricular ejection fraction 30-35%, grade III diastolic dysfunction, and a speckled myocardium, concerning for new heart failure with reduced ejection fraction (HFrEF). The speckled myocardial appearance was concerning for cardiac amyloidosis.

Discussion:

Heart failure is the leading cause of hospitalization among older adults, impacting 20% of individuals over 75. Etiologies of new HFrEF include ischemic heart disease, valvular disease, arrhythmias, and nonischemic cardiomyopathies. Causes of nonischemic cardiomyopathy include alcoholic cardiomyopathy, cardiac sarcoidosis, and AL as well as transthyretin (TTR) cardiac amyloidosis. TTR cardiac amyloidosis affects approximately 17% of older adults with heart failure. This is often seen with low amplitude on EKG and LV wall thickening on echocardiography. Reduced LV systolic function portends a poorer prognosis. On cardiac MRI, diffuse, transmural, or subendocardial late gadolinium enhancement suggest infiltrative disease like cardiac amyloidosis. Treatment includes TTR stabilizers, such as tafamidis and diflunisal to improve morbidity and mortality. ACE-I/ ARB/ ARNI, beta blockers, mineralocorticoid receptor antagonists, and SGLT-2 inhibitors help manage associated HFrEF.

Case Conclusion:

Following discharge, our patient underwent a cardiac MRI, which confirmed the diagnosis of cardiac amyloidosis. Genetic testing and bone marrow biopsy results demonstrated hereditary TTR cardiac amyloidosis. He was started on a beta blocker, SGLT-2 inhibitor, diuretic, and tafamidis. He developed TTR amyloid associated polyneuropathy, prompting initiation of patirisan, a TTR silencer, to slow progression.

Due to frailty and debility, our patient was unable to tolerate diuretic or beta blocker therapy. His clinical course was complicated by acute ischemic CVA with hemorrhagic conversion. Resultant dysphagia and PEG tube placement necessitated discontinuation of tafamidis. He transitioned to comfort care and died 6 months after diagnosis.

D43 Resident Presentation
Visual Hallucination By Rivastigmine
J. Yang, S. Ryzewicz. *Baystate Medical Center, Springfield, MA.*

Background

Rivastigmine is one of the common medications for dementia. We present a patient who presents with acute confusion and new visual hallucinations in the setting of well-established diagnosis of dementia.

Case

77-year-old male with history of dementia, hypertension, diabetes, and ESRD on dialysis presented with confusion. One day prior to presentation, the patient's wife noted erratic behaviors such as putting on underwear over his pants and having visual hallucinations. Initially he was hypertensive 170/65 but afebrile and saturating well on room air. Labs were significant for no leukocytosis, normal electrolytes, normal venous ammonia, glucose of 146, normal TSH and unremarkable urinalysis. CT of the brain showed no acute abnormality. Two years prior, patient's neurologist started patient on rivastigmine 4.6mg patch daily and eventually increased to 9.5mg daily and he did well. The dose was increased from 9.5mg to 13.3mg two weeks prior to presentation. During this admission, rivastigmine was discontinued and subsequently the patient's mental status improved and no longer had visual hallucinations.

Discussion

Dementia is an acquired cognitive decline from previous level of performance occurring over time, such as learning, memory, and executive function. Worldwide, about 47 million people have dementia. Diagnosis is made by history, cognitive/physical examination, laboratory testing and imaging. Typical treatments for dementia include both nonpharmacologic (cognitively stimulating activities like reading and social interactions) and pharmacologic approaches (memantine, donepezil and rivastigmine). The adverse effects of rivastigmine are gastrointestinal side effects, vivid dreams, and rarely visual hallucinations (2-5%). This case is unique in that the patient initially tolerated 4.6mg and 9.5mg daily patch dosing, but once the dose was increased to 13.3mg daily patch, the patient started having visual hallucinations with resolution of symptom once discontinued. Given that the patient had no other acute medical conditions, medication changes, no laboratory abnormalities, and resolution of symptoms once medication was discontinued, the patient's symptoms were most likely from higher dose of rivastigmine.

Conclusion

It is important to consider adverse effects of medications as etiology of confusion/hallucinations. Although the patient initially responded well to 4.6mg and 9.5mg of rivastigmine, he started having visual hallucination with 13.3mg dosing, which could imply dose dependent adverse effect.

D44 Resident Presentation
Perceptions of older adults with AD/ADRD and their caregivers regarding telemedicine-based health promotion interventions
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Background: The prevalence of Alzheimer's Disease and Related Dementias (AD/ADRD) is increasing, and the illness exacts a devastating toll on patients and their families. The mainstay of non-pharmacological treatment consists of dietary and exercise interventions to mitigate cognitive decline. Delivering these interventions via telemedicine may improve access and minimize disruptions to routine for this population, particularly in hard-to-reach rural areas. We explored perceptions of older adults with AD/ADRD and their caregivers regarding telemedicine use and telemedicine-based dietary and exercise interventions.

Methods: Electronic surveys were deployed via REDCap software to community-dwelling older adults (65+ years) with AD/ADRD and their caregivers. Participants were identified from UNC Geriatrics clinic (age ≥ 65, visit within 2 years, "dementia" umbrella diagnosis). Validated surveys from the telemedicine literature were adapted to a 10-point Likert scale (1 "strongly disagree" to 10 "strongly agree"). The survey items elicited patient opinions on telemedicine and caregiver opinions on nutrition and exercise interventions. Mean ± standard deviations are presented.

Results: Of the 19 survey respondents, mean age was 80 years ± 6.3 (78% female, 94% white). The majority of respondents were aware of telemedicine (agreement 6.3/10 ± 3.7) and agreed that telemedicine saves time (7.2/10 ± 3.3) and improves healthcare access (7.4/10 ± 3.2). Of those who had used telemedicine, most were comfortable with the technology (7.4/10 ± 3.3). Nearly all respondents strongly agreed (9.8/10 ± 0.5) that nutrition was important for overall health and brain health, and similarly agreed on exercise's health impact (9.8/10 ± 0.5).

Conclusions: In this pilot study, patients with AD/ADRD and their caregivers felt telemedicine may be a time-saving and accessible means of delivering healthcare. They perceived proper diet and exercise as highly beneficial for brain health. These results suggest telemedicine could be a convenient modality to deliver health promotion-based interventions to bolster cognition for a population with few treatment options.

D45 Student Presentation
Implementation of a Nurse-Driven Frailty Screening to Improve Access to Home-Based Primary Care
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Background

Access to home-based primary care (HBPC) remains limited despite acceptance as a standard of care. The Clinical Frailty Scale (CFS) is a valid instrument for identifying older adults at risk for poor outcomes. The goal of this evidenced-based practice project was to educate inpatient nursing staff on use of the CFS, promote recognition of frail homebound adults and optimize access to HBPC.

Methods

From October to November of 2022, educational sessions were conducted once weekly on an acute cardiology unit at an academic teaching hospital. The project lead provided educational handouts on scoring the CFS and referring to HBPC. Nurses were coached to enter the patients' CFS score in the electronic medical record. A prospective chart audit was conducted to track completion of the screening. Patients identified as moderately to severely frail were reviewed with the unit-based nursing case manager. Access to HBPC was measured by tracking referrals to HBPC from the project unit concurrently during the project period and 1 month post project completion. Referral volume to HBPC was compared post project completion to referral volume from October to November 2021.

Results

During the project period 79 of 93 hospitalized patients were screened, with a nursing screening adherence rate of 85%. 32 of the 79 patients were identified as moderately to severely frail and therefore, determined to be homebound. Of the 32 patients, 10 patients did not live within the HBPC catchment area, 1 patient was currently on dialysis, and 2 patients were deemed inappropriate for discharge to home. The remaining 19 patients were identified as meeting inclusion criteria for referral to HBPC. Additional reasons for omission of referral to HBPC included acute mental health needs, unstable housing/

caregiving, or patient declined referral to the program. 10 referrals were made during the data collection period compared to 0 referrals from the unit 1 year prior to the project implementation.

Conclusions

The CFS is a valid instrument for identifying hospitalized patients who are eligible for HBPC. Education of inpatient providers with a frailty screening is a successful method for increasing referral volume and access to HBPC.

D46 Resident Presentation

Identification of Patient Values and Alignment of Care through Individualized Priorities-Directed Care in a Home-Based Primary Care Population

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Background: Home-Based Primary Care (HBPC) is an innovative model that expands care to populations with limited access, including older adults. An HBPC program established in 2020 within a large family medicine practice utilizes Patient Priorities Care (PPC), an interdisciplinary, team-based approach to identify patients' health priorities and align care with what matters most to them. The purpose of this study is to describe the predominant values associated with the identified health priorities of an HBPC population and summarize common recommendations for alignment of care with these priorities.

Methods: A random sample of 50 patients was selected for retrospective chart review and included Medicare or dual-eligible men and women, ranging in age from 40 to 97 (average age 76), who had documentation of an initial HBPC visit with a PPC priorities identification discussion. Health outcome goals were classified as falling into one or more of the following value domains: Connecting, Enjoying Life, Managing Health, Functioning. Care alignment was assessed to identify recommendations for stopping, starting, or adjusting care based on these goals. Data collected during chart reviews was documented and analyzed using REDCap.

Results: Of 50 patients, 64% were White, 8% were African American, 4% were Asian, 4% were Native American/American Indian, and 20% were of unknown ethnicity. The predominant value associated with patients' top health priority was Functioning, followed by Managing Health. Common recommendations for care alignment included stopping potentially harmful medications, starting physical or occupational therapy, and adjusting medications to align care with stated goals and values.

Conclusion: Through PPC conversations, patients' values were identified and care was adapted to aid in attainment of individualized health outcome goals. In this way, PPC serves as a valuable tool for tailoring care to What Matters Most.

D47 Student Presentation

Ability of Natural Language Processing Methods to Detect Emergency Department Patients' Values and Preferences for End-of-Life Care in Medical Records

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Background: Natural language processing (NLP) is a machine learning method that can search for specific medical concepts or texts in the electronic health record. It has the potential to enhance care in the Emergency Department (ED) by providing a quick and accurate method to identify documented values and goals during a clinical crisis. The purpose of this study was to evaluate the ability of NLP to identify documentation of advance care planning for older patients with serious illness at the time of their ED visit.

Methods: Patients aged ≥ 50 years of age with serious illness and an expected prognosis < 1 year were prospectively enrolled from the ED of an urban, tertiary care academic medical center between January 2021 to January 2022. Patients were excluded if a limited chart abstraction in the ED found clearly documented goals of care, including a serious illness conversation within the last six months of the ED visit or a medical order for life-sustaining treatment (MOLST). Patients were also excluded if they had cognitive impairment or delirium because advance care planning documentation is more complex in this patient group, which was outside the scope of the study. The presence or absence of advance care planning documentation in patient notes was identified using NLP.

Results: 76 subjects were enrolled with a mean age of 64.4 years (SD 8.4), 49% were female and 57.9% had metastatic cancer. NLP review identified advance care planning documentation among 2.63% of patients who were found to have none with limited manual chart abstraction. NLP review spent 7.89 seconds per patient, whereas limited chart abstraction spent 1-5 minutes per patient.

Conclusion: Limited chart abstractions in the ED can miss critical information about patients' values and preferences, which can cause medical errors. NLP is a valuable tool that can locate this information in a fraction of the time it takes ED clinicians. This allows for faster shared decision-making and accurate delivery of goal-concordant care during emergency decisions about code status, especially for older adults with serious life-limiting illness.

D48 Student Presentation

Feasibility of Novel Opioid Assessment Tool for Rehabilitation Patients in Skilled Nursing Facilities

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Background: Opioid analgesics are commonly used to treat acute pain in skilled nursing facilities (SNFs), yet are associated with adverse effects such as constipation, falls, physical dependence, and respiratory depression. Currently, a uniform standardized assessment of opioid treatment does not exist to guide management decisions for patients in SNFs. The purpose of this study is to determine if a novel opioid assessment tool can feasibly be used to support clinician decision making in opioid management for patients in rehabilitation.

Methods: The Pain Assessment and Documentation Tool (PADT), validated to evaluate opioid therapy and its impact on function over time in the outpatient setting[1], was modified to assess opioid treatment in SNFs. SNF providers, nursing leadership, and direct care nurses were invited to participate in anonymous interviews regarding the tool and the feasibility of implementation. Interview transcripts

were analyzed using NVivo data analysis software to generate themes and then hierarchized to determine the most significant takeaways.

Results: Six physicians, two nurse practitioners, and two SNF nursing leadership staff were interviewed. Responses were broadly consistent. Key themes include 1) the ability to perform activities of daily living is the most significant factor in management decisions; 2) specificity and ease of use are crucial requirements for an assessment; 3) perceived subjectivity is a major concern; 4) a uniform tool would address the primary concerns of communication, standardization, and objectivity in treatment; and 5) nursing short staffing is a barrier to implementation. Of note, clinicians strongly preferred administering assessments on an alternate day frequency.

Conclusions: Provider feedback serves to guide revisions for the development of a standardized opioid assessment tool for future use in SNFs. This tool provides standardized and objective approaches to opioid management for improvement of patient outcomes and treatment.

1. Passik SD, Kirsh KL, Whitcomb L, et al. A new tool to assess and document pain outcomes in chronic pain patients receiving opioid therapy. *Clin Ther*. 2004;26(4):552-561.

D49 Student Presentation

Clinical Outcomes of Female External Urine Wicking Devices: A Systematic Review and Meta-Analysis

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Background: Geriatric patients are at increased risk for infection and immobility-related complications when indwelling urinary catheters (IUCs) are used. Recently, female external urinary wicking devices (FEUWDs) have become available as alternatives to IUCs to address urinary incontinence or measure urine output. To assess the benefit and risk of FEUWDs, we performed a systematic literature review and meta-analysis.

Methods: A systematic literature search was conducted in the following databases: Ovid Medline, Embase, Scopus, Web of Science Core Collection, CINAHL Complete, and ClinicalTrials.gov, from database inception to July 12, 2022. Meta-analyses were performed when feasible. Because FEUWD studies are rapidly evolving, we included all study types and patient populations. Records were selected for full-text review if they included an appropriate intervention (FEUWDs: PureWick™, PrimaFit™) and primary outcomes of interest (IUC-associated urinary tract infection/CAUTIs as defined by the National Healthcare Safety Network, and other UTIs broadly defined) or a secondary outcome (e.g., IUC utilization).

Results: From 2471 records, 40 studies were abstracted: 10 published, 30 abstracts. In the 6 studies reporting sufficient data for inclusion in meta-analysis, post-implementation, CAUTI rate per 1,000 patient days decreased 31% (IRR=0.69, 95% CI=[0.35, 1.36], p=0.283), CAUTI rate per 1,000 device days decreased 17%(IRR=0.83, 95% CI=[0.43, 1.62], p=0.592). When analysis was limited to studies with systematic implementation, significant reductions were observed. IUC utilization rate decreased 15% (RR=0.85, 95% CI=[0.73, 0.99], p=0.0324, analyzing 5 studies). Other UTIs were rarely measured. The effect of FEUWDs on secondary outcomes, including skin breakdown, pressure injuries, mobility-related complications, and antibiotic use, varied.

Conclusions: FEUWDs non-significantly reduced CAUTIs, though IUC utilization was significantly reduced. A standard definition and routine reporting of FEUWD-associated UTIs is needed to further assess these devices' risk.

D50 Student Presentation

Assessment of the Mind Over Matter program for incontinence in an urban primarily Black community setting

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Background

Over 60% of community-dwelling women over age 65 have urinary and/or bowel incontinence (UI/BI). Brown et al. developed the small-group, community-based "Mind Over Matter: Healthy Bowels, Healthy Bladder" (MOM) Program to improve UI and BI. They found 70% of participants vs. 23% of controls improved UI and 55% vs. 26% improved BI upon program completion in a primarily White rural population. Our aim was to pilot the MOM program in an urban primarily Black community and to describe barriers and facilitators to program engagement.

Methods

We conducted a prospective cohort pilot study evaluating impact of the MOM program in an urban Midwest senior center. Participants included women >50 years old recruited by their primary care provider or through clinic fliers with a 6-participant maximum due to space and COVID restrictions. Participants completed 2-hour workshops every other week for 3 sessions led by a trained community health worker with content focused on dietary and behavioral changes to improve UI and BI. The Wisconsin Department of Aging provided materials and training. Participants completed a pre/post Baseline Supplement Symptoms Questionnaire. After each session, the facilitator solicited verbal and written feedback.

Results

Five women participated in the first session, 4 in the 2nd session, and 2 in the 3rd. Participants were women aged 69-87, 80% identifying as Black (4). Overall 1 participant had no incontinence, 1 primarily BI, 1 primarily UI, and 2 with mixed BI/UI. Participants felt the material was helpful and made specific dietary changes such as including more fiber which greatly improved BI. They felt overwhelmed by the amount of information in each session and preferred more time to process the information, which was improved by the 2nd and 3rd sessions. All felt that the language and content of the session was easily understandable and applicable to their daily lives. Those with incontinence had a mean improvement of 53.3% in their symptoms and were very satisfied. Several could not attend all sessions due to health or transportation problems but provided feedback. All wanted more sessions and expansion of the program.

Conclusions

A community-based program in an urban setting focused on diet and behavioral changes to improve UI and BI is feasible, effective, and desired.

D51 Student Presentation

Discovering "What Matters" to Patients: A Quality Improvement Project

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Background: Age-friendly Health Systems recognize that older adults have a unique set of needs and strive to optimize their care. The "4 M's" (What Matters, Medication, Mentation and Mobility) were developed to provide an evidenced based framework for healthcare providers to consistently provide high-quality care to older adults. While all elements of the 4Ms are important, the focus of this project is on "What Matters" which is a key element of patient centered care. The goal of "What Matters" is to generate conversations between healthcare providers and patients and to shift the conversation away from disease processes to focus on health goals and care preferences of

the patient. The "Get to Know Me" boards are white board templates with colorful graphics in a story board format that in patient's rooms. The purpose of this quality improvement initiative was to increase the completion of the "What Matters" section of the "Get to Know Me" boards and ultimately improve patient centered outcomes, by aligning care with health outcome goals.

Methods: This project was implemented in the fall of 2022 on an Acute Care Surgical Unit (SU) and Surgical Intermediate Care Unit (IMC). In August of 2022, prior to implementation, baseline nursing staff knowledge of the 4 M's and the role of what matters and board completion was evaluated. Face-to-face training was provided to staff via individual information sessions on "What Matters" to the patient and how to complete the boards. Informal re-education continued weekly throughout the 15 weeks project period. Completion rates were collected via weekly room board audits.

Preliminary Results: A total of 60 nurses were educated at a 100% completion rate, knowledge was verified through a teach back method. To date, "What Matters" board completion rates demonstrated an overall increase from baseline of August of 2022 of 27% to 79% on SU and a baseline of 16% to 28% on the IMC.

Conclusions: The "Get to Know Me Boards" are a highly visibly way to describe "What Matters" to patients. Staff education helped to increase the completion rate of the boards allowing for "What Matters" to be easily accessible to all members of the healthcare team. Future projects should evaluate the quality of board completion and the use of the information once provided.

D52 Student Presentation
Non-contrast MRI comparing healthy premenopausal and postmenopausal ovarian tissues
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Background: Although ovarian cancer is within the top 5 deadliest cancers for women, it is primarily diagnosed after menopause. Early detection allows greater survival rate, but there is a lack of reliable screening methods for average-risk women. Among the non-invasive screening modalities, MRI is advantageous in optimizing soft tissue contrast and is free of radiation. Diffusion weighted imaging (DWI)-MRI shows increased signal in malignant tissue but also reflects high signal in healthy ovarian tissues (a unique property of ovarian tissue compared to other pelvic organs). Restricted Spectrum Imaging (RSI) is an advanced DWI technique that has potential for distinguishing between malignant and healthy ovarian tissue. Before studying the benefit of RSI in differentiating malignant and benign ovarian tissue, we need to better understand the variation in RSI signal in healthy ovaries and take into account the physiological changes of premenopausal and postmenopausal ovaries on the detected signal.

Methods: In this study, we collected pelvic scans from 15 healthy participants, including 9 premenopausal and 6 postmenopausal individuals. We compared the diffusion signal with a tri-exponential RSI model. The model compartmentalizes signal based on physiologic properties. The three compartments, C_1, C_2, and C_3, represent signal from restricted (cancer cells with high nuclear to cytoplasmic ratio), hindered (tightly packed cells), and free diffusion (vascular flow) respectively.

Results and Conclusions: In the postmenopausal group, ovaries were not detected in 3 participants' scans, which excluded them from data collection. Using a Welch's t-test, we found that the C_2 component, which represents how tightly packed the cells are together, is higher in the premenopausal non-follicular ovary compared to the postmenopausal non-cystic ovary. In all different variations, the C_3 component is higher in the premenopausal group suggesting that premenopausal ovarian tissue is relatively more vascular. Lastly, the C_1 component is not statistically different between the premenopausal and postmenopausal group. This indicates that C_1 has potential to be the differentiating factor between healthy and cancerous tissue among all populations because C_1 reflects cells that have high nuclear to cytoplasmic ratio, commonly seen in malignant tissue.

D53 Student Presentation
Implementation of Geriatrician-Managed Inpatient Zoledronic Acid for Post-Surgical Hip Fracture Patients
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Background

Despite high risk of recurrent fracture, elderly patients with osteoporotic fractures rarely initiate pharmacologic treatment. Geriatric co-management offers a unique opportunity to consider secondary osteoporosis treatment in this population. This study implemented and assessed a geriatrician-led protocol for screening and administration of zoledronic acid (ZA) in patients hospitalized with hip fracture at a large academic center in Boston.

Methods

The program included four phases: stakeholder involvement, education and material development, implementation, and evaluation. The RE-AIM framework was used to describe and evaluate outcomes. Patients over 65 admitted to orthopedics with proximal hip fracture were screened for ZA eligibility by a geriatrician between 9/1/22-11/9/22. Exclusion criteria were CrCl <35 mL/min, serum Ca <8.5 mmol/L, Vit D <20 ng/mL, and fracture due to high impact trauma. Persons with life expectancy <1yr, on hospice, recent osteoporosis treatment, frailty index (FI) >0.55, or critical illness were also excluded. Chart review and interviews identified barriers to implementation.

Results

Stakeholders included orthopedics, pharmacy, endocrine, nursing, and geriatrics. Materials developed included an electronic screening checklist, patient and staff-facing pamphlets, and a primary care follow-up letter. A total of 30 patients with hip fracture were screened with 12 patients (40%) eligible for ZA and 7 patients (mean age 82.7, mean FI 0.28) receiving an infusion. No adverse events were observed. Barriers to implementation included coordination with discharge time, critical illness or death, refusal by patients or proxies, and inability to contact proxies for shared decision making.

Conclusion

An inpatient ZA infusion program is feasible and safe to implement as part of a geriatric co-management service. This model offers a promising strategy to initiate osteoporosis treatment and reduce subsequent fractures in high-risk patients.

Table 1. REAIM Definitions and Metrics

REAIM	Definition	Outcomes
Reach	Patient eligibility determined by geriatrician Exclusion criteria: - CrCl <35 mL/min - Serum Ca <8.5 mmol/L - Vit D <20 ng/mL - Fracture due to high impact trauma - Life expectancy <1yr or on hospice - Recent osteoporosis treatment - Frailty index (FI) >0.55 - Critical illness	- 30 patients screened - 12 patients eligible - 7 patients received ZA infusion
Effectiveness	Most common short-term side effects: - Fever - Myalgia - Bone/musculoskeletal pain	0 patients with documented side effects in 24-hr period post-infusion
Adoption	Staff Training - Lunch and learns with midlevel staff - Implementation of screening checklist Patient Education - Geriatrician-patient conversations - Education materials	- 2 lunch and learns with 30 total staff in attendance - 15/30 (50%) patients screened using checklist
Implementation	Time spent in counseling patient regarding ZA	Range 20-40 min (mean 34 min)
Maintenance	Follow-up with PCP and next infusion	TBD

D54 Student Presentation

Smoking Cessation in Smokers with Alcohol Use Disorder: Does Age Matter?

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Background: Tobacco use remains the leading preventable cause of morbidity and mortality worldwide, which is worsened in smokers with concurrent alcohol use disorder (AUD). However, examinations of whether AUD has an impact on smoking cessation with respect to age—specifically comparing older to younger adults—are poorly represented in the literature. Our objective was to determine whether older adults have more difficulty quitting smoking than younger adults.

Methods: We used data from the CHART-NY study, which enrolled 1,618 smokers hospitalized in two New York City safety net hospitals and randomized them to: 1) fax referral to the state Quitline or 2) multi-session telephone counseling. The primary outcome was self-reported smoking abstinence at 6 months. Baseline alcohol use was determined by score on the 3-item Alcohol Use Disorders Identification Test (AUDIT-C, range 0-12). We created two age cohorts: younger adults (18-64 yo) and older adults (≥ 65 yo). In each, we looked at the incidence of smoking abstinence among participants with alcohol misuse (males with AUDIT-C ≥ 4 and females with scores ≥ 3) as well as severe alcohol abuse (≥ 8).

Results: See table. Our study population identified as follows: 36% Hispanic, 34% Non-Hispanic Black, 6% Non-Hispanic Other, and 24% Non-Hispanic White.

Conclusion: Among inpatient smokers at two urban safety-net hospitals Manhattan, neither alcohol abuse nor age influenced quit rates among participants enrolled in a smoking cessation intervention. Our findings suggest that smoking cessation interventions need not be altered based on the level of alcohol consumption. Furthermore, smoking cessation interventions tailored to older adults need not be developed at this time.

Alcohol Risk Category, Age Group, and Intervention Type as Predictors of Smoking Abstinence (n=1,618)

Predictor	Odds Ratio [95% CI]	p-value
Older Age	1.23 [0.60, 2.35]	0.54
Alcohol Abuse	0.79 [0.55, 1.15]	0.22
Intensive Counseling	1.54 [1.09, 2.21]	0.02*

1) Intention-to-Treat (ITT) assumes that all participants who were not able to be reached at 6-month follow-up were non-abstinent.
2) Older Age defined as individuals 65 years old or older.
3) Alcohol Abuse defined as an AUDIT-C score ≥ 4 in males and ≥ 3 in females.

D55 Student Presentation

An investigation of the correlation between MOAKS value and Gait Biomechanics and/or Patient Reported Outcomes of individuals 1 – month post – ACL – R.

J. S. Reynolds. *School of Medicine, The University of North Carolina at Chapel Hill, Chapel Hill, NC.*

Anterior Cruciate Ligament (ACL) injuries are common among young, active individuals. Not only does the event comprise a significant portion of knee injuries experienced here in the U.S., it also is an area in which gender disparities of incidence are present. Additionally, the volume of incidence of ACL injuries is also increasing. This study is focuses on Early Onset Knee Osteoarthritis (EOKA). While the initial injury event of an ACL tear typically occurs in younger and more active individuals, the associated long term sequalae of EOKA produces a significant decrease in the quality of life later on. We attempted to determine whether a correlation exists between the MOAKS values and 1.) gait biomechanics variables and/or 2.) Patient Reported Outcome Measures (PROMs) in individuals at 1 month post ACL – R, trying to establish a link that can be used clinically as a prognostic indicator. Participants underwent MRI and those images were assessed and assigned a MOAKS value. Then, the participants performed a series of walking trials with retroreflective markers. After completing the walking trials, PROMs were collected. Spearman analysis of the correlation between MOAKS values and Gait Biomechanics variables was insignificant. Positive correlations were seen between MOAKS and all variables except vGRF, which showed a negative correlation. Spearman analysis of the correlation between MOAKS values and Patient Reported Outcomes yielded a significant result when compared involving Knee Osteoarthritis Outcome Score (KOOS). The KOOS value showed a strong positive correlation with an increasing MOAKS value. As the number of radiographic features of OA increased, the average KOOS subscale score also increased. In conclusion, the results of our study makes an argument for a correlation between the MOAKS value of an individual and their KOOS value at 1 month post ACL – R. Whereas the relationship between the MOAKS value and Gait Biomechanics variables was not significant in all comparisons. We did find evidence of a relationship between the MOAKS and KOOS values. This relationship demonstrated a strong positive correlation meaning that as the MOAKS value increases, so too does the KOOS value. Higher KOOS values reflect a decline in function of the knee joint and thus this association is understandable.

D56 Student Presentation

Comparing the Predictive Value of Frailty Models On Patient Outcomes

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Background: Frailty is associated with an increased risk of hospitalization, long-term care admission, and death. The two theories guiding frailty instrument design include the physical frailty phenotype and the accumulated deficits model for frailty. We evaluated the predictive ability of a phenotypic frailty assessment and a frailty index in our clinical practice.

Methods: Comprehensive geriatric assessments (n=200) were completed in older adults (≥ 65 years) cared for in various clinical settings. Using Fried's Frailty Phenotype (Fried's) and the Frailty Index-Comprehensive Geriatric Assessment (FI-CGA), each patient was categorized as robust, pre-frail, or frail. Retrospective chart reviews for n=144 patients (n=56 excluded due to insufficient information) identified clinical outcomes (hospital admissions, SNF admissions, mortality) at 30- and 90-days after assessment, which was our positive composite outcome indicator. We applied the Cox proportional-hazards model to evaluate the association between the frailty score and the hazard of time to a positive composite outcome.

Results: Final sample included n=144 (mean age 79.3±8.0 years, 52.8% female, 84.0% white, 6.9% black or African American, 2.8% Asian, and 4.9% Hispanic or Latinx). At baseline, 37 (25.7%) and 41 (28.5%) were pre-frail and frail using Fried's, and 30 (20.8%) and 71 (49.3%) were pre-frail and frail using FI-CGA. Fried's had significant predictive value for a positive composite outcome for patients with a pre-frail designation (HR 2.86, 95% CI 1.11-7.37, p-value = 0.029) and a frail designation (HR 7.43, 95% CI 3.23-17.08, p-value < 0.0001) with a C-statistic value of 0.728± 0.031. For the FI-CGA, there was significant predictive value for a positive composite outcome with a frail designation (HR 5.34, 95% CI 1.98-14.45, p-value = 0.00096) but was not significant for the pre-frail designation (HR 1.11, 95% CI 0.29-4.19, p-value = 0.88). The C-statistic value for FI-CGA was 0.70±0.03.

Conclusion: We demonstrated the ability of Fried's Frailty Phenotype and FI-CGA to identify patients at risk of adverse clinical

outcomes in a real-world, clinical setting. We also confirmed that significant differences exist between the instruments, highlighting one of the continued challenges observed in frailty research.

D57 Student Presentation
Using Technology for Health Promotion in Older Adults with Cognitive Impairment
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Background: Telemedicine can be a helpful delivery modality in caring for older adults (≥ 65 years) by improving overall ease and access to care. Few telemedicine-delivered health-promoting studies have focused on persons with Alzheimer's Disease and Related Dementias (ADRD) and their caregivers. This qualitative study evaluated the perspective of clinicians and dyads (adults with early-stage ADRD and their caregivers) on telemedicine and how it could relate to a health promotion intervention to slow cognitive decline.

Methods: 10 clinicians and 10 dyads were recruited via various recruitment platforms. All participated in one semi-structured interview via Zoom focusing on the barriers of cognitive challenges, their telemedicine experience, and the facilitators for an exercise and nutrition-based telemedicine intervention. Interviews were transcribed and analyzed using thematic analysis.

Results: Mean participant age with ADRD was 72.1±7.3 years (50% female, 80% White, 20% Black). Mean clinician age was 36.8±6.7 years (80% female, 70% White, 20% Asian, 10% other). The dyads' perspective identified four major themes for persons with cognitive challenges: (1) Finding proper care in a timely manner and not having enough support from clinicians; (2) Clinicians could help patients with ADRD by better identifying community resources and receiving better training on how to support persons with dementia; (3) Receptivity to receiving telemedicine-based care if balanced with in-person visits; and (4) Enthusiasm about an exercise and nutrition-based telemedicine intervention to improve access to care but worried about technology barriers. Clinicians believed that limited access to receiving care and limited time in clinic were barriers for persons with dementia but having a telemedicine-based intervention could potentially mitigate these challenges, which aligned with Dyad perspectives. Differences were reported. Specifically, clinicians believed that both community resources and education for non-geriatricians needed improvements. Clinicians were also more supportive of telemedicine.

Conclusion: Persons with ADRD, their caregivers, and clinicians overall supported telemedicine use in conjunction with an exercise and nutrition-based intervention as a possible means to slow cognitive decline.

D58 Resident Presentation
Connecting the disconnected: pharmacist performed virtual care visits for older adults with technological support
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Background:

Pharmacists have expanded virtual care, but older adults continue to have challenges engaging in it. We leveraged our previous work in pharmacy virtual care and filled a gap: troubleshooting technology challenges with in-home support for older adults.

Methods:

As the first phase of a larger study of pharmacist-led video visits for medication management, we added the following novel steps: 1) Ensured that patients had technology and training before their visit; 2) Sent a study team member into the patient's home to observe; 3) Involved the in-home team member in resolving challenges and visualizing medication organization. We tracked pharmacist medication recommendations during the visit and technology challenges that occurred just before joining the visit and during the visit.

Results:

We successfully completed 20 pharmacist virtual visits with older adults (average age = 74, range 68-80) who were taking multiple medications (average = 12, range 7-24). Before we started the visit, 20% of patients were interested but incapable of completing a virtual visit due to not having a device or internet access, and another 25% unexpectedly needed a VA-loaned device the day-of. We identified similar facilitators (owned a device, comfortable using video for calls) and barriers to joining or engaging in the visit (unable to join via visit link, difficulty connecting audio or video) as our previous work. A novel finding was 60% of patients faced technology challenges that could not be solved by the pharmacist and required in-home assistance to overcome. Examples include not having email on their device that had a camera and inability to enable their camera. These took 10 minutes on average to troubleshoot.

Conclusion:

Even for those older adults who were willing to attempt a video visit and were provided with the technology and training to do so, our in-home team member identified new, behind-the-scenes barriers that the pharmacist could not solve. A next step is to develop and implement a multi-pronged training approach and technology trouble shooting guide to replace the in-home assistance to guide older adults in using telehealth for pharmacy visits.

D59 Student Presentation
A Scoping Review of Dementia Interventions in Home-Based Primary Care
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Background: Home-based primary care (HBPC) provides interdisciplinary, comprehensive care at home to homebound older adults. The prevalence of dementia among HBPC recipients is approximately 50%. To date, little research has been performed to determine whether dementia-specific interventions have been conducted in HBPC or their efficacy. We performed a scoping review to assess the landscape of dementia interventions in HBPC.

Methods: The PRISMA-ScR protocol was utilized. Literature searches were performed using PubMed, Embase, and Scopus for articles on dementia-focused interventions implemented in HBPC. Articles were excluded if they consisted of abstracts only, were not in English, or were not dementia interventions in HBPC.

Results: We screened 1463 unique titles and abstracts. 1402 titles and abstracts were excluded, resulting in 61 full-text studies to assess for eligibility. Of these 61 full-text studies, only one study met criteria for inclusion, an observational study assessing the implementation of the Resources for Enhancing Alzheimer's Caregiver Health (REACH) intervention in Veterans Affairs HBPC. That quasi-experimental study suggested the intervention was effective in reducing caregiver burden. Among the excluded 60 full-text studies, some studies included potentially relevant home-based interventions that could be translated to the home-based primary care setting. These included dementia interventions that targeted long-term services and supports, office-based primary care and other non-home settings such as nursing homes, and home-based palliative care.

Conclusion: This review, using several major databases, is the first to assess the scope of dementia interventions in HBPC. Despite

high prevalence of dementia among homebound older adults receiving HBPC, the evidence base for dementia care interventions in HBPC is lacking. Future studies should adapt and test interventions found to be effective in other settings to HBPC.

D60 Student Presentation

Exploring Deprescribing Experiences of Older Veterans

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Background Deprescribing initiatives have aimed to highlight the importance of appropriate prescribing in older adult patient populations. The Madison Veterans Affairs (VA) Hospital developed a sustainable model for providing pharmacist-driven deprescribing focused visits. Understanding a patient's experience after an intervention is essential for health quality improvement. Qualitative studies exploring older adults' experiences after deprescribing interventions and knowledge in this area is lacking. With a sustainable deprescribing initiative in place at the Madison VA, this study aims to conduct a patient survey to better understand patients' perceptions of the deprescribing process provided by Primary Care Clinical Pharmacists. Responses received will allow for opportunities to improve the deprescribing process currently offered to Veterans.

Methods 15-20 Veterans aged ≥65 with comorbidities who recently participated in a pharmacist-driven deprescribing intervention will be interviewed to explore their experience. Data will be collected through individual semi-structured interviews lasting between 30-45 minutes by the lead investigator. An interview guide will direct the interview. Open-ended questions will explore the type of suggestions made by the pharmacist, how the pharmacist respected the Veteran's opinions, and assistance the Veteran needs to make recommended changes. A concurrent process will be used between initial data collection and analysis. The interview guide would be modified accordingly. Transcripts will be analyzed using qualitative content analysis (CA) by two independent analysts. Categories and themes will be coded using deductive and inductive CA. The Framework for person-centered measures of health system quality and responsiveness will guide deductive CA. Content- characteristic words will describe the categories and clusters to create a general description of the research topic in inductive CA. Data overlaps between participant responses will be used to assess the thick description of the data. Veterans will be mailed a coded transcript of their response for verification.

Results Data collection and patient interviews are ongoing.

Conclusion An exploration of Veterans' experience with intervention will offer opportunities to enhance the quality of the Madison VA pharmacist-driven deprescribing intervention.

D61 Student Presentation

Recruiting Older Adults for Clinical Trials Through Social Media

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Background: PREVENTABLE is a clinical trial investigating if taking a statin could help older adults live well for longer by preventing dementia and/or functional disability. While studies have shown it is difficult to recruit older subjects for clinical trials, there is limited research on the role of social media in recruiting older adults. To evaluate recruitment through social media, we compared recruitment of participants for the PREVENTABLE clinical trial through Facebook® verses traditional strategies of calling and texting.

Methods: We created a Facebook® page for the PREVENTABLE study at UTHealth Houston. We ran one advertisement per week over the course of the 8 weeks with the goal of enrolling adults aged 75 or older for the PREVENTABLE trial. At 4 weeks, we began posting 3 additional times per week in efforts to grow our online presence. In comparison, we utilized DialMyCalls®, an automated messaging system, to send both voice and text recruitment messages to fifty potential participants per week during the same period.

Results: We reached 601 individuals via Facebook® and 472 individuals via DialMyCalls®. In total, 53 people interacted with our Facebook® posts/advertisements. 14 of those 53 contacted our study team via Facebook® Messenger expressing interest in participating. However, no participants enrolled in the study. Of the 14 interested individuals, 3 did not meet the minimum age requirement. The other 11 were either ineligible due to a previous dementia diagnosis or lack of response to our messages. For DialMyCalls®, after broadcasting to 472 individuals, we had 12 people interested in participation. Of those 12 individuals, 2 were successfully enrolled. Facebook® advertisements cost around $215 while DialMyCalls® were around $90 for the 8 weeks.

Conclusions: Unfortunately, Facebook® was not a successful recruitment tool to reach participants aged 75+. Limitations to Facebook® included not being able to directly reach our specified age group, as the oldest age group available for targeted advertisements was 65+. In addition, Facebook® was more costly than DialMyCalls® for the same time period. Our study shows that traditional methods of calling and texting seem to be more successful in recruiting this population. However, future projects should consider new and creative ways to recruit older adults for research.

D62 Student Presentation

Can a Nudge Intervention to Modify Prescribing Of Oxycodone among Elderly Inpatients Decrease Disparities in Prescriptions? Results From A Cluster Randomized Crossover Trial

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Background

Subgroup-specific differences (including disparities) in prescribing of certain drugs exist, including racial disparities in the prescription of opioids. It is unclear if interventions targeting prescribing of high-risk drugs may impact such disparities. We aimed to evaluate the impact of an electronic health record (EHR)-based nudge intervention within a cluster randomized crossover (CRXO) trial on prescription patterns for oxycodone among different White and non-White patients.

Methods

A CRXO trial of a nudge intervention was implemented across 10 sites in a large safety net hospital system between February and August 2022. We targeted oxycodone (nudge to 2.5 mg) prescribing among inpatients aged ≥65 years. Generalized linear mixed models measured the impact of the intervention (main outcome: prescription of nudged dose), separately for White and non-White patients, and those on government and non-government insurance; i.e. to test whether the intervention reduced subgroup differences in prescribing.

Results

A total of 2074 patients (1661 non-White) were prescribed at least one dose of oxycodone during the study period (Table 1). Among White patients the intervention led to 84% more prescriptions of the nudged dose (odds ratio [OR] 1.84 95% confidence interval [CI] 1.15-2.94; p=0.0103); this impact was not different among non-White patients (OR 1.51 95% CI 1.20-1.91; p<0.0001). Note the overlapping CIs between subgroups. Similarly, there was no difference in the impact of the intervention among patients with government insurance (OR 1.54 95% CI 1.21-1.95; p<0.0001) and non-government insurance (OR 1.93 95% CI 1.28-2.93; p<0.0001).

Conclusions

While overall effective in terms of increasing prescribing of nudged doses of oxycodone, our nudge intervention did not reduce racial and insurance based disparities in oxycodone prescribing.

Table 1. Cohort demographics

	Control		Intervention	
	White	Non-White	White	Non-White
Unique patients prescribed the nudged oxycodone dose (2.5 mg)	206	826	207	835
Median Age (interquartile range)	76 (70-83)	72 (68-78)	77 (70-84)	72 (67-78)
Male Sex (%)	84 (41%)	355 (43%)	75 (36%)	343 (41%)
Government Insurance (%)	157 (76%)	573 (69%)	157 (76%)	617 (74%)
Non-Government Insurance (%)	49 (24%)	253 (31%)	50 (24%)	218 (26%)

D63 Student Presentation

A Nudge Intervention to Modify Prescribing Of Oxycodone And Gabapentin Among Elderly Inpatients In a Large Safety-Net Hospital System: Heterogeneous Results From A Cluster Randomized Crossover Trial

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Background

Many single-institution interventions targeting prescription of high-risk drugs among elderly patients have been described. However, generalizability is a concern as successful approaches in one setting may not translate to others, and data on heterogeneity of results across sites are lacking. Therefore, we aimed to (1) evaluate the impact of an electronic health record (EHR)-based nudge intervention in a cluster randomized crossover (CRXO) trial across 10 sites on prescribing of oxycodone and gabapentin, and (2) analyze heterogeneity in results across sites.

Methods

A CRXO trial of a nudge intervention was implemented across 10 sites in a large safety net hospital system between February and August 2022. We targeted oxycodone (nudge to 2.5 mg) and gabapentin (nudge to 100 mg) prescribing among inpatients aged ≥65 years. Generalized linear mixed models measured the impact of the intervention (main outcome: prescription of new lower default dose). Intraclass correlation coefficients (ICC) indicated the proportion of variance in outcomes attributed to (unspecified) differences between hospitals.

Results

Among 17,581 oxycodone prescriptions (2,074 patients) and 49,265 gabapentin prescriptions (2,596 patients) our intervention led to 64% more prescriptions of the nudged dose of oxycodone (odds ratio [OR] 1.64 95% confidence interval [CI] 1.34-2.02; p<0.001) while no difference was observed for gabapentin (OR 1.11 95% CI 0.95-1.31; p=0.164). The ICC was 0.30 and 0.01 for oxycodone and gabapentin, respectively, indicating a greater variation between hospitals in terms of oxycodone prescribing (**Figure 1**).

Conclusions

Interventions targeting high-risk drugs among elderly patients may not easily translate between settings. This potential heterogeneity in results across sites may be due to site-specific prescribing cultures.

D64 Student Presentation

Low skeletal muscle index is associated with worsened quality of life but not worsened physical function in prostate cancer patients undergoing androgen deprivation therapy.

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Background: Androgen deprivation therapy (ADT) is commonly used in advanced prostate cancer despite its negative impact on muscle mass, physical function, and quality of life (QOL). Identification of patients at greater risk for developing these adverse effects can guide proactive clinical interventions. We evaluated the association of pre-ADT muscularity, defined by computed tomography (CT) skeletal muscle index (SMI), with ADT-induced changes in muscle mass, physical function, & QOL.

Methods: Men with advanced prostate cancer initiating ≥6 months ADT with a clinically available pre-ADT CT scan were eligible for analysis in this ongoing observational study. Body composition [dual-energy x-ray absorptiometry (DXA) derived appendicular SMI (ASMI)], physical function [6-minute walk test (6MWT), handgrip strength (HGS), VO_2 peak, stair climb power (SCP)], & QOL [Functional Assessment of Cancer Therapy (FACT-P), European Organization for Research and Treatment of Cancer QOL Questionnaire (EORTC)] were assessed Pre- & 6-Mo post-ADT initiation. Data are mean (SD) or N (%); paired t-tests & Pearson correlations were used for analysis.

Results: 20 men aged 70.5 (7.2) years were analyzed; 15 (79%) of patients displayed low SMI Pre-ADT. ASMI, HGS, VO_2 peak, & SCP worsened after 6-Mos of ADT (P≤0.02), as did EORTC (Physical Function & Fatigue, P≤0.015); there was a trend for reduced FACT-P Physical Function (P=0.06). Larger Pre-ADT SMI was correlated with smaller 6-Mo decreases in FACT-P Physical Well-being (r=0.52, P=0.02), EORTC Physical Function (r=0.47, P=0.04) & EORTC Role Function (r=0.58, P=0.01); there was a trend with FACT-P Physical Function (r=0.41, P=0.08). Pre-ADT SMI was not correlated with changes physical function.

Conclusions: Low SMI was prevalent Pre-ADT and was associated with worse QOL deficits after 6-months of ADT. However, low SMI was not associated with observed reductions in physical function, suggesting that other factors beyond muscle mass influence muscle function.

D65 Student Presentation

Validation of two prediction models for 1-year mortality after hospitalization in the elderly

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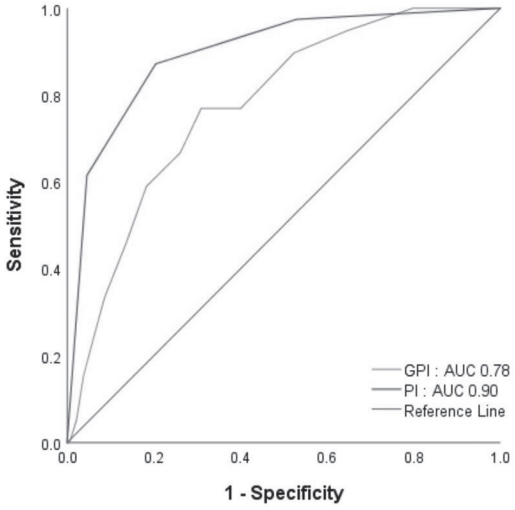
Background: The Multidimensional Geriatric Prognostic Index(GPI) and Prognostic Index(PI) are predictive tools for post-discharge mortality in the elderly. But they have not been validated in China. The objective of this study was to validate the accuracy of GPI and PI using the data from geriatric evaluation and management unit(GEMU) in Peking Union Medical College Hospital (PUMCH).

Methods: A retrospective cohort study of 424 patients (median age 76, 44.4% male) aged 70 years or older discharged from Jan 2016 to Dec 2019. The patients' survival at 1 year after discharge was obtained by telephone follow-up from 9 to 10 2022. Variables used to calculate GPI and PI included demographics, geriatric assessment, and lab values. The predicted risk probabilities were analyzed by logistic regression. The calibration was assessed by the Hosmer–Lemeshow(HL) test and discrimination was assessed by receiver operating characteristic(ROC) analysis.

Results: The 1-year mortality was 10.8%. According to PI, the 1-year mortality increased from 0.6% in the lowest risk group(0-1 point) to 61.7% in the highest risk group(>6 points). Each 1-point rise in GPI would increase the risk of 1-year mortality by 1.81 fold. The ROC areas for GPI and PI predicting 1-year mortality were 0.78 and 0.90, respectively. P values of HL test for both GPI and PI were >0.05.

Conclusions: Both GPI and PI can predict 1-year risk of mortality in analyses using GEMU data in PUMCH and PI outperformed GPI.



Receiver operating characteristic curves of GPI and PI for predicting 1-year mortality
Variables for GPI[1](Geriatric Prognostic Index) included age, sex; Charlson's comorbidity index, Activities of daily living(ADL), Instrumental activities of daily living, Mini-Mental State Examination, Geriatric Depression Scale-15, Mini Nutritional Assessment-Short Form.
Variables for PI[2] (Prognostic Index) included sex; ADL, Congestive heart failure, cancer, creatinine >3.0 mg/dL, albumin.
References:
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D66 Student Presentation
Correlates of Confidence that Physicians Know their Patients' End-of-Life (EOL)Preferences:Does My Doctor Know What I Want?
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Physicians' knowledge of patients' preferences for care at the EOL maybe influenced by many factors, including limited experience with or time for advance care planning, communication issues about EOL care preferences, & medical mistrust. Increasing patient-physician engagement in conversations about EOL care requires identification of barriers to these important discussions. **Aims:** Identify factors a/w patients' perceptions of physician-level knowledge of their EOL care preferences. A descriptive analysis of data from the EQUAL ACP Study, that examines ACP practices among non-Hispanic Black and White community-dwelling, older(≥ age 65) adults with serious illness from 10 primary care clinics in the South was conducted. The primary outcome of interest was to measure how confident participants were that their doctor would know their EOL care preferences if they were unconscious or in a coma. Sociodemographic & clinical characteristics (race, age, co-morbidities, marital status), measures of healthcare use (hospital admissions & emergency department (ED) visits) were selected. Variables measuring level of social support, health literacy, shared decision making & level of trust in their doctors were included. Appropriate statistical tests (Chi-square, Fisher Exact, t-test, Wilcoxon rank sum) were used to identify potential associations. **Results:** 725 participants were included in the analysis. Mean age:75 yrs (SD=7), predominantly female (65%), Black (57%), & not married (60%). The most common diagnosis was Type 2 Diabetes(48%). More than half (57%) of participants were not confident that their doctor would know their EOL preferences. Those with higher levels of social support/ engagement ($p = 0.03$), engaged in shared decision making ($p<0.001$), more ED visits ($p=0.001$), & those with higher levels of trust in their physicians ($p<0.001$) were more confident that their doctors knew their preferences. **Conclusions:** This exploratory analysis has identified potential factors that may influence patients'confidence in their physicians' knowledge of their EOL care preferences. Future studies are needed to more specifically identify factors that influence the quality of patient-physician communication about EOL care.

D67 Student Presentation
The Effects of an Enhanced Meal Delivery Intervention on Nutritional Biomarkers in Homebound Older Adults
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Background: There have been few studies involving homebound older adults due to the inability to leave their homes to participate in traditional clinical trials. While there are increasing numbers of older adults (>65) who are homebound, most of them prefer to stay in their own homes to maintain autonomy. Our intervention is designed to see if providing enhanced meal delivery through Meals on Wheels (3 meals a day vs the usual 1 meal a day) can improve the nutritional status of homebound older adults. Six nutritional markers will be assessed: homocysteine, vitamin C, folate, B12, 25-OH-D, and methylmalonic acid.

Methods: All participants were screened to fit the criteria of homebound adults 60 and older who are prefrail or frail and medically stable. 9 participants had blood drawn for plasma vitamin C, serum folate, serum vitamin B12, vitamin 25-OH-D, methylmalonic acid, and homocysteine before and after 12-weeks of enhanced meal delivery. To measure these levels, enzyme-linked immunoassays (ELISA) were conducted. T-tests were used to express the difference in levels of nutritional biomarkers at baseline and after 12 weeks in homebound older adults, as well as differences between homebound older adults and healthy older adults recruited from a geriatric clinic (n = 10) at baseline. The significance level is $p=0.05$.

Results: Of the six biomarkers that were assessed, our findings revealed that there were higher levels of baseline homocysteine in homebound older adults than healthy aging adults ($p = 0.03$). There were also higher levels of vitamin C after the enhanced meal delivery at 12 weeks compared to baseline ($p = 0.04$). There were no statistically significant differences in the other nutritional biomarkers for homebound versus healthy aging adults or baseline versus after 12 weeks of enhanced meal delivery.

Conclusions: Elevated levels of homocysteine are linked to dementia, heart disease, and mortality. Our results showed higher levels of homocysteine in homebound older adults than in healthy aging adults, indicating that homebound older adults may be at greater risk of morbidities such as cognitive decline and mortality. Vitamin C is found in fruits and vegetables and is crucial for the formation of collagen and wound healing. Improvement in vitamin C levels indicate that enhanced meal delivery from Meals on Wheels may play a positive role in improving the nutritional status of homebound older adults.

D68 Student Presentation
Efficacy of the Osteopathic Pedal Pump in Reducing Lower Limb Volume in Older Adults with Lymphedema
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Background: Lymphatic techniques are gentle and passive techniques long speculated to return lymph into circulation. Previously, the only studies measuring lymphatic movement were performed on animal models. Recent preliminary data in healthy subjects showed

a significant decrease in lower leg volume using the Osteopathic Lymphatic Pedal Pump. However, these findings have not been tested in the elderly population until now.

Methods: Twenty geriatric patients from the New Jersey Institute of Successful Aging at Virtua-Rowan School of Osteopathic Medicine were enrolled in the study. The requirement for inclusion in the study was chronic lower extremity edema. Exclusion criteria included patients with acute asthma or COPD, acute congestive heart failure, active infections or fractures of the lower extremities, or metastatic cancer. Treatment consisted of the application of the myofascial thoracic inlet release followed by 5 minutes of the pedal lymphatic pump. A volumetric gauge was used to measure lower limb volume both before and after treatment. Immediately following the protocol treatment, the measurements were taken using the same leg to determine post-treatment lower limb volume.

Results: The average change in lower limb volume was 76.90 mL (standard deviation of 65.89 mL). There was a statistically significant change ($p = 0.001$) between pre-and post-treatment limb volumes. Minimum and maximum displacements were -12 mL and -242 mL, respectively. In a post hoc analysis, patients with the most appreciable change also had comorbidities of type II diabetes mellitus ($p < .001$; M = 113.75 mL; SD = 88.399 mL), history of DVT ($p = 038$; M = 120.50 mL; SD = 105.5 mL), or obesity ($p = .004$; M = 94.3 mL; SD = 86.82 mL).

Conclusion: The osteopathic pedal pump technique is a safe and efficacious technique that can assist elderly patients in significantly, albeit temporarily, reducing lower limb edema.

D69 Student Presentation

Reaching Dementia Caregivers: Online Recruitment Strategies for a Firearm Safety Study

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Background

Caregivers play crucial roles in making decisions for people living with dementia (PWD). This population is often hard to reach due to caregiving demands and under-identification with the term "caregiver." The Safe at Home study tested online ways to reach caregivers in the context of supporting decision-making related to firearm safety.

Methods

This prospective online randomized trial seeks to enroll 500 adults who speak English or Spanish, reside in the US, and care for a community dwelling PWD with firearm access. Initial recruitment was conducted through social media (Facebook/Instagram) and Google ads, with a digital marketing firm refining parameters by age, audience, and location. In addition, we expanded recruitment to online platforms (ResearchMatch (RM), Craigslist (CL)).

Results

From all sources, 1,270 screening forms were filled out; of these, 358 caregivers were ineligible due to the PWD not having firearm access; 76 PWD lived in a care facility; and 220 were not caregivers. Over six months, Facebook/Instagram ads resulted in 46,111 ad views, 4,363 study page views, 100 screening forms, and 11 enrollments; Google ads resulted in 282,328 ad views, 17,127 study page views, 766 screening forms, and 25 enrollments. Over one month, 4,500 RM emails led to 166 screening forms and 32 enrollments; 12 paid CL ads led to 67 screening forms and 18 enrollments; other sources (referrals and flyers) led to 122 screening forms and 26 enrollments. Staff reviewed screening forms for duplicate entries and identified 36 from RM, 14 from CL, and 14 from other sources.

Conclusions

Online recruitment of caregivers of PWD allows inclusion of a broad geographic sample, but the optimal modality remains to be determined. The efficiency of these online approaches needs to be studied further. Our findings may benefit future studies by sharing insights to reach caregivers of PWD.

D70 Student Presentation, Encore Presentation

Impact of EASO/ESPEN-defined Sarcopenic Obesity on Outcomes of Telehelath Weight Loss Program

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Background: Biological changes occurring with age can lead to the simultaneous gain of fat mass and loss of muscle mass and function known as sarcopenic obesity (SarcOb), which is associated with worse outcomes. New EASO/ESPEN consensus definitions allow standardization of SarcOb, which can be used to determine whether SarcOb status necessitates different treatment approaches. This study sought to evaluate whether there are differences in weight or physical function outcomes in older adults with and without SarcOb taking part in a multicomponent weight loss intervention.

Methods: A 6-month, non-randomized, non-blinded, single-arm study was conducted from 2018–2020 in adults ≥65 years with a body mass index (BMI) ≥30 kg/m^2. Weekly dietitian visits and twice-weekly physical therapist-led exercise classes were delivered using telemedicine. Body composition was assessed using bioelectrical impedance analysis. We applied six definitions of SarcOb (as outlined in the consensus) to determine whether the response to the intervention was different depending on SarcOb status. Outcomes evaluated included weight loss and physical function (30-second sit-to-stand, six-minute walk).

Results: The overall cohort's mean age was 72.9±3.9 years (82% female). Baseline measures of weight, BMI, and waist circumference were 97.8±16.3 kg, 36.5±5.2kg/m^2, and 115.5±13.0 cm, respectively. Overall, mean weight loss was 4.6±3.5kg or 4.7±3.5% ($p<0.001$), 30s sit-to-stand improved (3.1reps±4.2), as did the 6-minute walk (42.0m±77.3). SarcOb was present in 11.3-54.9% of the cohort using the consensus definitions. There were no significant differences between SarcOb vs. Obesity status in weight loss (range: -1.21kg, 1.00kg; effect size: -0.29,0.37), 30-second sit-to-stand (range:-0.35,1.06 reps, effect size:-0.25,0.47), and six-minute walk test (-7.3,11.3m, effect size:-0.14,+0.08). The proportion of Responders (individuals with >5% weight loss) was no different between groups.

Conclusions: The lack of significant differences in weight loss or physical function in older adults with SarcOb participating in a weight loss intervention suggests that well-designed, multicomponent interventions can lead to similar outcomes irrespective of SarcOb status.

D71 Student Presentation

Functional Dependence as a Contributing Factor for Patient Hand Contamination by Multi-Drug Resistant Organisms (MDROs) in Acute Care Settings

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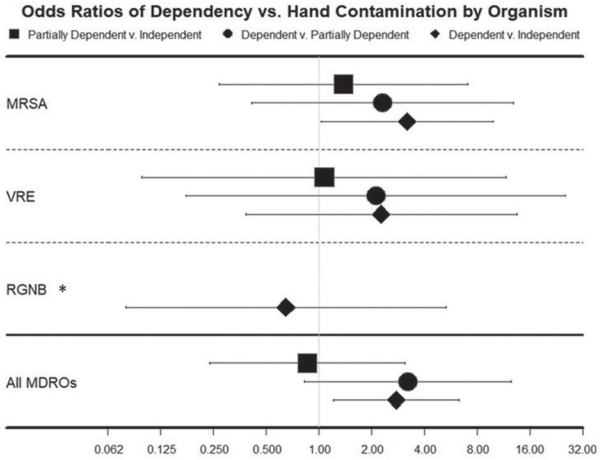
Background and Objectives: Patients with functional disabilities are at higher risk of adverse outcomes including infections. We aimed to determine whether the presence of functional disabilities is correlated with patient hand contamination by multi-drug resistant organisms (MDROs), and thus a potential target for patient hand hygiene (PHH) interventions.

Methods: Case-control study of hand contamination with methicillin-resistant *S. aureus* (MRSA), vancomycin-resistant enterococci, and gram-negative bacilli resistant to cephalosporines, fluoroquinolones and/or carbapenems in 2 acute-care hospitals in Southeast Michigan. Forty cases with MDRO hand contamination were matched to 359 controls. Exposure categories were based on the Katz Activities of Daily Living (ADL) scale scores: no functional disabilities (reference group), 1-3 disabilities (partially dependent), and 4+ disabilities (dependent).

Results: Hospital site, sex, and history of MDROs were included in the model based on stepwise regression. The odds ratio (OR) of MRSA hand contamination in the dependent category was 3.19 (95% CI: 1.181, 5.536) compared to the independent category, and for any MDRO the OR was 2.77 (95% CI: 1.22-6.32). Feeding dependence had the highest single association with hand contamination (OR 3.80, 95% CI; 1.28-11.291).

Conclusions: Patients with a large number of functional dependencies were more likely to have MDRO hand contamination. This suggests a need for targeted PHH interventions in patients with functional disabilities, to help prevent the spread of MDROs in the acute-care setting.



MRSA: methicillin-resistant *S. aureus* (MRSA); VRE: vancomycin-resistant enterococci;
RGNB: gram-negative bacilli resistant to cephalosporines, fluoroquinolones and/or carbapenems
* OR not calculated for RGNB due to limited data for "partially dependent" category

D72 Resident Presentation

Population Factors Affecting 30-day Medicare Readmissions for Congestive Heart Failure in a Nonprofit, Community Hospital

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Background: Congestive Heart failure (CHF) is one of the most common diagnoses for readmission in developed countries and accounts for roughly a quarter of all 30-day readmissions in patients aged >65 years. This study aims to identify population factors that affect a community hospital's 30-day readmissions for Medicare patients over the age of 65 years with CHF.

Methods: We performed a retrospective review of 30-day readmissions for CHF patients at or above 65 years old between 10/1/20-10/1/21. Patients readmitted for diagnoses other than CHF were excluded. Data abstraction included factors such as age, race/ethnicity, comorbidities, socioeconomic factors, disposition, referral to hospice/palliative care and referral to chronic care management.

Results: A total of 64 patients had unplanned readmissions after an initial admission for CHF. Of these, 13 patients were excluded due to being readmitted with primary diagnoses different from CHF. Patients >80 years old represented 66% of those readmitted. In terms of race/ethnicity, 86.3% of the patients who were readmitted were caucasian, 7.8% were African American, 2% were Hispanic/latino and 3.9% were other/unknown. Insurance coverage was Medicare for 92.2%, Medicare Advantage or Managed Medicare for 7.8% and dual coverage with private insurance for 2%. Disposition for initial admission, was home with services for 51%, Skilled Nursing Facility (SNF) for 26% and home without services for 25%. Disposition for readmission, was home with services for 41.2%, SNF for 31.4%, home without services for 17.6%, hospice for 3.9% and death for 5.9%. Chronic care management referral was present for 49% of initial admissions and 60.8% for readmissions. Hospice and palliative care was consulted for 3.9% of patients who were initially admitted and 25.5% of patients who were readmitted.

Conclusion: More patients were referred to hospice/palliative care and chronic care management during readmission, and more patients were discharged to SNF as opposed to home or home with services after readmission. This represents a worsening functional status and disease progression with each readmission. Involvement of hospice/ palliative care and chronic care management earlier in the disease course may lead to improved outpatient management and fewer readmissions.

D73 Student Presentation

Balance Challenges and the Energetic Cost of Walking

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Background

Gait modifications to improve stability likely increase the energetic cost of walking (ECW) but have not been systematically examined. Since rising ECW is a known precursor to functional limitation,[1] examining the relationship between balance impairment and ECW is important.

Methods

This cross-sectional analysis uses data from 1357 men and women aged 60 – 96 in the Baltimore Longitudinal Study of Aging seen between January 2007 and March 2020. Balance was assessed by a 6m narrow (20cm) walk (NW), and progressive static balance (SB) tests (semi-tandem, tandem, and single leg stance). NW performance was recorded as failure if the participant stepped outside the 20cm course more than twice over three trials. Each SB position was recorded as failure if unable to hold for 30 sec. ECW was measured during a 2.5-min usual pace walk in a tiled corridor while the participant wore a portable indirect calorimeter. To allow for metabolic steady state attainment, the first 1.5 min of the walk was excluded and only the last minute was averaged to obtain VO (mL/kg/min). ECW was determined by using average VO2 (mL/kg/min) and standardizing it by meters walked in 2.5 min test. The association between ECW and NW, and ECW and SB were analyzed using generalized linear regression models adjusted for age, sex, race, height, and weight.

Results

The study population consisted of 53% women and 23% of Black race. Mean ECW was higher in persons who failed the NW (19.5 vs 16.4 mL/kg/100m; p.<.0001). Mean ECW was progressively higher in those who failed the semi-tandem stance versus those who could hold a semi-tandem stance for 30 sec but failed the tandem stance versus those who could hold a single leg stance for any amount of time (21.4 vs 17.4 vs 16.4 mL/kg/100m; p<.001; p=.004, respectively).

Conclusion

Instability contributes to higher energetic costs of walking which suggests that rehabilitation methods aimed at improving balance may help maintain function in later life and delay mobility disability.

1. Schrack JA, Zipunnikov V, Simonsick EM, Studenski S, Ferrucci L. Rising Energetic Cost of Walking Predicts Gait Speed Decline with Aging. *GERONA*. 2016;71(7):947-953. doi:10.1093/gerona/glw002

D74 Student Presentation

Mobility Device Use and Frailty Progression in Older Adults with Mobility Impairment

A. Chau,[1] D. Kim,[2] S. S. Shi.[2] *1. University of Hawai'i at Manoa John A Burns School of Medicine, Honolulu, HI; 2. Hinda and Arthur Marcus Institute for Aging Research, Boston, MA.*

Background: Frailty is associated with increased risk of disability and adverse health outcomes. While mobility devices are often used for mobility limitations, the relationship between mobility device use on frailty progression remains unknown.

Methods: Participants were community-dwelling adults with mobility impairment (gait speed <0.8m/s or Short Physical Performance Battery <10) who participated in two consecutive years (2015 and 2016) of the National Health and Aging Trends Study, a nationally representative survey of Medicare beneficiaries ages 65 and older. We defined mobility device use as using a cane or walker in 2015. We measured frailty with a validated 40-item deficit accumulation frailty index (FI) in 2015 categorized into robust (<0.15), pre-frail (0.15 to <0.25), mildly frail (0.25 to <0.35), and moderate-to-severely frail (≥0.35). Frailty change was calculated as the difference in FI from 2015 to 2016, categorized as worsening (≥0.03) or stable/improved (<0.03). We used multivariable logistic regression to examine the association between mobility device use and worsening frailty, falls and hospitalizations.

Results: Among 4,067 older adults (56.5% female, 78.2% White), 1,196 (29.4%) used a mobility device. Among device users, the proportions of robust, pre-frail, mildly frail, and moderate-to-severely frail were 5.8%, 23.3%, 32.5%, and 38.4%, respectively. Overall, 496 (38.8%) of device users and 967 (30.2%) of non-device users had worsening frailty. Mobility device use was not associated with worsening frailty in the overall cohort (Table). However, device use was associated with worsening frailty in pre-frail participants. After full adjustment, device use was not associated with falls or hospitalizations.

Conclusion: Among older adults with mobility impairment, mobility device use was generally low and associated with worsening frailty in pre-frail participants but not in those with mild or worse frailty.

Table. Association between mobility device use

Primary Outcome	Unadjusted	Adjusted*
Worsening Frailty		
Overall Cohort	**1.46 [1.19-1.80]**	1.26 [0.95-1.68]
Non-frail	1.88 [0.96-3.69]	1.88 [0.95-3.71]
Pre-frail	**1.78 [1.22-2.59]**	**1.62 [1.09-2.41]**
Mild frailty	1.35 [0.99-1.84]	1.26 [0.90-1.78]
Moderate to severe frailty	0.75 [0.45-1.25]	0.74 [0.45-1.23]
Secondary Outcomes**		
Falls	**2.00 [1.71-2.33]**	1.16 [0.94-1.42]
Hospitalizations	**2.03 [1.66-2.48]**	1.15 [0.91-1.46]

* Adjusted for age, gender, race, income, cohabitation status, and baseline frailty
** Adjusted for baseline frailty

D75 Student Presentation

Patterns of estimated 24-hour urinary sodium excretion and atopic dermatitis in the UK Biobank

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Background: Recent data show that sodium can be stored in the skin and act as an ionic checkpoint, stimulating TH2 inflammation found in atopic dermatitis. Dietary sodium intake may be an important contributor to the heterogeneity in the onset and persistence of atopic dermatitis, which has had an increasing prevalence among older adults in recent decades. We aimed to determine the extent to which dietary sodium intake is associated with atopic dermatitis in a large, population-based cohort of adults.

Methods: We conducted an observational study using the UK Biobank, a population-based cohort with 500,000 participants aged 40 to 70 years at time of recruitment from 2006-2010. Dietary sodium intake was estimated using spot urine samples and the INTERSALT equation for estimating 24-hour urine sodium excretion (g/day). The primary outcome was atopic dermatitis, and the secondary outcome was active atopic dermatitis at the time of urine collection. We used logistic regression to examine the association between estimated 24-hour urine sodium excretion and the outcomes of interest, adjusting for age, genetic sex, ethnicity, Townsend deprivation index, and highest level of education. We used likelihood ratio tests to assess effect modification by age, genetic sex, and ethnicity.

Results: The 215,855 participants in our cohort were 54% female with an average age of 57 years. Mean (SD) estimated 24-hour urine sodium excretion was 3.00 (0.82) g/day. 10,899 participants (5.0%) had atopic dermatitis. A one-gram increase in estimated 24-hour urine sodium excretion was associated with an 11% increase in the odds of atopic dermatitis (AOR 1.11, 95% CI 1.07-1.15) and a 21% increase in the odds of active atopic dermatitis (AOR 1.21, 95% CI 1.10-1.33). There was evidence for effect modification in the association between urinary sodium and AD by sex (p-value = 0.002) and age (p-value = 0.002), but not by ethnicity (p-value = 0.11).

Conclusion: Increased 24-hour urinary sodium excretion was associated with increased odds of adult atopic dermatitis. Dietary sodium restriction warrants additional research as a potential intervention for adult atopic dermatitis, especially among older adults who may have increased skin sodium storage and for whom traditional immunosuppressive treatments have more risks.

D76 Resident Presentation

Humerus and Wrist Fracture Incidence among US Asian and Pacific Islander Adults Compared to White Adults

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Background: Prior U.S. studies have shown that Asian adults have about 50% lower incidence of hip fracture compared to White adults. However, there is less data regarding other fractures, particularly among men. This study aimed to compare the incidence of humerus and wrist fractures among Asian and Pacific Islander (PI) versus non-Hispanic white (NHW) adults.

Methods: We performed a retrospective study of adults in a diverse northern California healthcare population who were age ≥50y during 2000-2019. Closed fractures of the humerus (proximal/shaft) and closed or open fractures of the distal radius or ulna (wrist) were ascertained during follow-up to 2021. Race and ethnicity were obtained from self-reported data. Fracture incidence was compared using log-Poisson regression, adjusting for 5-year age group and calendar year.

Results: Our cohort included 1,877,572 adults (aged 58±10y at entry), including 403,687 Asian/PI and 1,473,885 NHW adults. 17,009 adults experienced humerus fracture (mean age 73±12) and 22,640 experienced wrist fracture (mean age 69±12). The age-adjusted incidence of humerus fracture for Asian/PI women and men was 0.55 and 0.21 per 1000 person-years (p-y) compared to 1.50 and 0.58 per 1000 p-y for NHW women and men, respectively. The age-adjusted incidence of wrist fracture for Asian/PI women and men was 1.07 and 0.42 per 1000 p-y, compared to 2.04 and 0.69 per 1000 p-y for NHW women and men, respectively. When compared to NHW counterparts and adjusted for age and calendar year, Asian/PI adults in aggregate had a humerus fracture incidence rate ratio (IRR) of 0.40 (95% CI 0.37-0.43) for women and 0.39 (0.34-0.44) for men. For wrist fracture, the IRR was 0.54 (0.52-0.57) for women and 0.63 (0.58-0.69) for men.

Conclusions: Humerus fracture incidence in older Asian/PI adults in aggregate is 60% lower than NHW adults whereas wrist fracture incidence is 46% lower for women and 37% lower for men. However,

the Asian/PI group is heterogeneous and further studies are needed to determine if fracture incidence rates vary substantively among Asian ethnic subgroups.

D77 Resident Presentation
Association of Frailty and QOL: Data from the NHATS
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Background: Understanding the link between frailty and quality of life (QoL) has become an integral part of clinical practice. While previous longitudinal studies have evaluated the impact of baseline QoL on future risk of frailty, no work has yet assessed how baseline frailty status impacts long-term QoL. The goal of this analysis is to assess the impact of baseline frailty status on future quality of life.

Methods: We conducted a longitudinal analysis using data from the National Health and Aging Trend Study (NHATS) from 2011-2020 in adults ≥ 65 years. We used components of Fried's Frailty phenotype (weakness, slow gait speed, low physical activity, exhaustion, and weight loss) to define robust, pre-frail, and frail groups. Five 12 item short form survey (SF-12) subscales (depression, anxiety, overall health, pain, and functional limitations) represented health-related quality of life (HRQoL). We used logistic regression to evaluate each of the HRQoL measures as response variables and frailty as our primary predictor (referent=robust). Models were adjusted for demographics (e.g. age, sex, education, race) and baseline smoking status of participants.

Results: We included 8,628 observations (median age cohort between 75-80, 55.8% female, 30.5% White, 19.3% Black, 5.8% Hispanic, 2.9% Other). Baseline rates of robust, pre-frail, and frailty were 41.6%, 48.5%, and 9.9% respectively. We found that at follow-up, having frailty at baseline was strongly associated with depression (OR 5.94 [95%CI: 5.89, 5.99]), anxiety (OR 6.65 [6.57, 6.73]), functional limitations (OR 178.96 [178.80, 179.13]), pain (OR 3.78 [3.75, 3.82]), and health (OR 29.48 [29.41, 29.56]). Pre-frail had higher odds of depression (OR 2.67 [2.62, 2.73]), anxiety (2.58 [2.49, 2.67]), functional limitations (7.16 [6.98, 7.33]), pain (2.17 [2.14, 2.20]) and health (5.78 [5.74, 5.82]) than robust; however, estimates were lower than that in persons with frailty. There was a stronger impact across five HRQoL measures for people with frailty at baseline than those who were identified as robust and pre-frail.

Conclusion: Baseline frailty was strongly associated with negative HRQoL measures in a sample of community-dwelling adults.

D78 Student Presentation
Association of socioeconomic status with age in patients hospitalized with osteoarthritis of the knee
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Introduction: Osteoarthritis of the knee (OAK) is a common condition with an increased risk with advanced age. Our objective was to investigate the association between socioeconomic status (SES) and age in patients hospitalized with OAK.

Methods: The 2016 to 2020 National Inpatient Sample database was used to identify hospitalized adult patients with International Classification of Diseases, Clinical Modification (ICD-10-CM) codes for a primary or secondary diagnosis of osteoarthritis of the knee. Demographic information including age, insurance status, and median household income quartiles (MHIQ) per patient's zip code was extracted. Patients were stratified into three age groups: 25 to 44, 45 to 64, and older than 65 years of age. Primary outcomes of interest were the age and SES of patients. A chi-square test was used to compare differences between categorical variables.

Results: 4,001,195 hospitalizations were included in our study after weighing the cases that met our inclusion criteria. Among patients between 25 and 44 years of age, 22,210 (33.7%) lived in the lowest MHIQ zip codes, as opposed to 10,464 (15.9%) who lived in higher ones ($p<0.001$). Among patients older than 65 years of age, 571,675 (22.5%) resided in the lowest MHIQ zip codes compared to 639,385 (25.1%) who lived in the higher-income zip codes ($p<0.001$). Among those without medicare, Medicaid was the source of insurance for 29.5% of those between the ages 25 to 44 compared to 12.6% of those ages 55 to 64 ($p<0.001$). Private insurance was used by 45.9% of those between the ages of 25 to 44 compared to 64.0% of those between the ages of 55 and 64 ($p<0.001$).

Conclusions: OAK of younger patients is more common among those living in the lowest MHIQ. Further, those insured by Medicaid were hospitalized with a diagnosis of OAK at a younger age while those insured by private insurance were admitted at a later age. Our findings suggest that those of lower SES have an earlier onset of debilitating OAK leading to hospitalization at a younger age. The difference in the hospitalization age among patients of different SES warrants additional research to examine the role of various risk factors in leading to earlier onsets of aging pathologies.

D79 Student Presentation, Encore Presentation
The Impact of Playing Adapted Mahjongg on Cognitive Function in Older Adults
A. Greene,[1] A. Rasheed.[1,2] *1. The University of Arizona College of Medicine Phoenix, Phoenix, AZ; 2. Banner University Medical Center Phoenix, Phoenix, AZ.*

Background: In the United States an estimated 6.5 million individuals aged 65 and older are living with Alzheimer's in 2022 with 73% of individuals being aged 75 or older. Mahjongg is a strategic tile-game played mostly by older women, and in the United States almost 67% of those who are living with Alzheimer's are women. Recent studies have shown that mental-focused activities and hobbies can have positive impacts on cognitive function in older adults and lower the risk of dementia. This study is the first of its the kind, to our knowledge, conducted in the adapted version in the mahjongg community in America. We hypothesize that older adults that often engage in mahjongg will have a lower incidence of cognitive impairment utilizing the AD8 screening when compared to adults of a similar age group. **Methods:** All participants at the Destination Mahjongg tournament in Scottsdale, Arizona in April 22 were invited to participate in the AD8 dementia screening and survey questions. We surveyed 76 individuals (97% female, median age= 71) that play the adapted version of Mahjongg. A Pearson correlation coefficient was computed to assess the linear relationship individually between AD8 dementia screening scores and age of player, frequency of gameplay, and years of gameplay. Averages were computed across all other variables. **Results:** Out of 76 players surveyed, 97.0% were female with a mean age of 69 (range: 48-85 years of age). 81.5% of players identified as Caucasian and 75.0% of players had at least a college degree. 35.5% of players identified a family history of dementia. On average, players reported 21 years of experience playing mahjongg and 10.65 hours per week of gameplay. There were no significant correlations between AD8 screening and age (r= [-0.02], p = [0.05]), years of gameplay (r= [0.065], p = [0.05]), and frequency of gameplay per week (r= [-0.038], p = [0.05]). The incidence of MCI based on the AD8 dementia screening in all participants was 6.6% (mean=0.4, SD=0.89). **Conclusions:** The incidence of MCI in ages 65-69 is 8.4% and in ages 70-74 is 10.1% nationally. Reported incidence of MCI for mahjongg cohort at 6.6% is lower than both reported averages. These results support that, similarly to other strategic and social games, there is a significant promise of mahjongg being a protective factor regarding cognitive decline.

D80 Student Presentation

Antibiotic Resistance Profiles of Methicillin-Resistant *Staphylococcus aureus* (MRSA) Isolates Recovered in Post-acute Care Screening of Patients and Environmental Surfaces

M. Harris, K. Gibson, M. Cassone. *University of Michigan Michigan Medicine, Ann Arbor, MI.*

Background: MRSA is responsible for approximately 20,000 deaths per year in the US, and highly prevalent in post-acute care facilities. Targeted and empiric treatment is often challenging due to multi-drug resistance.

Objectives: Compare prevalence and antimicrobial susceptibility profiles of MRSA in two VA post-acute care facilities (Community Living Centers, CLCs) in Michigan and Ohio, investigate their correlation with recent antibiotic therapy, and differences between environmental and patient isolates.

Methods: Prospective cohort study of 240 MRSA strains isolated from patients (nares, groin, hands), their rooms (seven high-touch surfaces), and during interactions in procedure rooms in VA CLCs in Ann Arbor, MI & Cleveland, OH. Susceptibility to vancomycin, ciprofloxacin, gentamicin, co-trimoxazole, tetracycline, erythromycin, and linezolid was assessed by disc diffusion / minimal inhibitory concentration (MIC).

Results: Resistance rates were high for ciprofloxacin (87%) and erythromycin (91%) Rates were higher in the Ohio facility for ciprofloxacin (p<0.001), gentamycin (p,0.001) and co-trimoxazole (p=0.003). Vancomycin MIC values were close to the intermediate range for 90% of strains (1-2 µg/mL). Patient and environmental isolates showed similar resistance rates. Resistance profiles changed for 9 strains over time in patients receiving antibiotics.

Conclusions: Environmental strains are closely related to patient strains and a potential target for facility-wide screening to inform therapeutic choices. Vancomycin resistance rates should be monitored as MICs close to the intermediate range may lead to treatment failures.

MRSA strains antibiotic resistance rates, Ann Arbor MI and Cleveland, OH VA Community living centers.

	% (N) of resistant strains						
	Patient strains		Environmental strains		Total		
	Ann Arbor N-52	Cleveland N=31	Ann Arbor N=86	Cleveland N=71	Ann Arbor N=138	Cleveland N=102	p
Linezolid	0% (0)	0% (0)	0% (0)	2% (2)	0% (0)	2% (2)	NS
TMP/SXT	4% (2)	35% (11)	2% (2)	37% (26)	3% (4)	13% (13)	0.003
Gentamicin	0% (0%)	23% (7)	7% (6)	28% (20)	4% (6)	26% (27)	<0.001
Tetracycline	10% (5)	6% (2)	5% (4)	15% (11)	6% (9)	13% (13)	NS
Ciprofloxacin	83% (43)	97% (30)	78% (67)	96% (68)	80% (110)	96% (98)	<0.001
Erythromycin	90% (47)	93% (29)	88% (76)	93% (66)	89% (123)	93% (95)	NS

TMP/SXT: Trimethoprim/sulphametoxazole

D81 Student Presentation

Demographical Differences in the Prevalence of Dry Eye and Its association with Psychiatric Comorbidity in the Geriatric Population.

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Background: To examine the impact of various patient demographic and geographical differences on the diagnosis of dry eye, as well as to elucidate the association between dry eye with depression and anxiety in the geriatric population.

Methods: Using a 5% random sample of Medicare beneficiaries from 2011, 1,321,000 patients residing within the lower 48 states were identified. Clinically significant dry eye patients were classified as patients having 2 or more claims of dry eye in the calendar year. Patients with a depression or an anxiety disorder diagnosis were likewise identified. Demographic information include age, gender, race/ethnicity, state, county code, and median income were collected. Logistic regression models were used to estimate associational odds ratios between dry eye and each of anxiety and depression with demographical covariates included.

Results: A total of 21,059 patients with dry eye were identified. Women were 2.01 times more likely to be diagnosed with dry eye compared to men (p<0.01). Compared to white patients, patients of asian (OR 1.87, p<0.01) or native american race (OR 1.53, p<0.01) had higher odds of being diagnosed with dry eye. Black patients were less likely to be diagnosed with dry eye (OR 0.81, p<0.01). Compared to patients residing in the Northeast, patients residing in the West were more likely to have dry eye (OR 1.48, p<0.01), while patients residing in the Northwest were less likely to have dry eye (OR 0.58, p<0.01). Having depression and anxiety together was associated with higher odds of dry eye diagnosis (OR 2.38, p<0.01) compared to having depression (OR 1.94, p<0.01) or anxiety (OR 2.22, p<0.01) alone. Having depression alone, anxiety alone, or both depression and anxiety were most highly associated with dry eye in patients aged 65-74 (OR 2.47, 2.28, 2.64, p<0.01) and least highly associated in patients aged 85+ (OR 2.08, 1.56, 1.98, p<0.01).

Conclusion: Our findings demonstrate that the prevalence of dry eye diagnosis varies by race, gender, and geography. There is also a significant association between dry eye and each of depression and anxiety in the elderly population, with a decreasing trend in the association with increasing age. Additional longitudinal studies evaluating dry eye association with psychiatric comorbidity are warranted.

D82 Resident Presentation

The Role of MR Assessments of Cardiac Morphology, Function, and Tissue Characteristics on Exercise Capacity in Well-Functioning Older Adults

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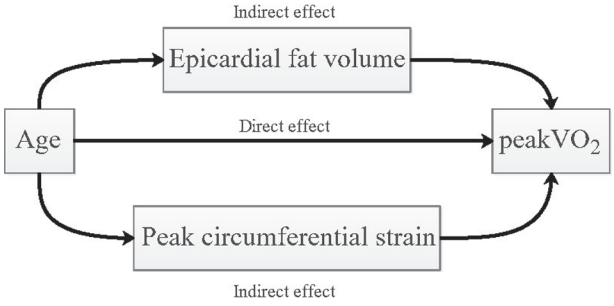
Background: The relationship between resting cardiac indices and exercise capacity in older adults was still not well understood. New developments in cardiac magnetic resonance imaging (MRI) enable a much fuller assessment of cardiac characteristics. To assess the association between exercise capacity and specific aspects of resting cardiac structure, function, and tissue.

Methods: All participants underwent 3.0 T MRI. Blood samples were assayed for lipid and glucose related biomarkers. All participants performed a symptom-limited cardiopulmonary exercise test to achieve peakVO2. Demographic, geriatric characteristics and MR measurements were compared among quartiles of peakVO2, with different methods according to the data type. Spearman's partial correlation and least absolute shrinkage selection operator regression were performed to select significant MR features associated with peakVO2. Mediation effect analysis was conducted to test any indirect connection between age and peakVO2. A two-sided P value of <0.05 was defined statistical significance.

Results: Epicardial fat volume, left atrial volume indexed to height, right ventricular end-systolic volume indexed to body surface area and global circumferential strain (GCS) were correlated with peakVO2 (regression coefficients were -0.040, -0.093, 0.127, and 0.408, respectively). Mediation analysis showed that the total effect of peakVO2 change was 43.6% from the change of age. The proportion of indirect effect from epicardial fat volume and GCS were 11.8% and 15.1% in total effect, respectively.

Conclusion: PeakVO2 was associated with epicardial fat volume, left atrial volume, right ventricular volume and GCS of left ventricle.



D83 Student Presentation

Sexual health and satisfaction among people aging with and without HIV

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Background: Given the growing population of older persons living with HIV (PLWH), greater attention needs to be on what it means for this group to age successfully. This study focuses on an important and under-investigated aspect of successful aging and evaluates differences in sexual health and relationship satisfaction among people aging with and without HIV.

Methods: We used data from all waves of the Multi-Dimensional Successful Aging among HIV-Infected Adults study at the University of California, San Diego. This structured multi-cohort longitudinal study recruited PLWH and seronegative adults. Participants completed demographic, psychosocial, and clinical questionnaires. At each time point, participants who reported having a sexual partner also completed the QSLQ, a 7-item ($\alpha = .81$) self-report survey covering 1) relationship problems, 2) discussing sex, 3) frequency of sex, 4) satisfaction, 5) desire, 6) rejection and 7) dysfunction. Questions were each rated on a 5-point Likert scale. We performed cross-sectional analyses on baseline data to describe the sample and examine differences between PLWH and seronegative participants and between partnered and unpartnered individuals. We conducted growth curve modeling on participants with complete data on the QSLQ.

Results: Baseline participants included 138 PLWH and 98 seronegative adults (for overall cohort M_{age}=51, SD=8.1; 72.5% Male; 41.5% partnered). Among PLWH, mean duration of HIV disease was 15.05 years (SD=9.7); 52.9% had AIDS. PLWH were less likely to be partnered (38.1% vs. 95.3%, p<.001). Our growth curve model showed that PLWH had significantly lower sexual satisfaction (β = -2.39, t(138) = -14.41, p = <.001); the average yearly decrease in satisfaction for PLWH was small but significantly different from seronegative participants (β = -.043, t(138) = -2.95, p = .004). All participants had a small decrease in satisfaction for every year of age (β=-0.17, t(139) = -3.53, p<.001). When controlling for physical and mental well-being and chronic conditions, HIV remained the strongest predictor of satisfaction among this aging sample.

Conclusion: Sexual health and relationship satisfaction are important across the adult life span and may represent additional metrics to assess healthy aging. Clinical conversations should engage in dialogue about sexual health and fulfillment among older adults, especially those living with HIV.

D84 Student Presentation

Anxiety & Driving Behaviors in Older Adults: A LongROAD Project

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The effects of general anxiety on driving behaviors in older adults have not been thoroughly studied. Evidence suggests that anxiety may lead to premature driving cessation, which has been shown to be associated with poorer health outcomes. This study seeks to better elucidate the relationship between anxiety, anxiolytics, measures of driving safety, and driving cessation in older adults. This study is based on the LongROAD study of older drivers, which included adults 65-79 years old at baseline and followed for five years, in five cities across the United States. Individuals were categorized with having active anxiety based on a score > 55 on the Patient-Reported Outcomes Measurement Information System (PROMIS) Anxiety at baseline. GPS data, crash records, driving cessation questionnaires, and anxiolytic prescriptions—including barbiturates, benzodiazepines, sedatives, and hypnotics—were collected. Overall, there was a significantly higher chance of driving reduction in a given year for individuals with active anxiety that are not on anxiolytics compared to the control group of no anxiety and no anxiolytic use (95% CI: 1.1-2.2), even after controlling for possible confounders such as race, gender, and education. Meanwhile, individuals without active anxiety taking anxiolytics have a higher risk of crashing (95% CI: 1.1-2.3) compared to the same control group while still accounting for confounders. In terms of general driving behaviors, there was no significant difference in driving behaviors (speeding, hard braking, or night driving) in those with anxiety compared to those without. These results reinforce the need for physicians to review the presence of anxiety and anxiolytic prescriptions and driving risks with their older patients.

D85 Student Presentation

Obesity and the Risk of Incident Nursing Home Placement in Older Adults

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Background: The prevalence of obesity in older adults has been increasing. Though body mass index (BMI) is often used as a measure of obesity, waist circumference (WC) or a combination of both may be a better reflection of obesity in older adults. While many factors contribute to nursing home placement (NHP), the relationship between obesity and NHP has demonstrated inconsistent results. This study aims to understand the relationship between BMI, WC, and incident NHP.

Methods: This analysis is based on a longitudinal cohort study using data from the National Health and Aging Trends Study. Obesity was defined as BMI $\geq$ 30 kg/m^2, WC $\geq$ 88 cm in women, or WC $\geq$ 102 cm in men. NHP was determined based on changes to residence throughout study rounds. Those without BMI/WC data available and those living in nursing homes or residential care facilities at the start of study participation were excluded. Separate proportional hazards models evaluated the risk of NHP using BMI and WC as primary predictors, after adjusting for demographics and comorbidities.

Results: The resultant cohorts were n=11,111 with BMI, and n=10,374 with WC data available. Rates of NHP were 25.71% in the entire study cohort, and in the proportion classified as having obesity was 17.04% using BMI, and 23.48% using WC. Using BMI, adjusted risk of NHP was HR 1.31 (0.95-1.79) for underweight subjects, HR 0.74 (0.65-0.85) for overweight subjects, HR 0.71 (0.59-0.85) for those with class 1 obesity, HR 0.58 (0.42-0.80) for those with class

2 obesity, and 0.69 (0.44-1.08) for those with class 3 obesity. With elevated WC, NHP risk was HR 0.98 (0.86-1.12).

Conclusions: In this analysis being overweight or having class 1 or class 2 obesity by BMI was protective against incident NHP. This may have been seen because more participants in these groups were younger at the start of the study, therefore at lower risk of NHP at baseline. In addition, BMI alone may not be the best predictor of NHP due to age related physical and physiologic changes. Further study is needed to elucidate the underlying reasons why higher BMI was protective against NHP to inform future interventions and conversations with older adult patients regarding health promotion behaviors.

D86 Student Presentation

Physical and Mental Health Correlates of Cannabis Use among Middle-Aged and Older Adults: Findings from NESARC-III

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Background: As cannabis use is increasing faster among both middle-aged and older adults compared to younger adults, the health correlates comparing middle-aged and older adults need further exploration.

Methods: We examined data from a US representative sample of middle-aged (50-64 years, N=8,932) and older (65+ years, N=5,806) adults from the 2012-13 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC-III). We conducted logistic regression analyses to test associations of cannabis use with past-year physical and mental health correlates and examined differences between the two age groups.

Results: An estimated 5.6% of middle-aged and 1.3% of older adults used cannabis in the past year. Compared to middle-aged adults, older adults had higher rates of cannabis use for medical purposes (15.8% vs. 12.3%, p=0.033). Physical health correlates for use include digestive disease (Odds Ratio [OR]=1.96, 95% Confidence Interval [CI] 1.56-2.48), musculoskeletal disease (OR=1.34, 95% CI 1.06-1.69), nerve pain (OR=1.77, 95% CI 1.36-2.29), and having ≥3 health problems (OR=1.57, 95% CI 1.22-2.02) among middle-aged adults; but only digestive disease (OR=2.91, 95% CI 1.64-5.16) among older adults. Mental health correlates for use among both middle-aged and older adults include Alcohol Use Disorder (OR=5.67, 95% CI 4.51-7.13 and OR=5.99, 95% CI 2.55-14.09, respectively), Tobacco Use Disorder (OR=4.56, 95% CI 3.71-5.61 and OR=3.61, 95% CI 1.98-6.55), any mood disorder (OR=2.18, 95% CI 1.68-2.82 and OR= 2.98, 95% CI 1.62-5.49), and any personality disorder (OR=3.81, 95% CI 3.09-4.70 and OR=3.57, 95% CI 2.02-6.31); and any anxiety disorder (OR=2.10, 95% CI 1.64-2.71) only among middle-aged adults.

Conclusion: Findings indicate differences in cannabis use correlates between middle-aged and older adults, with a wider array of physical and mental health problems associated with use in middle-aged adults. Understanding these correlates among more recent cohorts will assist in monitoring cannabis use among the older adult population.

D87 Student Presentation

Depressive Symptoms in Older Mexican Americans and the role of disability care.

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Background: Caregiving and caregiving intensity is associated with increased depressive symptoms among caregivers. Nonetheless, more research is needed to examine the relationship between caregiving intensity and depressive symptoms among care recipients.

Methods: Using data from the seventh wave of the Hispanic Established Populations for the Epidemiologic Study of the Elderly (H-EPESE)(n=550), we assessed the association between depressive symptoms in care recipients and the source of care for ADL disability in Older Mexican Americans age 75+. Depressive symptoms were measured using the Center for Epidemiological Studies Depression (CESD) scale. Caregivers were asked to name all sources of ADL care for care recipients, including the caregiver, the care recipient, another family, and other non-family. We used regression models controlling for the care recipient and caregiver characteristics, as well as the care recipient's health.

Results: The average CESD score of care recipients was 11.12. Care recipients' mean age was 87 years old, 68% were women, and 52% were born in the U.S. Caregiver reported sources of care included the care recipient (73%), the caregiver (32%), another family (13%) and other non-family(21%). Care recipients who provided care for themselves had significantly fewer depressive symptoms (-3.16), while those who reported non-family as sources of care had significantly higher depressive symptoms (3.33), even when controlling for the level of disability. Depressive symptoms were higher for females than males and among those that had fewer than seven years of education.

Conclusion: The source and amount of attention the care recipients receive are crucial in determining the risk of developing depressive symptoms.

D88 Student Presentation

The Impact of Psychiatric Comorbidities on Outcomes in Palliative and End-of-Life Care: A Systematic Review

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Background: Although psychiatric comorbidities are common among individuals at end-of-life, their impact on outcomes is poorly understood.

Methods: We conducted a systematic literature review following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and aimed at assessing the relationship between psychiatric comorbidities and healthcare utilization as well as clinical outcomes in people at end-of-life. Six databases (Ovid MEDLINE, Ovid Embase, Cochrane Library, AgeLine, CINAHL and PsycINFO) were searched using targeted keywords. This review is registered on PROSPERO (CRD42022335922).

Results: Our search generated 7,472 unique records. Following title and abstract screening, 88 full texts were reviewed for eligibility and 43 studies were included in the review. Data showed increased utilization of palliative care by people with psychiatric comorbidities. Patterns of acute care utilization and use of high-intensity or burdensome care (i.e., surgery, invasive diagnostic procedures, and chemotherapy) varied based on the specific type of psychiatric comorbidity. Anxiety and depression were consistently associated with increased physical symptom burden, decreased quality-of-life, and decreased function. Quality of evidence was limited by lack of consistent approach to confounding variables as well as heterogeneity of the included studies.

Conclusion: Our findings suggest that psychiatric comorbidity is associated with significant differences in care utilization and clinical outcome among patients at end-of-life. Increased utilization of palliative care is consistent with data showing that psychiatric comorbidity predicts referral to palliative care among individuals with serious illness and that psychosocial concerns are among the most frequent concerns raised by patients to palliative care clinicians. Patients with depression and anxiety experienced more severe symptoms and lower quality of life than controls. These data suggest that greater integration of mental health and palliative care services may enhance quality-of-life among patients at end-of-life.

D89 Resident Presentation

Rheumatoid Arthritis Prevalence in an Ethnically Diverse Population of Older U.S. Women

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Background: The epidemiology of rheumatoid arthritis (RA) in the U.S. has been primarily described among White adults and to a lesser extent among Black and Hispanic adults. Black adults have a higher risk of RA compared to non-Hispanic White (NHW) adults, but little is known about RA prevalence among US Asian and Pacific Islander (PI) adults. We examined racial and ethnic differences in the prevalence of RA in a community-based population of older women.

Methods: This retrospective population-based study included women aged 65-85 in 2019 who were members of a Northern California healthcare system during 2017-2019. Race/ethnicity was determined from self-reported data, including Asian/PI subgroup if available. RA was identified based on ICD-coded clinical diagnosis at KPNC rheumatology clinic encounters during 2017-2019. Log-binomial regression was used to estimate prevalence ratios (PR) by race and ethnicity with 95% confidence intervals (CI), adjusted for age.

Results: Among 303,340 older women (mean age 73±6 years) 60.1% were NHW, 6.7% Black, 8.8% Hispanic, 16.0% Asian/PI, and 8.5% Other/unknown race and ethnicity. There were 4161 women with RA, with an overall RA prevalence of 1.4%. By race and ethnicity, the prevalence was 1.1% (NHW), 2.2% (Black), 2.2% (Hispanic), and 1.2% (Asian/PI), but ranged from 1.0% (Filipina), 1.1% (Chinese), 1.1% (Vietnamese and other Southeast Asian),1.8% (Korean), 1.9% (Japanese), 2.5% (Native Hawaiian/PI, NHPI), and 2.8% (South Asian). The corresponding PRs with NHW as reference were Black 1.9 (CI 1.8-2.2), Hispanic 1.9 (CI 1.7-2.1), Filipina 0.9 (0.7-1.0), Chinese 1.0 (0.8-1.2), Southeast Asian 1.0 (0.7-1.4), Japanese 1.6 (1.3-2.1), Korean 1.6 (1.1-2.3), NHPI 2.2 (1.5-3.2) and South Asian 2.5 (2.0-3.2).

Conclusions: Compared to NHW women, RA prevalence was 1.9-fold higher for Black and Hispanic women but similar for Asian/PI women. However, disaggregated findings among Asian/PI subgroups showed 1.6-fold higher prevalence among Japanese and Korean women and >2-fold higher prevalence among South Asian and NHPI women compared to NHW women. Future studies should examine whether characteristics of RA differ among these Asian/PI subgroups.

D90 Student Presentation

The Association between Coffee and Physical Performance, Muscle Mass in Older Men

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Background: Recent in vitro and in vivo studies indicate coffee is associated with factors related to sarcopenia. Our study aimed to assess the association of coffee with physical function and muscle mass, as well as replicate findings of previous studies with a different population, variables, and covariates.

Methods: MrOS is a prospective multicenter cohort study that was first established in 2000. This analysis used a subset of the dataset from Visit 4 (Year 14), with participants who had D3Cr muscle mass data obtained from deuterated creatine dilution and self-reported coffee consumption. Self-reported coffee consumption was obtained from the Block food frequency questionnaire (FFQ). Physical function was assessed with the following five measurements: grip strength, 400 M walking speed, chair stand, force plate (jumping mechanography), and short physical performance battery (SPPB). Self-reported coffee intake was categorized into five groups: never, decaf (any amount), ≤ 1 cup/week, >1 cup/week to ≤ 1 cup/day, >1 to ≤ 2 cups/day, and >2 cups/day. The covariates considered in the study are age, height, weight, BMI, % body fat by DXA, total calories, site, and by self report: race/ethnicity, college education, marital status, tobacco and alcohol use, depressive symptoms, anxiety symptoms, subjective social status, weight loss, and sleep quality.

Results: When comparing D3Cr muscle mass across categories of coffee consumption, the decaf group had higher muscle mass than no cups, >2 cups/day had higher muscle mass than no cups, and decaf had higher muscle mass than >1 to 2 cups/day (unadjusted ANOVA P = 0.001). No significant differences were observed for coffee consumption for all five physical performance outcomes.

Conclusion: Significantly higher muscle mass in the decaf and >2 cups/day could be due to phytochemicals or components other than caffeine that impact muscle; however, these results did not translate to differences in physical performance. Future studies should confirm our findings in other populations (different racial subgroups, women, and younger people) and enhance our understanding of coffee by studying isolated components.

D91 Student Presentation

The Effect of Smoking, Drinking, and Sleeping behavior on the Cognitive Function of U.S. Older Adult

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Background

Studies show that poor health behaviors such as smoking, drinking, and sleeping problems are associated with cognitive impairment in older adults. Unhealthy behaviors often co-occur, and no studies have examined the combined effect of unhealthy behaviors on cognitive function. This study aims to identify prevalent combinations of multiple health behaviors and to examine their associations with cognitive function among older U.S. adults.

Methods

This cross-sectional study used the 2018's Health and Retirement Study (HRS) data, including 7,321 respondents aged 65 and older. Cognitive function scores were assessed with the Telephone Interview of Cognitive Status-Modified (TICS-M; range 0–35). Health behaviors included self-reported smoking, drinking, and sleeping problems, and were categorized as current, former or never. Health behavior combinations with frequency ≥ 2% were also assessed (n = 6,658). Linear regression was used to examine the association between each health behavior or different health behavior combinations and individual's cognitive function.

Results

7.81% of older adults were current smokers, 33.75% were current drinkers, and 14.67% currently had sleeping problems. The three most common combinations were never smoked, drank, or had sleeping problems (22.36%); never smoked or had sleeping problems but former drinkers (15.22%); and current smokers, former drinkers, and never had sleeping problems (15.15%). Current smokers had significantly lower cognitive function compared to never-smokers (b = -0.91, 95% confidence interval (CI): -1.32, -0.51). Compared to never-drinks, the current and former drinkers had significantly higher cognitive function (b = 0.79, 95% CI: 0.55, 1.03 and b = .51, 95% CI: 0.21, 0.80, respectively). Respondents who were current smokers but never drank or had sleeping issues had lower cognitive function than those who never smoked, drank, or had sleeping problems (b = -0.93, 95% CI: -1.56, -0.30).

Conclusions

Our findings showed that smoking is associated with lower cognitive function, while drinking is associated with higher cognitive function. Although previous studies have shown that sleep issue negatively affects cognitive function, our results found no significant relationship between sleep and cognitive function. Among types of health combinations, current smoking matters the most for cognitive function.

D92 Student Presentation, Encore Presentation
Impact of Social Vulnerability on Alcoholic Cardiomyopathy Mortality in the United States from 1999-2020

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Background. Alcoholic cardiomyopathy (ACM) is a leading cause of heart failure associated with significant morbidity and mortality. As racial and social disparities exist in cardiovascular disease (CVD) outcomes, we evaluated CVD related mortality trends in individuals with ACM and the impact of the social vulnerability index (SVI).

Methods. We utilized CDC Wide-Ranging Online Data for Epidemiologic Research (W.O.N.D.E.R) database to obtain mortality data from 1999 to 2020. CVD (I00-I78) was the underlying cause of death with ACM (I42.6) as the multiple cause of death. SVI for all U.S. counties were abstracted from CDC Agency for Toxic Substances and Disease Registry (ATSDR) database between 2014-2018. Percentile rankings were calculated for overall SVI with higher values indicative of greater social vulnerability (SV) and aggregated into four quartiles (SVI-1, least SV; SVI-4, most SV). Analysis included age-adjusted mortality rates per 100,000 population (AAMR) and 95% confidence intervals. Impact of social vulnerability was estimated by comparing AAMR within SVI-4 and SVI-1.

Results. We identified a total of 3,412 deaths from 1999 to 2020. AAMR remained consistent from 0.43 in 1999 to 0.39 in 2020 with SVI not having an impact on total mortality. Significant differences in AAMRs were observed among adults ≥65 years old (0.34) compared to adults <65 years old (0.11); males (0.68) compared to females (0.10); and non-Hispanics (0.39) compared to Hispanics (0.25) [$p<0.05$]. Increasing SVI was associated with higher AAMR in males (0.62 and 0.74 [$p<0.05$]). Black adults (0.58) had the highest AAMR, followed by White (0.34), American Indian/Alaska Native (0.72), and Asian/Pacific Islander adults (0.10) [$p<0.05$]. No significant impact was observed with higher SVI among racial subgroups. AAMR was higher in non-metropolitan regions (0.39) and Western regions (0.53) compared to metropolitan regions (0.34) and other US regions, respectively [$p<0.05$]. Increasing SVI was associated with higher AAMR in the Midwest (0.28 and 0.43) and South (0.19 and 0.30) [$p<0.05$] but not in Northeastern and Western regions.

Conclusions. Our results highlight the disparities in ACM related mortality, impact of SVI on trends, and importance of more robust ACM education, targeted prevention, and intervention, especially in older adults with complex comorbid conditions.

D93 Student Presentation
Benzodiazepines and Falls Injuries: Indications, Duration, and Complications

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Background: Falls-risk increasing drugs (FRIDs) are those that act on the central nervous system, such as benzodiazepines. Despite the association of BZD use with falls in older adults, these drugs are often inappropriately prescribed in this age group. There has been limited understanding of the injuries that result from medication-related falls that co-occur with BZD use in older adults.

Methods: This study was a retrospective chart review. The target sample was adults 65 and older with chronic use of BZDs, defined as 4 or more prescriptions in the last year or greater than one prescription in the last 180 days, and an ICD-10 code for either a fall or fracture in 2020-2021 (n=89). Data collected included demographic information, falls injuries and their contributing factors, and co-prescribed medications to identify CNS polypharmacy (≥2 CNS active drugs). Information from chart review was stored in Research Electronic Data Capture (RedCap) database. We conducted descriptive analyses by tabulating frequencies and percentages for patient characteristics overall and stratified by treatment indication. We also evaluated the occurrence of negative health events based on whether patients had CNS polypharmacy in addition to BZD use.

Results: Among 89 patients, 81% were female and 72% were younger than 80. Most patients had been taking BZDs for 1-5 years (72%) at the time of fall or fracture, with 27% more than 5 years. Older age groups had > frequency of prescribing for insomnia than for anxiety (age 70-79: 48% vs. 46%; age 80-89: 32% vs. 21%). Among BZDs prescribed, alprazolam was most common (48%), then clonazepam (25%), lorazepam (20%), and diazepam (7%). Almost half of the cohort went to the ED post-fall, and almost half of those were admitted. Older adults who took BZDs and other CNS-activating drugs had > prevalence of negative health events, such as ED visits, hospitalization, physical therapy visits, and office visits.

Conclusion: Negative health events may result from long-term BZD use in older adults. Efforts are needed to reduce long-term BZD prescribing. Our study provides insight into how prescribers can best meet the needs of patients who are long-term users of BZDs.

D94 Student Presentation
When Worlds Collide: A Geriatric & Psychiatric View of Undocumented Immigrants with Dementia

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Background: The growing population of undocumented immigrants in the United States who present with psychiatric symptoms poses a unique challenge to the healthcare system. For geriatric and psychiatric physicians that manage the acute care of these patients, the greatest challenge lies not only in the therapeutic plan, but in the safe discharge plan as well. Limited history, poor social support, behavior disturbances, and potential legal history are all factors that complicate the citizenship and aid application processes necessary for safe discharge. The primary objective of this study is to bring attention to potential challenges faced when managing aging undocumented adults with mental health issues.

Methods: The case of a 79-year-old Syrian undocumented immigrant with Progressive Supranuclear Palsy (PSP) and dementia was examined through in-person interview, medical records review, and discussions with his medical providers, social work team, and legal guardian.

Results: Through a thorough review of the patient's case, three major challenges were identified. Care challenges included unreliable history, behavioral problems, lack of social and financial support, and previous interactions with the U.S. legal system in the form of nonviolent crimes. He was not accepted into any post-acute care nursing facility due to increased behavioral problems secondary to dementia. Due to his legal issues, his citizen application could not be processed, and he subsequently could not apply for Medicaid coverage to provide financial support. He has continued to stay at a specialized acute care geriatric psychiatry unit for over six months due to a lack of any safe discharge options.

Conclusion: The challenges identified and discussed in this case can be broadly applied to all cases of post-acute care discharge planning in the undocumented immigrant population. The geriatric and psychiatric physicians on their healthcare team must advocate passionately on the patient's behalf to administrators responsible for making the financial decisions in these cases. We recommend using open communication between all members of the care team (medical, social work, guardian) so all reasonable means to decrease time within the healthcare system and reduce suffering for the patient are explored efficiently.

D95 Student Presentation

The Influences of Faith on Illness Representations and Coping Procedures of Mental and Cognitive Health Among Aging Arab Refugees: A Qualitative Study

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Introduction: Refugees experience higher rates of mental illness, isolation, and trauma which are documented risk factors for dementia. Faith and spiritual practices play a major role in patients' understanding and coping with illness as well as enhancing resilience. This study examines and compares the role of faith on perceived mental and cognitive health among aging Arab refugees resettled in Arab and Western countries.

Materials and Methods: A total of 61 Arab refugees were recruited through ethnic community-based organizations in San Diego, CA, US (N=29) and Amman, Jordan (N=32); two major refugee resettlement hubs globally. Participants were interviewed using 10 in-depth, semi-structured interviews and 8 focus groups. Data were coded using inductive thematic analysis.

Results: Participants were refugees from Syria (82.0%) and Iraq (14.8%), 55.7% female, with a mean age of 57.6 years. Faith significantly impacts illness perceptions and resilience regardless of resettlement country or gender. The following themes emerged: 1) The relationship between mental and cognitive health is interdependent. 2) There is a self-awareness of the impact of the refugee experience and trauma on participants' mental health problems, leading to a belief of increased personal risk for dementia. 3) Spiritual fatalism greatly informs perceptions of mental and cognitive health. 4) Participants acknowledge that practicing faith improves their mental and cognitive health. 5) Spiritual gratitude and trust are important coping procedures that build resilience among participants.

Conclusions: Faith and spirituality play an important role in shaping Arab refugees' illness perception, risk, and coping mechanisms for mental and cognitive health. Clinicians and public health professionals interacting with aging refugees must address their spiritual needs when designing prevention and coping interventions to preserve brain and mental wellbeing.

D96 Student Presentation

Patient Perspectives on Common Ethical Dilemmas in the Care of Unrepresented Adults

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Background: Unrepresented adults are those that lack decision-making capacity and a surrogate decision maker. Their care presents ethical challenges, especially when they refuse care. There is data on the provider experience in these circumstances. However, the patient perspective is lacking. We sought to add this through qualitative interviews with patients at risk of being unrepresented.

Methods: From two urban outpatient clinics for low-income adults, we recruited adults 50 and older and at risk of becoming unrepresented due to a low social network (Lubben score ≤ 12) and serious medical conditions predisposing to loss of capacity (deemed by their provider). We presented participants with non-emergency scenarios of an unrepresented patient with serious medical conditions and functional decline refusing recommended care. This presented ethical dilemmas between respecting the patient's autonomy and prioritizing their safety. We used a semi-structured interview guide to elicit their perspectives on the scenarios. We recorded, transcribed, and analyzed interviews using the constant comparative method.

Results: We interviewed 9 participants, age 54-83. They spoke English (2), Spanish (3), Chinese (4). Major themes from their interviews were: 1) Differing thresholds for prioritizing safety over autonomy, e.g. participants expressed different views about when it was acceptable to violate a patient's stated wishes. 2) Acknowledging limitations in understanding a patient's stated preferences, e.g. they grappled with the challenge of knowing a patient's "true" reasons for refusing care (e.g. due to lack of capacity, fear, etc.). 3) Appreciating situational complexity, e.g. that there was no "correct" answer. 4) Advocating for additional solutions, e.g. they gave creative solutions, such as searching for peers of the patient to help make decisions or providing the patient with more options.

Conclusion: By exploring the perspectives of people at risk of being unrepresented, we broadened the understanding of how patients may see common ethical dilemmas in the care of similar patients.

D97 Student Presentation

"I may die if I sit at home forever": Mediators of Social Isolation in Diverse Older Adults Living Alone with Cognitive Impairment at the Onset of the COVID-19 pandemic

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Background:

Older adults living alone with cognitive impairment (an estimated 4.3 million Americans) experienced severe isolation at the onset of the pandemic, putting them at higher risk of depression, falls, and premature mortality. We describe the lived experience and strategies to maintain social connectivity from the perspective of isolated older adults with cognitive impairment, with a focus on racially/ethnically minoritized groups and non-English speakers who have been greatly under-represented in pandemic research.

Methods:

59 ethnographic phone interviews of 24 participants were conducted from April to July 2020. Participants were older adults (range: 62-97) living alone with cognitive impairment (defined by prior diagnosis or MoCA < 24). 17 (71%) were women, 8 (33%) were Latino, 7 (29%) were Asian, 5 (21%) were African-American, and 13 (54%) were monolingual Spanish or Cantonese speakers. Drawing

from an ecological framework, interview transcripts were analyzed in Atlas.ti using a deductive content analysis approach to identify themes and codes.

Results:

Three factors were found to mitigate isolation at the onset of the pandemic. (1) Subsidized public home care aides commonly acted as participants' main companions. Yet, state financial support for home care aides often fell short of fully addressing participants' needs. (2) The use of translators and existing cultural institutions mitigated difficulty communicating across language and literacy barriers, thus allowing participants to maintain a sense of community and access to vital pandemic public health information. (3) Cultural norms of reciprocity, in which participants both received and provided support to their communities, helped alleviate isolation.

Conclusions:

The pandemic destabilized social support systems among diverse older adults living alone with cognitive impairment, including non-English speakers, and often left home care aides as their main, if not sole, social companions. To support socially isolated older adults in future public health emergencies, policymakers should address state funding gaps for home care aides and clinicians should work with existing, trusted cultural networks to ensure that monolingual older adults do not get left behind.

D98 Student Presentation

Utility of Participant Commentary to Evaluate a Virtual Educational Technology Program for Older Adults

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Background: Social isolation is a common geriatric issue. Technology can help older adults connect with others, yet older adults too often lack adequate technological ability. The HealthWise program (HWP) teaches digital skills to geriatric participants. We investigated whether qualitative participant feedback would support the value of an educational technology intervention for older adults in reducing social isolation.

Methods: The HWP involves two one-hour Zoom sessions between a coach and older adult (≥55 years) each week for about 12 weeks. Participants learn about Wi-Fi, telehealth, email, Zoom, and the Birdsong platform. Two authors administered a post-program REDCap telephone survey to participants between December 2021 and July 2022. We inquired about their experience in and whether they would recommend the HWP. Themes were identified from participant comments, and all comments were analyzed based on these themes.

Results: Of 38 respondents, 95% would recommend the HWP to others. 89% offered a positive piece of feedback: participants indicated that the program was helpful, useful, beneficial, valuable, or worthwhile (42%) and that the coach was good (34%). 16% of participants had a negative piece of feedback: some were unsatisfied with the program due to poor communication (5%) or technical obstacles (5%).

Conclusions: Commentary on older adults' experience in a virtual educational technology program was overwhelmingly positive, highlighting the value of qualitative data in supporting this type of intervention. Similar programs should be developed to promote older adults' ability to connect with others, and narrative feedback should be explored to more thoroughly evaluate the efficacy of such interventions.

Themes	N=38	%
Any positive piece of feedback	**34**	**89.5%**
Helpful/beneficial/useful/valuable/worthwhile	16	42.1%
Good coach	13	34.2%
Good/positive program	11	28.9%
Learned/grew as a person/more comfortable/improved ability/less intimidated	10	26.3%
Well-designed/good premise/thoughtful of older adults/flexible to their needs	9	23.7%
Informative/educational/liked material	8	21.1%
Enjoyed/satisfied with/appreciative of program	4	10.5%
Any negative piece of feedback	**6**	**15.8%**
Unsatisfied with program due to poor communication	2	5.3%
Unsatisfied with program due to technical obstacles	2	5.3%
Unsatisfied with how much they learned/feel uncomfortable	2	5.3%
Poor program	1	2.6%

D99 Student Presentation

Attitudes towards dementia and cognitive aging among refugees resettled in California: A qualitative study

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Background: There is mounting evidence linking forced migration to increased dementia risk. Despite unprecedented numbers of refugees aging in exile, there has been no formal study of dementia knowledge and experiences within this non-monolithic population. This study investigates refugee perspectives on dementia and their access to cognitive healthcare.

Methods: We conducted 6 focus groups (total N = 37) and 29 individual interviews with Arab, African, and Afghan refugees resettled in San Diego, the largest resettlement city in California. Data was transcribed, translated, and coded using inductive thematic analysis.

Results: Despite varying levels of knowledge across the different ethnic groups, we found commonalities in participants' general understanding of dementia. We organized our findings according to the social-ecological model of health.

Individual: Participants believed stress, traumatic experiences, and mental ill-health related to their migration history were linked to dementia. Interpersonal: Participants expressed fear of dementia due to concerns of burdening loved ones or lacking the social support system to be properly cared for. Community: Many relied on *virtual communities* (e.g. Facebook, YouTube) for information about dementia and expressed the *loss of local community* as a source of stress contributing to their risk of dementia. Institutions: Participants who lived in refugee camps before resettlement in San Diego had more positive experiences with US healthcare institutions than their counterparts who did not spend time in refugee camps; however, providers across the board did not address their cognitive health needs. Policy: Participants reported frustrations with immigration policies and geopolitical turmoil as general barriers to healthy physical and cognitive aging.

Conclusions: Given the heightened risk of dementia among refugees, lessons from this study can inform clinical and public health protocols to best support the cognitive aging needs of this population, needs that are common despite ethnic and racial diversity. It is critical to address their mental health and social support concerns, and train clinicians to screen for and discuss dementia and its risk factors with aging refugee patients.

D100 Student Presentation, Encore Presentation

A Qualitatitative Study of Integrative Medical Group Visits for Older Adults with Long COVID

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Older adults are a vulnerable population that has disproportionately experienced severe health, social, and financial impacts from the COVID-19 pandemic, including Long COVID symptoms. Integrative Medical Group Visits (IMGVs) have been shown to be a feasible and

accessible format to deliver integrative medicine approaches, including nutrition counseling and stress reduction. However, little research has investigated their utility for older adults. This study focuses on older adults' experiences of IMGV's on Long COVID, including potential barriers to participation, impacts on care, and their feelings about the future.

IMGV's for patients with Long COVID were conducted virtually between 2021-2022 at an outpatient rehabilitation clinic in the Southern United States. Participants were interviewed before and after the 8-week IMGV program about their experiences of both Long COVID and the intervention. Thematic content analysis was performed by 1 coder with 21 pre- and 18 post-intervention interviews, including 6 pre- and 6 post-interviews with adults over age 60, and verified by a senior researcher.

Similarities among younger and older adults included uncertainty surrounding their condition, seeking support from fellow patients in social media groups, and mixed feelings about the future. Many also desired to learn about both holistic approaches and emerging research on Long COVID. Themes specific to older adults included aging-related health implications (such as fall risk and cognitive symptoms), retirement concerns, prevalence of comorbidities, and diagnostic challenges. Both groups largely found the Zoom platform to be more convenient, especially because many of their symptoms interfered with their ability to travel to the site.

Our findings suggest that virtual delivery of IMGVs may be a feasible strategy to address symptoms and provide a social support network for both younger and older adults with Long COVID. As research evolves, special attention needs to be given to concerns expressed by older adults, such as clarity on the role of aging in this disease process and socioeconomic issues, including (early) retirement. Further research should also explore the utility of integrative medicine strategies delivered via telehealth in addressing other chronic conditions among diverse older adults and other vulnerable populations.

D101 Resident Presentation

Providing Dignity in Care: Patient Perceptions of Age Friendly Assessment in Geriatric Primary Care

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Background: One of the 4Ms of the Age Friendly Health System Initiative is what matters to patients.[1] The Patient Dignity Question (PDQ), "What do I need to know about you as a person to give you the best care possible?" helps to elicit this.[2] In 2020, patients at our GCCs were asked the PDQ during encounters; response analysis was previously reported.[3] In this phase, we surveyed the cohort about being asked the PDQ to explore preferences and perceptions around the notion of dignity.

Methods: We designed an 8-question survey to elicit feedback on the experience of being asked the PDQ. 227 surveys were mailed from May through September 2022. Likert scale responses were analyzed using descriptive statistics. Free response was analyzed with iterative qualitative coding.

Results: 58 surveys were received by November 1, 2022 with a 26% response rate. 84% of respondents were patients and others were caregivers or both. 53% recalled being asked the PDQ and 34% thought about it after their visit. 90% wanted the GCC to "know them as a person." Overall, respondents reacted positively to the PDQ, reporting they felt respected and thought their response would be integrated into their care. Qualitative analysis of the question, "What does it mean to you to be treated with dignity?" produced several themes. Listening (30%) and personalized care (23%) were common elements that increased sense of dignity. Many (30%) expressed satisfaction and gratitude for their experience with the GCC. A few felt the PDQ was intrusive or unimportant.

Conclusions: Responses to the PDQ varied with most patients and caregivers reporting they felt more understood, respected, and truly cared for. We believe geriatric clinics can use this question to build rapport, though further exploration with patients who react negatively is warranted to better understand their perspectives.

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D102 Student Presentation

Older Adults' Cannabis Discussions with Healthcare Providers: Preliminary Qualitative Findings

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Background: Though cannabis use for health concerns is growing, particularly among older adults, we know little about their interactions with healthcare providers (HCP) on this topic. Our study investigates medical cannabis use among older adults living in Southern California; we present qualitative findings focusing on their interactions with HCPs.

Methods: Adults aged 65+ who reported medical cannabis use in the past 6 months completed an audio-recorded, semistructured, qualitative interview. Interviews were transcribed verbatim and coded using NVivo Software and analyzed for emergent themes.

Results: Fifteen participants (60% women, mean age 76.5; 86.7% non-Hispanic White, 6.3% White/Asian, 6.3% Hispanic) completed the interview. Preliminary content analysis identified two major themes around participants' interactions with HCPs: 1) disclosure of use to HCPs, and 2) desired topics of discussion with HCPs. Participants cited various reasons for disclosing cannabis use to HCPs, including a desire for feedback about cannabis side effects or medication interactions. Several participants reported comfort with disclosing to HCPs given the current legal status of cannabis and the understanding attitude of HCPs. Still, others reported discomfort with disclosure due to concerns about the still-evolving legal status of cannabis, fear of stigma from HCPs, and the perception that HCPs have insufficient knowledge of cannabis. Most participants described their HCP's attitude toward cannabis use as neutral, and discussions about cannabis use were most often initiated by the participants. Participants desired further discussion with their HCPs on the following topics: the pros/cons of different formulations, dosing, side effects, and interactions with medications; effective alternatives to cannabis; strategies for replacing prescription medications with cannabis; myths versus facts around cannabis; and recommendations for use for specific conditions.

Conclusion: Findings illustrate a common desire by older participants for more in-depth discussion about cannabis with their HCPs. As cannabis use increases among older adults, understanding their experiences will inform discussions with HCPs focused on medical uses of cannabis.

D103 Student Presentation

Nurse perspectives on their experiences giving low-dose methadone to nursing home residents

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Background: Chronic pain is a prevalent problem in the older adults in nursing homes. Current recommended pharmacotherapies include acetaminophen, which is not always sufficient to control pain, and opioids, which carry a high risk of side effects in frail older adults. Some observational studies have shown that methadone at a low dose (i.e., <10 mg) could be used as a first-line opioid for frail older adults. However, methadone is rarely used in a nursing home setting. We aimed to explore nurse perspectives on the use of low-dose methadone in frail nursing home residents to assess the potential benefits and barriers of introducing methadone into clinical practice in nursing home settings.

Methods: Semi-structured interviews (n=4) were conducted with nurses who administered low-dose methadone (<10 mg) in the past two years in post-acute care and long-term care settings. We explored three general themes: 1) General idea of methadone; 2) Experience and observation using low-dose methadone; 3) Opinion and attitude of using low-dose methadone. Interviews were transcribed then coded and analyzed by two separate coders using a modified phenomenological approach.

Results: Most participants were previously unfamiliar with low-dose methadone as an analgesic in nursing home settings and were only familiar with methadone as a treatment for substance use disorder (75%). Although most participants were initially hesitant to administer low-dose methadone (75%), all participants (100%) said it was effective to reduce pain with no serious side effects. Although some participants were unsure how low-dose methadone was more advantageous than traditional pain therapeutics (50%), many benefits were reported, including: 1) The long-acting formula was easier to administer (50%); 2) The sublingual route was well tolerated, especially for those with dysphagia (75%); and 3) There was no significant sedation noted (100%).

Conclusions: Although nurses were initially hesitant to use low-dose methadone given its rarity in nursing home settings, their experiences were generally positive. These findings support future studies into the safety and efficacy of low-dose methadone as a novel approach to clinical management of chronic pain in nursing home patients.

D104 Student Presentation

Attitudes and practices among primary care providers assessing the older driver

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Background: Driving is important for patient autonomy, yet many conditions, medications, and cognitive and functional changes can compromise driving safety. Primary care providers (PCPs) are often involved in the assessment of driving ability. However, no national standardized process exists to evaluate older drivers. Thus, we aim to understand PCPs' attitudes and practices when assessing older drivers.

Methods: From July to October 2022, we surveyed faculty physicians, fellows, residents, and advanced practice practitioners (APPs) in the UNC Division of Geriatrics via paper or electronic questionnaires. The 15-item questionnaire was developed based on a literature review of existing guidelines and best practices. The survey included multiple-choice, yes/no, and free-response questions focused on PCPs' approaches and knowledge about driving in older adults.

Results: During the study period, 24 responses were recorded: 17 physicians, three fellows, one resident, and three APPs. The response rate was 100%. Overall, 58% felt extremely comfortable initiating or engaging in a discussion about driving, while only 25% felt extremely comfortable assessing driving ability in older adults. Most PCPs (71%) thought they would benefit from further education. PCPs were more familiar with North Carolina's reporting policy (71%) than the AMA's guide to assessing and counseling older drivers (42%). For driving evaluations, most PCPs (83%) had referred patients to occupational therapy, but fewer (42%) had referred to third-party companies. Only 26% reported documenting driving status in the medical record, yet most (58%) felt mandatory driving evaluations should occur at an average age of 75. Additionally, 96% of PCPs reported using cognitive screens to assess driving capacity and identified a range of conditions that placed drivers at higher risk for impairment.

Conclusions: PCPs reported comfort with discussing driving with their older patients, but there was greater variability in comfort with evaluation, documentation, and reporting of driving safety. A desire for further education existed across all levels of PCPs, and most felt mandatory driving evaluations should occur. Increasing awareness of resources for driving assessment and standardizing approaches for evaluating and communicating about driving safety would likely improve PCP comfort and competence in assessing the older driver.

D105 Student Presentation

The Influence of Social Support on Chronic Disease Management among Older Adults with Multimorbidity

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Background: Multimorbidity increases with age and can cause physical and psychosocial burden. Social support, the emotional and practical support individuals perceive receiving, is critical for effective chronic disease management, yet qualitative research studying its influence on diverse older adults with multimorbidity is limited.

Methods: Participants were multiethnic adults aged 65+ with 2+ chronic conditions recruited from primary care clinics. Semi-structured interviews were conducted through video/phone calls, and participants took photos according to prompts. We coded interviews using framework analysis and used a two-step process to code the foreground and background of photos.

Results: Of 15 participants, 47% were female, and the mean age was 77 years. 60% belonged to minority ethnic groups. Identified themes were beneficial effects of adequate support on disease management, negative impact of COVID-19 on support networks, and consequences of insufficient support on wellbeing. 13% (n=29) of photos depicted elements of social support through images of family members and friends, video conferencing with individuals, and multi-person dining table set-ups (Figure 1).

Conclusions: Different degrees of social support affect chronic disease management. Participant-generated photos can reveal additive visual data regarding perceived social support from patient perspectives.

Figure 1: Zooming with family members during COVID-19.

D106 Student Presentation
Home Care Clinicians' Perspectives on Advance Care Planning for Older Patients who are Incapacitated with No Evident Advance Directives or Surrogates

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Background: Older patients who lack advance directives and surrogate decision makers are at risk of receiving care that is unaligned with their goals and preferences if they lose decisional capacity. This study explored barriers to advance care planning (ACP) among patients with limited family or community support who are without surrogates. Our objective was to elicit home care clinicians' perspectives on barriers and facilitators to completing advance directives and appointing surrogate decision makers among older adult patients at risk of becoming Incapacitated with No Evident Advance Directives or Surrogates (INEADS) who are receiving home care services following acute care hospitalization.

Methods: From August 2021 through November 2022, we conducted 30-90 minute semi-structured interviews with 8 nurses and 7 social workers who had worked with multiple older patients who were at risk of becoming INEADS while receiving post-acute home care services in a New York based agency. The interview guide asked clinicians to recall experiences discussing ACP and end of life with patients at risk of becoming INEADS. Two coders reviewed the transcripts and conducted a thematic analysis.

Results: Three central themes emerged: (1) Clinician-level personal and structural barriers to ACP conversations, (2) Patient-level barriers to understanding and completing ACP forms, and (3) Institution-level policy and procedural barriers in hospital and community settings. For example, one social worker noted that "Patients that didn't have advance directives in the community thought that what they were signing in the hospital was going to follow them and they don't." The clinician emphasized this misconception among both patients and providers, highlighting the procedural complexities of ACP documents.

Conclusions: Our findings highlight challenges to providing ethical care for older patients who are at risk for becoming INEADS. Home care presents unique opportunities to assist these patients with ACP in a safe, comfortable, intimate environment. However, current barriers to utilizing this opportunity for ACP, such as lack of training, language barriers, fear of litigation, and procedural complexities regarding the completion and transfer of ACP documents across care settings must be addressed.

D107 Student Presentation, Encore Presentation
"They Never Thought They Would Be Here": A Qualitative Study of HIV Clinic Providers' Frameworks for the Relationship Between HIV and Aging

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Background: As a result of treatment advancements, people living with HIV (PLWH) are living longer: an estimated 70% of PLWH in the US will be over the age of 50 by 2035. Providers' framings of disease states may significantly impact patient care and health, but limited research characterizes how providers caring for older PLWH conceptualize the relationships between HIV, aging, and comorbidities. Our objective was to explore HIV clinic providers' underlying frameworks for these relationships as they care for this quickly growing, aging population.

Methods: We conducted 11 semi-structured interviews with physicians, RN case managers, and administrators at two health systems' HIV clinics in NYC and the Hudson Valley between November 2019 and July 2020. We coded the interviews using Dedoose, developing a codebook comprising both etic and emic codes through multiple iterations (ABL, RS, MV), and thematically analyzed the data (MV, ABL).

Results: We identified a range of framings involving (patho) physiological and psychosocial dimensions of aging and HIV. To providers, the relative clinical importance of HIV depended upon whether HIV was controlled and the presence of comorbidities; often, HIV was well-managed and comorbidities were positioned as the main drivers of morbidity and mortality. Additionally, providers often employed the language of "duration," "endurance," or "living through" when describing patients, conveying their perceptions of older patients as having longitudinal social and medical experiences as they moved through a shifting, evolving epidemic.

Conclusion: Providers caring for aging PLWH have moved beyond HIV exceptionalism, towards HIV conditionality: a contingent framing of aging with HIV that encompasses both management issues and the biopsychosocial dimensions of living with HIV over and through time. These findings have implications for structuring interdisciplinary care management across geriatrics, specialty care, and HIV care for aging PLWH; supporting patient engagement with comorbidity care building upon longstanding HIV care management practices; and adapting existing geriatrics frameworks, such as the Five M's, to engage with temporality, lived experience, and the life course.

D108 Student Presentation, Encore Presentation
Qualitative analysis of lay descriptions of postoperative cognitive dysfunction

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Background: Postoperative cognitive dysfunction (POCD) disproportionately affects older adults after surgery and anesthesia. Patient-reported POCD symptoms are clinically important to trigger cognitive assessment, but have not been well described.

Methods: We performed inductive qualitative analysis on website user comments anonymously submitted in response to "*The hidden long-term risks of surgery: 'It gives people's brains a hard time'"* published by United Kingdom-based news source The Guardian in April 2022. The analytic team was a preclinical medical student, a clinical anesthesiologist, and a neuropsychologist. We analyzed reported symptoms and their alignment with neuropsychiatric domains, particularly those most associated with POCD (memory and executive function).

Results: We analyzed 39 anecdotes from 38 unique users. Nine anecdotes denied cognitive symptoms. Of those with cognitive complaints, memory problems ("used to have a partially photographic memory") and psychological or personality changes ("a strange sort of depression") were common. Memory complaints sometimes overlapped with executive function deficits, e.g., difficulty holding complex information in mind (working memory). New reading difficulty appeared to be consistent with a working memory deficit in 3 anecdotes. 6 anecdotes cited brain fog ("I was a foggy mess"), which poorly localizes to a single traditional neuropsychiatric cognitive domain. See Table for representative quotes.

Conclusion: Patients and caregivers describe deficits in memory and executive function (particularly working memory), psychological symptoms (commonly depression), and brain fog after surgery. These reported symptoms align with and extend beyond neuropsychiatric domain-based deficits seen in POCD, and may support earlier identification and referral for cognitive testing.

Representative quotes

Memory	Isolated memory	"He lost his ability to make new memories overnight and has slowly declined since."
	Memory/executive function overlap	"Until the operation I had a 360° memory, which could retain the multi-layered information & awareness [professionals] require…I can retain the primary info well enough, but I find I lack the circuitry to process the secondary or contradictory without effort… I have to make conscious mental notes instead of being able to recall them effortlessly."
Psychological Changes	Depression	"I was like a different person when I came out, I had a strange sort of depression and I cried for hours every day, for nearly six weeks."
	Personality	"The vivacious person that went into the operation disappeared replaced with someone who was quieter and not firing on all cylinders."
Executive Function	Concentration	"Couldn't work, concentration was woeful, even reading was a struggle."
	Working memory	"After recovering from a couple of anaesthetics for a kidney transplant I found I could no longer read….I have trouble building up an overview of the argument being presented. My mind seems to miss key pieces of information as I go, making the whole more and more incomprehensible."
Brain Fog		"I was a foggy mess for a couple of days afterwards."

D109 Student Presentation

Investigating the impact of the APOE genotypes on the acquisition of a senescent phenotype on pericytes of the blood brain barrier

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Blood brain barrier leakiness is correlated with neurodegenerative diseases such as Alzheimer's disease. Of the many cell types of the blood brain barrier, there have been limited studies focusing on induced pluripotent stem cell (iPSC) differentiated pericytes and their association with cellular senescence. Specifically, determining whether pericytes with different isoforms of the *APOE* genotypes have increased or decreased susceptibility to cellular senescence remains to be accomplished, which can potentially pioneer a path for therapeutic targets. In this study, pericytes were differentiated from iPSC's and seeded into 4-96 well plates. The pericytes were treated with doxorubicin, a chemotherapy drug inducing senescence. Controls included untreated (DMSO drug carrier) and a low nutrient quiescent group. Immunocytochemistry of the pericytes were used to compare the altered expression of several senescent markers in the different APOE isoforms. The dose of doxorubicin utilized was selected based on a titration curve and provides a mixed population of normal and senescent cells. Morphological changes consistent with senescence were evident in the DOXO treated groups relative to the DMSO control groups when staining for lamin-B1 and H2AX proteins, as demonstrated by the increased nuclear size and mean intensities. This was more evident in the E4 isoforms compared to E2, and intense staining was also seen for H3K9me3, p16 and p21 proteins but not sufficient to make significant conclusions. The results obtained show promising data that senescence does play an important role in blood brain barrier integrity. Although some of the markers did not behave as strongly as expected at this dose of doxorubicin, we have characterized the senescent pericytes at higher doses with significant changes in the relevant markers.

D110 Resident Presentation

Cold Antibody Autoimmune Hemolytic Anemia, a Serious and Rare Adverse Effect of mRNA Pfizer COVID-19 Vaccine Booster in a Geriatric Patient.

M. Mahmodian, K. A. Moshiri. *Eisenhower Health, Rancho Mirage, CA.*

Background:

One of the breakthrough responses to the COVID-19 pandemic included emergent fast-tracked vaccine development, which safeguarded public access to the vaccine in months. Despite the success with mass vaccination preventing COVID-19 related hospitalizations and deaths, there are reports of rare but serious adverse effects. We present a case of a geriatric patient who developed cold antibody autoimmune hemolytic anemia after receiving the Pfizer COVID-19 booster.

Case:

87-year-old female presented to our geriatric clinic with worsening fatigue for weeks.

Medications: Cyanocobalamin, Calcium Citrate, Latanoprost ophthalmic.

Vitals/Physical Exam: WNL

Labs: Hgb/Hct:5.4/13.4, LDH:567, Haptoglobin<30, DAT Anti-C3 +ve, T bilirubin:7.2, marked reticulocytosis, agglutinated erythrocytes on peripheral smear. Patient was admitted to the hospital for severe anemia. Internal bleeding was ruled out. She met criteria for cold agglutinin hemolytic anemia. Patient had received her Pfizer COVID-19 booster three months earlier, otherwise no other precipitating factors. She received 5 units of Packed RBCs and was started on Rituximab and discharged home. Rituximab was later replaced by cyclophosphamide due to failure in therapy. Patient was then readmitted for worsening anemia and was discharged to home hospice.

Discussion:

Autoimmune hemolytic anemia (AIHA) is a condition characterized by increased destruction of red blood cells (RBCs) mediated by anti-erythrocyte autoantibodies with or without complement activation. This particular case demonstrated cold agglutinin AIHA with complement activation. The development of AIHA after SARS-CoV-2 has been linked to the molecular mimicry between Ankyrin-1, an RBC protein, and the SARS-CoV-2 viral spike protein. We suspect cross-reactivity could be contributing to this patient's development of AIHA after receiving the COVID-19 booster based on the chronology of events, hematological studies, and the absence of other culprits.

Learning Points:

The accelerated development of the mRNA COVID vaccines, leaves much to learn regarding their serious adverse effects.

More research into the causes of such severe adverse effects is necessary.

Implementing large collaborative prospective studies to allow providers to screen and detect post COVID-19 mRNA vaccination adverse effects may also improve adherence and related morbidity for these novel agents.

D111 Student Presentation

Regulation of Insulin Blood-Brain Barrier Transport

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Insulin is essential for metabolic and cognitive functions in the brain, and brain insulin resistance is implicated in Alzheimer's disease (AD). Insulin is transported across the blood-brain barrier (BBB) but the regulation of this process is largely unknown. This study tests whether CNS insulin signaling regulates BBB transport.

This study investigates S961, a selective insulin receptor (IR) antagonist, and insulin itself on the rate of radioactive insulin BBB transport; the effect of S961 on brain regional uptake of radioactive

insulin was also studied. CD-1 mice received either an intracerebroventricular (ICV) vehicle, insulin, or S961 injection with a 10-min wait time, followed by a radioactive intravenous (IV) injection of lactated Ringer's solution containing [^{125}I]-insulin and [^{99}Tc]-albumin for all studies. After various time points blood and brains were collected, the whole brain (WB), olfactory bulb (OB), and hypothalamus (HY) were dissected and weighed. The regional uptake study had a single wait time and 11 brain regions were collected. A gamma counter was used to measure the levels of radioactivity in serum and brain samples. Multiple-time regression analysis was used to calculate transport rates and brain/serum ratios are reported for regional uptake.

ICV insulin decreases insulin BBB transport into the WB ($p=0.04$). ICV S961 significantly decreases transport into WB in females ($p=0.007$) but has no statistically significant effect in males ($p=0.14$). ICV S961 also significantly decreases insulin uptake at the pons-medulla (PM) ($p=0.01$) with trending decreases at the OB, thalamus, and cortices (all $p<0.1$).

High levels of brain insulin can downregulate BBB transport likely via negative feedback. Inhibition of insulin signaling in the brain also downregulates insulin BBB transport. Females are more sensitive than males to brain insulin receptor inhibition in regulating insulin BBB transport, which may be linked to the higher prevalence and incidence of AD in females. The OB and PM have the greatest levels of insulin BBB transport, thus making them potentially more sensitive to altered BBB transport. As the role of insulin in neuropathology becomes more apparent, understanding the mechanism and regulation of insulin transport into the brain will be crucial in developing more effective therapeutics to combat brain insulin resistance.

D112 Student Presentation
Oxygen Consumption Rates Between Skeletal Muscle Cells Derived From Young and Old Human Donors Elucidate Mitochondrial Dysfunction

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Mitochondrial oxidative phosphorylation plays a significant role in cellular functions such as nutrient metabolism, ATP synthesis, and respiratory capacity. Mitochondria's branching network, the reticulum, is active through the fusion (connection) and fission (fragmentation) dynamics. As humans age, however, there is a loss of mitochondrial fusion which leads to fragmentation and imbalance of mitochondrial homeostasis. Therefore, the purpose of this study is to investigate mitochondrial dysfunction in human skeletal muscle derived cells (SkM). The discrepancies of the oxygen consumption rate (OCR) of the mitochondria between the young versus old human cells may reflect the driving factor behind aging. In order to determine mitochondrial dysfunction, OCR was measured between a primary human SkM from an 18 year-old-male (18M) and 66 year old male (66M) purchased from Cook MyoSite Inc. (Pittsburgh, PA). OCR was measured using the Cell Mito Stress Test by SeaHorse Analytics XFp Analyzer (Agilent Technologies; Santa Clara, CA). Data was generated by Seahorse Report Generator (Mean±SEM). Basal OCR and Maximal OCR were higher in 18M compared to 66M (Basal: 28.51 ± 1.61 and 20.43 ± 2.18 ; Maximal: 54.98 ± 6.74 and 28.68 ± 3.91 pmol/min). In addition, the results reflected that ATP production as well as Spare Respiratory Capacity (SRC) were higher in 18M compared to 66M (ATP Production: 23.88 ± 1.37 and 16.84 ± 2.04 ; SRC: 26.47 ± 5.13 and 8.25 ± 1.73 pmol/min). Basal OCR, Maximal OCR, ATP Production, and SRC of the 18M cells were higher than those of the 66M cells, revealing a greater mitochondrial function in the primary skeletal muscle-derived cells derived from the young compared to the old. This could be accounted for by the fact that the young cells have a higher stress adaptability compared to the old cells. The discrepancies in the OCR between the young versus the old human cells, therefore, augment our understanding of how mitochondrial dysfunction may serve as a driving force behind aging in humans. Combining data from additional samples to be obtained, this study provides crucial information to the geriatric community in mitigating age-related pathphysiologies, such as sarcopenia and Alzheimer's Disease.

D113 Student Presentation
Brain Microvessels from Dementia and No Dementia Subjects

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The brain microvasculature is the foundation of the blood-brain barrier (BBB), an interface that regulates passage between the circulatory system and the brain parenchyma. Tight junction (TJ) proteins function as cell-cell adhesion molecules at the BBB and have been shown to differ in subjects with dementia (D) versus those without dementia (ND), with most studies showing an overall decrease in Alzheimer's Disease (AD). We measured levels of TJ proteins (occludin, claudin-5) and protein markers of neurovascular unit cells (endothelial cell PECAM, pericyte PDGFR, astrocyte foot process GFAP, associated neuronal MAP2 and NeuN) in brain microvessels (MV) to determine the association with dementia. MV were isolated from the superior parietal lobe cortex of female (F) (n=8 D and 8 ND, age range 79-99, mean 93 for both groups) and male (M) (n=7 D and 7 ND, age range 53-93, mean 74 for both groups) subjects. Within each sex, D and ND subjects were matched by age and AD neuropathologic change. Protein levels were assessed by western blot (WB), which showed no detectable differences in claudin-5, PECAM, GFAP, MAP-2 or NeuN in M or F regardless of dementia status but demonstrated significant increases in occludin in F D versus ND. Additional unique MV samples from fresh brains of female subjects (n=3 D, age range 92-94; n=3 ND, age range 51-92) were examined by WB and immunofluorescence (IF). Similar levels of claudin-5 and differences in occludin were observed. A separate set of unique parietal cortex sections from female subjects (n=12 D, age range 82-93; n= 5 ND, age range 83-98) were examined by immunohistochemistry (IHC) to confirm the WB and IF data. IHC demonstrated that brain microvascular density was similar in D versus ND samples by PECAM staining with no detectable differences in claudin-5, but again showed an increase in occludin in F D versus ND. The significant increase in occludin observed only in F D, which was unexpected, could reflect a compensatory response in the brain MV of D subjects of advanced age (mean age 93) or changes in total protein that do not represent cellular localization to the TJ.

D114 Student Presentation
Impact of tauopathy on hippocampal CA1 interneuron integrity in PS19 mice

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Background: Studies on memory loss in Alzheimer's disease (AD) have extensively focused on hippocampal pyramidal neurons (PN), yet little is known about the impact of AD on the hippocampal interneurons that shape PN activity. Within hippocampal CA1, affected earliest and most robustly by AD, interneurons also shape processing differentially across its transverse axis and laminae that feature distinct information processing. Here we tested the hypothesis that tau differentially impacts CA1 interneuron integrity across its transverse axis and laminae.

Methods: PS19 (Tau P301S) transgenic and wild type (WT) mice (n = 4/genotype, divided equally by sex) were anesthetized and

perfused with paraformaldehyde. Brains were extracted and sectioned for immunohistochemistry. We used antibodies against GAD65 and GAD67 as surrogate measures of interneuron axon terminal and cell body integrity, respectively. We also stained for phosphorylated tau (AT8) to quantify tau pathology across the transverse axis. Fluorescence was imaged via confocal microscopy and the mean fluorescence intensity (MFI) across the transverse axis and laminae of CA1 were measured via ImageJ and averaged by genotype. Transverse axis included CA1c and CA1a, and laminae included stratum oriens (SO), stratum pyramidale (SP), stratum radiatum (SR) and stratum lacunosum-moleculare (SLM).

Results: Tau pathology was most robust in CA1a. There were no significant differences in GAD65 MFI in CA1 across genotype in any of the domains, suggesting a preservation of overall interneuron synaptic number. With GAD67 staining, compared to WT the CA1a region in PS19 mice displayed more reductions in MFI than CA1c. Within CA1a, the SLM layer featured the greatest percent decline.

Conclusion: Tau pathology associates with a reduction in somatic markers of interneuron integrity, most evident in CA1a and its SLM region that processes entorhinal cortical input. In contrast, tau pathology does not associate with alterations in synaptic terminal markers of interneuron integrity. An intriguing interpretation is that tau pathology induces interneuron neurodegeneration, resulting in a compensatory increase in synaptic terminal activity of remaining interneurons. Future work should clarify physiological evidence of these changes, and if this is truly compensatory or a maladaptive response.

D115 Resident Presentation

Improving trainees' confidence and interest in geriatric medicine: a comparison of faculty-only vs. hybrid faculty-peer teaching models

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Background: Peer-teaching has been shown to be non-inferior to faculty-only teaching in medicine and other educational fields. We describe and compare the design, implementation, and evaluation of a faculty-only vs hybrid faculty-peer teaching model aimed at improving confidence and interest in geriatric medicine among family medicine interns. The primary aim of our study is to compare how these two models impact trainees' confidence in their knowledge about common geriatrics topics. The secondary aim is to compare how the two models improve interest in geriatric medicine.

Methods: A total of 23 family medicine interns participated in an interactive, skills-based 4-hour geriatrics workshop aimed at improving confidence and interest in geriatric medicine. The participants were divided into two groups: faculty-only led teaching (n=12) and hybrid faculty-peer teaching (n=11). Participants completed anonymous pre- and post-intervention surveys of self-reported confidence in knowledge about common geriatrics topics (delirium, dementia, mobility, and advance care planning) using a 5-point Likert scale ranging from "not at all confident" to "extremely confident." Self-reported interest in geriatric medicine was rated as well, ranging from "not at all interested" to "extremely interested".

Results: Post-survey responses demonstrated comparable improvement in confidence between the faculty-only and hybrid models across the common geriatric medicine topics. Comparable average increases were seen in interest in geriatrics between the two teaching models.

Conclusion: This study suggests that a hybrid faculty-peer teaching model is a non-inferior approach to a faculty-only teaching model. A hybrid teaching model, which combines the cognitive and social congruence of near-peers with the expertise of faculty, may also help to create and strengthen a geriatrics training pipeline, while increasing trainees' knowledge and confidence in key domains of geriatric medicine.

D116 Student Presentation

Improving stroke health literacy in rural areas: an interventional study

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Background. Stroke impacts almost 800,000 people per year and is a leading cause of serious long-term disability and the fifth leading cause of death. Despite its pervasiveness in the U.S., understanding the warning signs of stroke continues to be suboptimal, especially in rural communities when compared with urban. Because early intervention can significantly improve health outcomes, advancing health literacy is critical. Therefore, we will examine the efficacy of stroke health literacy as a strategy to improve the recognition of signs and symptoms of stroke.

Methods. A one-time intervention aimed at improving stroke health literacy was implemented in rural central Michigan. The intervention, a one-hour interactive presentation, gauged participants' prior knowledge and sought to build upon existing frameworks using case studies and scenarios to engage participants. Over a one-month period, a total of 65 participants comprised of older adults and caregivers across three counties in rural Central Michigan participated in the intervention. Short term effectiveness of stroke literacy education was tested by a pre- and post-presentation questionnaire. The data was analyzed using nonparametric McNemar's test. An anticipated six-month post-presentation survey is planned to assess the initiative's efficacy for long-term retention of recognition of stroke signs and symptoms.

Results. Prior to the educational presentation, approximately half of the participants self-reported knowing the risk factors of stroke (49.2%) and recognizing the symptoms of stroke (47.7%). After the presentation 96.9% of participants self-reported feeling comfortable recognizing the signs and symptoms of stroke. Participants' ability to recognize facial drooping as an early sign of stroke improved from 76.6% to 93.8% ($p = 0.0127$).

Conclusion. The results demonstrate that the presentation is effective in improving participants' ability to recognize not only facial drooping as a sign of stroke, but also improving participants' confidence in recognizing features of stroke and their ability to act. By providing this framework for improving health literacy, we believe this initiative can lead to an improved quality of life for rural older adults through early stroke intervention.

D117 Student Presentation

A 3D Approach: Increasing Health Literacy on Delirium, Depression, and Dementia in Older Adults

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Background: Delirium, depression, and dementia (the 3Ds) have similar symptoms in older adults, causing confusion by caregivers that may result in inappropriate care for each condition and decrease quality of life. A health literacy intervention was implemented to improve understanding of risk factors, symptoms, and caregiver responses to the 3Ds.

Methods: Educational materials on risk factors, symptoms and caregiver interventions for the 3Ds were developed by medical students at Central Michigan University. Educational presentations with case-based scenarios and videos were led by medical students at PACE Central Michigan and PACE Southeast Michigan Centers. Target audiences included PACE participants and staff. Pre- and post-presentation surveys assessed participant understanding of the 3Ds. The associations were tested by nonparametric McNemar's test. Long-term retention will be assessed by surveys 6-months after presentations.

Results: Participants completed pre-presentation surveys (N = 40) and post-presentation surveys (N = 36) that were compared to assess changes in comprehension of the 3Ds. A significant increase was seen in recognizing signs of delirium ($p < 0.0001$). This was seen in females ($p < 0.0001$), both white ($p < 0.0001$) and non-white ($p = 0.0039$) groups, and in participants less than 68 years old ($p < 0.0001$) and greater than/equal to 68 years old ($p = 0.0078$). Delirium recognition also improved in those with a high-school level education ($p = 0.0078$) and with a college level education ($p = 0.0001$). A significant increase was seen in recognizing signs of depression ($p < 0.0001$). This was seen in females ($p < 0.0001$), both white ($p = 0.0120$) and non-white ($p = 0.0313$) groups, and in participants less than 68 years old ($p = 0.0160$). Finally, a significant increase was seen in recognizing signs of dementia ($p = 0.0010$). This was seen in females ($p = 0.0034$), in white participants ($p = 0.0060$), and in those with a college level education ($p = 0.0117$).

Conclusion: This health literacy intervention effectively improved symptom recognition of the 3Ds by older adults and caregivers. This knowledge will enable communities to appropriately care for the conditions their loved ones exhibit and promote the quality of life of independent older adults.

D118 Student Presentation

A Model to Reduce Isolation and Loneliness in Older Adults

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Literature has found that social isolation and loneliness are similar psychosocial processes that threaten the wellbeing and longevity of adults. A 2020 study Social Isolation and Loneliness in Older Adults, reported that 25% of adults are isolated. Loneliness can be precipitated by loss of social roles, retirement, reduced social networks and physical and cognitive decline. Loneliness and isolation were further accentuated during the COVID-19 pandemic. Due to rural populations having decreased access to behavioral health they are especially at risk of developing these conditions. We utilized community outreach programs, PACE Central Michigan and the Isabella County Commission on Aging to reach older adults. We used a service model to provide support services and enhance social skills to reduce social isolation. This service model consisted of (1) Recruitment and screening for loneliness or isolation using evidence-based survey tools; (2) connector services to reach and engage older adults to the needed support and resources; (3) gateway infrastructure assessment to understand their unique situation e.g., finance and mobility etc.; (4) appropriate alleviation measures and support; and (5) train and educate future and present healthcare providers. A total of 44 independently living older adults were reached, 68.2% of which were female, and 97.7% were white, with 2.3% being American Indian/Alaskan Native and 79.5% being not Hispanic or Latino. The median age of participants was 74.9 years. When asked if they were satisfied or happy with their daily or weekly contact with others, the median score was 7 out of 10, and when asked about their social network range the average for participants was 2.74 relationships and 24% of participants reported having a social network member in their household. These results can be used to develop community education programs that help alleviate loneliness and social isolation in older adults through empowerment and rekindling social skills.

D119 Student Presentation

Adaptation and Feasibility of a Dementia-Specific Workshop Training for Japanese Primary Care Clinicians on Advance Care Planning Communication Skills

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Background: Advance care planning (ACP) helps dementia patients receive medical treatment they desire. Japanese primary care clinicians need support in ACP communication skills for patients living with dementia. This study's objectives were to deliver a dementia-specific training workshop on ACP communication skills for Japanese primary care clinicians and to assess its impact using pre- and post-training surveys.

Methods: An existing ACP training workshop composed of didactic lectures, videos, roleplay activities, and action planning was translated and culturally adapted into Japanese. Primary care sites were recruited via word of mouth and direct outreach and the adapted workshop was delivered across central Japan in various healthcare settings. Pre- and post-training surveys assessed pre- and post-training confidence in dementia-specific ACP communication skills and the workshop.

Results: We conducted 13 out of 15 scheduled workshops in central Japan for a total of 153 participants. Workshops were conducted in hospitals, medical universities, and clinics in both rural and urban settings. Participants had varying education levels including physicians, nurses, nursing PhDs, social workers, care managers, physical therapists, and medical students. Surveys conducted before the training yielded 153 responses and 130 responses after the training, 98 participants had both pre- and post-training surveys.

Conclusion: An existing dementia-specific ACP communication training workshop was successfully delivered to primary care clinicians across central Japan. This work demonstrates the feasibility of cross-cultural dementia-specific advance care planning communication training for primary care. Further work is needed to examine changes in confidence and perceived needs for changes to the workshop.

D120 Student Presentation

Virtual Reality and Interdisciplinary Immersive Simulations: Evaluation of Novel Geriatrics Curriculum for First-Year Medical and Physician Assistant Students

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Background:

There has been a lack of training in and exposure to geriatrics among medical (MD) and physician assistant (MSPA) students. To address this gap in medical education, we designed, implemented, and evaluated our novel, interactive geriatric medicine curriculum for first-year MD and MSPA students in their shared clinical science course.

Methods:

All 118 first-year students (90 MD, 28 MSPA) completed the same in-person 4-hour geriatrics module. Groups of about 8 students rotated through four stations with physicians and interdisciplinary instructors: (1) a virtual reality (VR) headset session on being a patient with cognitive changes; (2) polypharmacy simulation exercises; (3) a

fall prevention case study; (4) an overview of 4Ms (mind, medications, mobility, matters most) with an implicit thread of multicomplexity. A virtual panel with perspectives from older adults and/or their caregivers concluded the module. Students were given pre- and post-surveys to rate their confidence levels on five learning objectives on a 5-point Likert scale (1-Strongly Disagree, 5-Strongly Agree). We conducted qualitative review on open-ended questions for reflections and feedback.

Results:

The overall survey response rate was 41%. Improvements in students' confidence were seen across all learning objectives (e.g., confidence for using the 4Ms model increased from 2.5 to 4.3). The most common reflection themes were about dignity and quality of life (33%, 9/27) and medication risks (33%, 9/27), followed by empathy (26%, 7/27). Of responses with feedback, 77% (28/36) described keeping the VR session, and 36% (13/36) explicitly mentioned VR.

Conclusions:

Exposure to geriatrics in the first-year MD/MSPA curriculum using immersive simulation may be feasible and effective in increasing students' knowledge of caring for older adults. Future studies should examine methods to teach with VR and interdisciplinary immersive simulations to build interest and understanding of geriatrics early in training.

Curriculum Highlights

Module Component Theme	Leader from Interdisciplinary Team	Examples of Learning Modalities Utilized
Mind	Clinical Nurse Specialist	Virtual reality headset to simulate first-person cognitive changes, hallucinations, and caregiver fatigue in the setting of Alzheimer's Disease
Medications	Pharmacist	Polypharmacy and sensory impairment simulation exercises; e.g., experiencing thickened liquids and filling pill organizers while wearing visual impairment simulator glasses and cloth gloves to simulate sensory changes
Mobility	Physical Therapist	Fall prevention case study with utilizing mobility aids
Matters Most	Family Caregiver	Panel discussion with patients and/or their caregivers

D121 Student Presentation, Encore Presentation
Gerofit Student Volunteers: Intergenerational Approach to Mobility

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Background: The proportion of the US population that is over 65 years old is continuing to rise and by 2034, the number of older individuals will outnumber children. However, according to the Institute of Medicine, the need for more geriatrics providers will not be met. Possible barriers to this shortage are negative attitudes towards working with older patients. These attitudes are often shaped early in life but may be malleable and can improve over time. This project aims to evaluate the change in student volunteers' perceptions regarding aging after volunteering and interacting with older Veterans in a health promotion program called Gerofit.

Methods: The ERA-12 is a 12-item survey that measures expectations regarding aging with three 4-item scales (expectations regarding physical health, mental health, and cognitive function), and one global expectations score. The survey is scored from 0 to 100 with higher scores corresponding to higher expectations. Thirteen volunteers from the Gerofit@UCLA undergraduate student organization were asked to complete the survey before and after their time volunteering.

Results: At baseline, students rated expectations regarding mental health highest (78.9 ± 13, mean±SD) compared to physical health (48.7 ± 15) and cognitive function (50.6 ± 18). The global score skewed positive at 59.4 ± 12. In the initial post-survey of three volunteers, students had increases in the global score (59.23 ± 7.2 to 75.9 ± 10.3, mean±SE) and all expectations regarding physical health (36.1 ± 7.4 to 55.5 ± 16.9), mental health (88.9 ± 7.4 to 88.9 ± 5.6), and cognitive function (58.3 ± 8.3 to 83.3 ± 12.7) but only the change in cognitive function was significant (paired t-test p=.04).

Conclusion: Few studies have analyzed how volunteers' attitudes towards aging are affected by physical activity and wellness programs in older adults. The outcome of our project shows that students had a more positive expectation regarding cognitive function after volunteering in Gerofit. Furthermore, it emphasizes the importance of analyzing social determinants of health and factors that shape individuals' attitudes towards aging.

D122 Student Presentation
Integrating a curriculum for caregivers of people living with dementia into PCMH: CaRE (Caregiver Resources and Education)

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INTRODUCTION

Yearly, over 11 million family members and friends provide 16 *billion* hours of unpaid care to those living with dementing conditions. Caregiving activities can include help with ADLS, IADLS and chronic disease management. These responsibilities can overwhelm and impact caregiver health. This feasibility study explored how a group visit in the Patient Centered Medical Home (PCMH) setting might improve caregiver training.

METHODS

Dakota Geriatrics (GWEP) and the Alzheimer's Association MN-ND Chapter partnered to modify a HRSA curriculum on caregiver training. 8 modules are presented to caregivers through group visits. Each session includes a didactic presentation (pre-recorded video presentation) followed by a discussion with caregivers in the presence of AD specialized educators and a clinical expert. Interprofessional teams of students facilitate the meetings.

RESULTS

Caregivers report that the group sessions were preferable to support groups and they highly valued contemporaneous access to health care experts which underpins the PCMH group visit. Caregivers also appreciated the inclusion of healthcare students who hosted the sessions, indicating the value of inter-generational programming. Curriculum is modified based on caregiver feedback as senior caregivers can find initial sessions on diagnosis and early stages of dementia as redundant and their training includes later modules Sessions 3-8). CaRE is being formally included in PCMH referrals for new patients being diagnosed with dementia.

CONCLUSION: Partnerships between community and clinical services towards group visits can transform the PCMH into Dementia Friendly health care. Future work involves expanding the curriculum to Native American caregivers through Indian Health Service PCMHs.

D123 Student Presentation
MedEd Case Studies: An Untapped Approach to Formative Evaluation

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Background

Evaluating the transfer of didactic education to behavior change in a clinical setting is challenging. Case studies are used to gain understanding of complex issues in patient care but are less often utilized in medical education. In Spring 2022, a session was piloted to educate physician trainees about the Alzheimer's Association's Direct Connect caregiver support referral program. Initial evaluations indicated a positive response, including an intent to recommend referrals and educate colleagues and patients about the program. To inform follow-up training, additional data regarding retention and application in the clinical setting was needed.

Methods

Six months post pilot session, a case study methodology was undertaken with a convenience sample of pilot session medical students. A 15-minute 1-on-1 semi-structured interview was conducted by the first author (CM) focusing on trainees' retained session knowledge, current reactions regarding the referral resource, and application in clinical settings (e.g., advocacy and referrals to date).

Results

Five student case studies were completed: 80% female; 60% second year medical students. Common themes emerged: good session recall including general knowledge of dementia, existence of Direct Connect referral program/resources, and the process of completing a referral. Confidence to complete a referral was mixed. Some respondents lacked confidence initiating a referral or advocating for the program with a supervisor. No students had initiated a Direct Connect referral; however, two students provided education on the program, and one witnessed their attending complete a referral. The most common barriers to submitting a referral were not remembering the program in applicable cases and a lack of a safe space to advocate for the program with a supervisor. Feedback for improving participation included sending reminders throughout clinical rotations and providing accessible copies of referral forms and educational resources.

Conclusion

This case study approach yielded rich and actionable data. While the session helped raise awareness about dementia and the Direct Connect service, further intervention is required to increase trainee engagement and utilization.

D124 Student Presentation

Creation and Evaluation of a Dementia Caregiver Resource Website

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Background: The 11 million unpaid dementia caregivers in America provide over 16 billion hours of unpaid care, many without any formal dementia education or support. While some seek information from their healthcare providers, in this digital age, they may also rely on online digital resources including many which are not peer reviewed. To address this gap, we created a Dementia Caregiver Resources Website to serve as a user-friendly compendium of high quality, peer-reviewed, dementia care educational resources tailored for an informal caregiving audience.

Methods: The Dementia Caregiver Resources Website took 1.5 years to complete. The interdisciplinary Website development team (representing occupational therapy, nursing, social work, geriatrics, and neurology) went through seven iterative steps to ensure resource selection quality and eligibility rigor. Steps included 1: Needs Assessment/Resource Scan; 2: Collection of National Resources; 3: Creation of Resource Eligibility Criteria; 4: Resource Organization by Topic; 5: Additional Content Identification; 6: Resource Selection; 7: Website Testing and Launch. We sent a 20-item survey to the website team's network of clinicians to evaluate website usability and utility after launch.

Results: We launched the Dementia Caregiver Resource Website February 2022. Over the first 9 months, the site averaged 1100 hits per month. The subcategories with the highest number of hits consistently are *Educational Information*, *ADLs*, and *Self-Care and Support.* Most (98%) Website experience survey participants (N=60) agreed or strongly agreed that the website was easy to navigate and all (100%) respondents agreed or strongly agreed that the resources were useful. All but one respondent stated it was likely or very likely that they would recommend this website to a patient, caregiver, or colleague in the future.

Conclusion: Our Dementia Caregiver Resource Website received thousands of hits and positive clinician reviews in its first 9 months. Clinicians may refer individuals to the free, publicly available Dementia Caregiver Resource Website for peer-reviewed, organized, quality resources [https://tinyurl.com/nhkax2rv]. Next steps will include updating the website using survey responses and evaluating it from the caregivers' perspective.

D125 Student Presentation

An Intergeneration Approach to Address Social Isolation and Loneliness in Older Adults through Tellegacy

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Background: During the COVID-19 pandemic, social distancing was implemented causing increased social isolation and loneliness in vulnerable groups, such as older adults in long-term care facilities, which lead to a decrease in health. Tellegacy focuses on intergenerational connections between college or graduate students interested in healthcare and the older adult population. Students receive training prior to establishing a relationship with an older adult, where they learn about mindfulness, SMART goal setting, legacy interviewing, growth mindset, and reminiscence therapy. They also create a Legacy book for the older adult, highlighting their life and memories and creating a tangible keepsake of their experience, which serves as a reminder of all the accomplishments in their life.

Methods: In June and July of 2022, five medical students participated in the Tellegacy program as part of their Research Experience for Medical Students. Each student was paired with an older adult in a senior living facility for six sessions where the students recorded their conversations within the guided questionnaire that served to direct the student and older adult in conversation. The students wrote a Legacy book for the older adult, documenting the older adult's life. After the experience, the older adults filled out a survey, which assessed loneliness, social isolation, satisfaction with life, intergenerational connection, and technology use.

Results: At the end of each session, students input their thoughts about the conversation: what went well, what could've gone better, and the impact on their emotions/mindset. Students noted an improvement in mood after every session as well as things they had in common with the older adults. The older adults noted a positive shift in their view of the younger generation, an improvement in loneliness and social isolation, and increased satisfaction of life.

Conclusions: While the COVID-19 pandemic shifted the way people met and communicated due to social isolation measures, this experience shows meaningful connection is possible through technology and showed improvement in social isolation and loneliness among older adults who participated. Students and older adults alike showed a positive shift in their view of the other generation. The students also had a unique opportunity to practice question-asking and listening skills useful in future clinical experiences.

D126 Resident Presentation

Comparison of Themes from Discussions Across Medical Specialties Regarding LGBTQ Older Adults

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Background: The LGBTQ older adult patient population are less likely to seek medical care compared to their heterosexual peers. As a result, they are a subject to significant health disparities comparatively.[1] They have also been subjected to long standing trauma seeking health equality which has affected their interactions with medical providers.[2] One way to improve delivery of care to this population is by increasing medical training in this area.[3]

Methods: Participants were recruited via email to participate in a showing of an excerpt of the documentary film, *Gen Silent*, followed by a voluntary discussion.[4] Themes from discussions were independently extracted by two reviewers and were compared across specialties.

Results: Twenty-three participants from Emergency Medicine (n=8), Psychiatry (n=7), and an HIV clinic (n=8) participated. Across specialties, there were multiple similar themes: a lack of training specific to LGBTQ healthcare needs, isolation, discrimination, lack of support that can be experienced by LGBTQ older, and a need to leverage community resources and the EMR to better serve this population. HIV healthcare providers were the most familiar with disparities faced by this population compared to other groups. Psychiatry providers were the only group to address providers' biases in relation to delivery of care. EM providers acknowledged challenges of doing primary care in the emergency department and how partnerships with primary care could be leveraged to better serve this population.

Conclusion: While this study was small, *Gen Silent* can be a valuable educational tool for improving healthcare providers' awareness of issues faced by LGBTQ older adults.

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D127 Student Presentation

Impact of Sex, Previous Occupation, and Social Support on Older Adults' Ability to Gain Comfort Using an Electronic Tablet

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Background: Due to COVID-19, technology has become integral to healthcare for older adults. The HealthWise Technology Program was created to combat isolation in geriatric populations due to the pandemic. Recently, the program expanded to in-person classes. It is important to account for the factors that could enhance or inhibit one's learning experience. The purpose of our study is to analyze sex, previous occupation, and social support on older adults' ability to gain comfort in using a tablet.

Methods: We held an in-person course with the Healthwise Technology Program Director. Twenty-five older adults enrolled in the course at a local recreation center from August until mid-October. Each participant received a tablet provided by HealthWise. Participants attended an hour-long class on a weekly basis for eight weeks. Each participant was given homework to complete each week. Participants filled out a survey at the beginning, during each week, at the midpoint, and at the end of the course regarding comfort level and level of social support. Their ability to complete their homework was also monitored to gauge the retention and use of skills learned in class.

Results: There were 23 total participants. To be included in the data, participants needed to complete 8 out of a total of 10 surveys. 15 participants met these criteria. Surveying participant education showed that 64% did not complete college and 36% completed college or above. 47% of participants reported living alone while 53% reported living with family. The lack of participants meeting selection criteria significantly limits the sample size available for data analysis. While slight correlations were found, including a positive correlation between social support and homework completion (r=0.42), further in-person technology classes will be needed in order to increase sample size.

Conclusion: The impact of sex, previous occupation, and social support on an older adult's ability to use technology must be studied to better counsel this population. For future classes, we hypothesize that an increase in social support will positively impact an older adult's ability to learn how to use the tablet and that previous occupations will factor into the comfort level of the technology, as certain occupations already require the use of technology more so than others.

D128 Resident Presentation

Survey of Pharmacy Students to Assess Attitudes towards a Career in Older Adult Care

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Background: The older adult population in the United States is growing at a faster rate than the geriatrics-trained healthcare workforce. The primary objective of this study is to determine the top factors that increase or decrease pharmacy student interest in pursuing a career in geriatrics.

Methods: A 23-question survey was administered to first- through fourth-year pharmacy students. Participants were recruited from two public schools of pharmacy in the United States from February through September 2022. Surveys were administered during class or distributed via email and required course websites. Participation was voluntary and responses were anonymous. Descriptive statistics, Fisher's exact test, independent-samples t-tests, and ANOVA were used to analyze results.

Results: The top three factors driving pharmacy student interest in geriatrics were past positive experiences with older adults, interest in deprescribing, and perceived need for geriatrics-trained providers. The top four factors discouraging interest in geriatrics were emotional impact of death and end-of-life care, disinterest in geriatric syndromes, inadequate exposure to geriatrics within the curriculum, and perceived limitation of specializing in one patient population.

Conclusions: While some top factors encouraging student interest in geriatrics are personal (i.e. past positive experiences), pharmacy schools may be able to implement curricular changes to address the lack of exposure to geriatrics in didactic and experiential curricula. For example, pharmacy schools may increase didactic geriatric content by requiring all students to take a geriatrics course instead of as an optional elective. Additionally, curricula can be supplemented to foster more personal experiences with older adults through the co-curriculum and incorporating more activities and discussions to reduce the discomfort of death and providing end-of-life care among students. Further research is needed to determine additional solutions for increasing encouraging factors and to assess how influential curricular changes are on student interest in geriatrics.

D129 Student Presentation

Understanding Medical Student Attitudes Towards Older Adults

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Intro: Medical student attitudes towards older adults have been studied, showing that thet can have negative attitudes towards older adults and little interest in geriatrics.[1] The objective of this project was to re-evaluate the current state of medical student attitudes towards older adults and compare these between students in pre-clinical years versus clinical rotations. Ageism is a growing obstacle for older adults, and relevant for professionals in medicine, as the population of individuals over 65 is predicted to be 21% of the U.S. population by 2030.[3]

Methods: The COCOA survey[1] was distributed online to current allopathic and osteopathic medical students in the U.S. Of the 132 surveys started, 86 were completed.

Results: Results showed many students didn't hold ageist attitudes, but most medical students had little interest in a geriatric career. Results also showed there was minimal geriatric medicine exposure in medical school curriculum.

Conclusion: Geriatric medical education shows the power of empathy after older adult exposure for medical students.[2] This indicates

the need for fostering experiences for medical students to understand the benefits of strong training in older adult care. Implementing opportunities for medical students to participate in senior mentoring programs may be the effort needed to address this disparity.[4] With the growing population of older adults in the United States, an emphasis in understanding differences in their care is important.

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D130 Resident Presentation
The Efficacy of a One-time Group Advance Care Planning Educational Event

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Introduction

Only one quarter of Americans have an Advanced Care Directive, despite literature demonstrating significant benefit to patients, families, and providers. While one-on-one interventions have been studied, there is limited literature on group educational interventions. This study hypothesized that a large group educational intervention would improve patients' knowledge of Advanced Care Planning (ACP).

Methods

This pre-post interventional study was completed during the Retiree Health Fair, Carl R. Darnall Army Medical Center on 29 October 2022. Study participants included military retirees aged 36 years and older, their dependents, and other attendees. The educational intervention included a presentation of the three Texas ACP forms: the Medical Power of Attorney (MPOA), the Directives to Physicians, and the Out of Hospital (OOH)-DNR forms. Pre and post-education questionnaires were given to participants to complete prior to and following the educational presentation. A total of three group presentations were held during the health fair to those who wished to participate. The objective of the study was to assess the impact of a one-time group education presentation on patient knowledge of ACP. This study utilized descriptive statistics to analyze the impact group education makes on overall knowledge of ACP.

Results

Twenty-five of the two hundred (12.5%) adults who attended the health fair participated in one of the three ACP education presentations. The majority (61%) were aged 61 years and older. The study included 13 males, 11 females, and 1 participant identifying as bigender. Thirteen participants were military retirees. Following ACP education 100% of participants reported planning to discuss or re-address ACP with their friends or family compared to 76% (19/25; p=0.0455) who had previously discussed ACP with their spouse. Fifteen of the 25 participants had not designated an MPOA. Of those 15 who had not previously designated an MPOA, 80% (12/15) reported planning to designate an MPOA following the education presentation, a 52% increase (p=0.0003). All participants reported understanding what advanced care planning is after the education seminar, and 92% reported planning to complete a directive to physicians, an absolute increase of 40% (p=0.0015).

Conclusion

Our results support that, in this limited study population, group education can be an effective intervention for improving patients' self reported knowledge of ACP.

D131 Student Presentation
Combating Social Isolation and Fostering Social Relationships with Older Adults Through Poetry During the COVID-19 Pandemic

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Background: The pandemic and public health control measures increased social isolation and loneliness in the older adult population resulting in negative health outcomes.[1] Aiming to combat this, the Geriatrics Connection Clinic is a virtual platform-based support group started at the Massachusetts General Hospital during the COVID-19 pandemic. Listening, writing, and reading poetry can help patients manage pain, cope with stressors, and improve well-being.[2] Since April, this support group has had dedicated time to discuss original poetry written by a Harvard Medical student.

Methods: Biweekly Geriatric Connection Clinic sections were conducted virtually with approximately a dozen patients of the Massachusetts General Hospital. Approximately fifteen minutes at the end of the hour session was dedicated to reading and listening to original poems written by the Harvard Medical student who focused on the intersectionality of writing and geriatrics. At a virtual Geriatric Medicine Town Hall dedicated to poetry, this student and three patients shared their original poems that generated discussion on the pandemic, isolation, and hope.

Results: During biweekly Geriatric Connection Clinic, participants gained an understanding of changing health guidelines and a sense of community. Participants were eager explore original poems and discuss. At the virtual Geriatric Town Hall, attendees commented: "I am thrilled to see your program and others working to blend the [medicine and arts] in addressing the health care needs of patients," "reminders that we are not alone," and "healing for the soul," and "we are all poets."

Conclusions: COVID-19 exacerbated social isolation common in the older adult population. One of the key tools combatting social loneliness is having strong social relationships. The sharing of poetry is an avenue through which patients can delve into deep, rich discussions about their worries and hopes. We aim to hold Geriatric Town Halls dedicated to poetry yearly moving forward. Future research will investigate how listening and writing poetry can improve older adults' health and illuminate effective interventions to improve the social relationships of older adults.

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D132 Resident Presentation
Postoperative Medications and Ambulation

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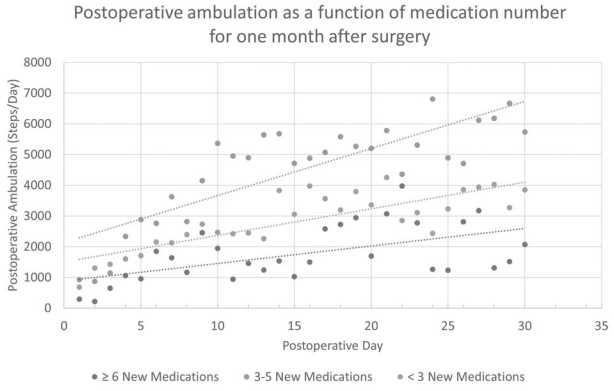
Background: Surgery places the elderly at risk of decreased ambulation and functional decline, which a change in medications may also affect. Our hypothesis is that patients with increased postoperative medications will have delayed recovery.

Methods: Review of patients aged 75+, who underwent inpatient, non-cardiac surgery from 1/2016-7/2019 at a VA Medical Center. Patients wore an accelerometer preoperatively and postoperatively to measure their ambulation (steps/day). Medications recorded. Patients without preoperative data, 7+ days of missing postoperative data and discharge to facility were excluded. Statistical analysis by t-test and chi-squared.

Results: Eighteen patients met criteria, mean age 78±6.1. All patients were male, majority were white, 83%. Procedures included minimally invasive abdominal (11), open abdominal (4) and minimally invasive thoracic (3). Patients on 9.4±10.9 medications preoperatively. Cohorts separated based on new medications at discharge: <3 new medications (low med), 3-5 new medications (medium med) and 6+ new medications (high med). Cohorts did not differ in comorbidities or length of stay. Preoperative and first postoperative week ambulation did not differ. By POD14, high med patients were walking mean of 1538 vs 5678 steps in medium med, p=0.007, and by POD30 high med patients were walking 2070 vs 5735 steps in medium med, p=0.03.

Conclusion: Geriatric patients who underwent non-cardiac surgery and discharged home on 6+ new medications ambulate half to one-third in the first month. Postoperative medication management is complex with more study needed in the elderly surgical population to support recovery while balancing polypharmacy risks.



D133 Student Presentation, Encore Presentation
Treatment of Achilles Tendon Rupture in Geriatric Populations: A Systematic Review

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Background: Multiple studies comparing surgical versus non-surgical treatment of Achilles tendon rupture have shown comparable results, with specific tradeoffs leaving an unclear gold standard for treatment. Given the nature of the injury being more common in middle-aged adults, data on treatment for patients over 60 years old (YO) is scarce. Our aim was to help elucidate the ideal treatment for elderly patients experiencing an Achilles tendon rupture.

Methods: Our analysis looked at studies with populations aged between 18-60 YO, which we labeled as non-elderly, and compared their results to studies that included individuals above 70 YO, labeled elderly. There were no studies found that solely included patients over 60 YO. MEDLINE, Embase, Cochrane, CINAHL, and Web of Science) were searched for potential studies to be included. 168 papers were evaluated by two separate individual reviewers for further screening through Covidence. Ultimately 29 papers were chosen for inclusion in this study. The meta-analysis was conducted through R 4.2.1 software.

Results: Our total N for the elderly studies was 1,922, and 1,014 for the non-elderly studies. For conservative treatment, we found that the re-rupture rate was significantly higher in the non-elderly studies 0.087 [95% CI: 0.064; 0.117] than in the elderly studies 0.043 [95% CI: 0.029; 0.065], p = 0.007. Surgical intervention showed significantly fewer failures 0.024 [95% CI: 0.013; 0.042] than 5%, $p = 0.011$. Comparison of the elderly to the non-elderly groups for operative treatment revealed no significant difference in failure rate between non-elderly 0.025 [95% CI: 0.010; 0.058] and elderly 0.024 [95% CI: 0.011; 0.048] individuals, $p = 0.174$.

Conclusion: Elderly patients may benefit more from conservative treatment than younger individuals. However, the lowest re-rupture rates were seen when using operative treatment in both demographics, lending further support for surgery being the definitive treatment of Achilles tendon rupture. Ultimately, careful consideration of comorbidities by the surgeon will be the deciding factor when considering operative treatment for elderly patients.

D134 Student Presentation
"A toll on your body that affects so many other things:" Patient-Caregiver Perspectives on the Functional Impact of Multiple Myeloma

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Background

Multiple myeloma (MM) is a debilitating blood cancer associated with poor baseline quality of life. Over time the demands of the disease and its treatments result in functional losses and a further decline in quality of life. These losses lead to increasing dependence on informal family caregivers for additional support. Over time these older caregivers can become burdened by caregiving demands. We designed a qualitative study to examine symptom burden, function, and quality of life (QoL) among MM survivors and their informal caregivers.

Methods

We recruited 21 older adult dyads (a patient with MM paired with an informal caregiver) from a Comprehensive Cancer Center in NC between 11/2021-04/2022 to participate in semi-structured dyadic interviews. We used the Sort and Sift, Think, and Shift approach for data analysis (ResearchTalk Inc). This approach allowed us to develop analytic diagrams and memos from our transcript data, which we used to generate key themes and synthesize dyadic perspectives on symptom burden, function, and QoL.

Results

Among patients, the mean age was 70 years (range= 57-90), and for caregivers: 68 years (range=37—88). Patients were, on average, 5.4 years, standard deviation (SD) ± 4.2 from the initial diagnosis. Symptoms experienced due to MM and its treatments included fatigue, pain, and peripheral neuropathy, all of which impacted patients long term. Patients reported losses in independence due to the physical toll of the disease and its symptoms and, in response, an increasing demand for caregiver support. Dyads experienced a reduced ability to engage in physical (e.g., playing sports such as tennis and golf) and social (e.g., leisure travel) activities, strain within their relationships, and a reduced ability to engage socially with others. Dyads also reported reduced QoL due to the effects of MM and the burdensome treatment journey.

Conclusion

Every dyad identified at least one challenge related to maintaining their function, independence, and quality of life throughout the MM journey. This study provides a more comprehensive understanding of the long-term impact of MM on dyads. It also provides the foundation for future research to design and test dyadic-level interventions targeting this population's physical function and social support needs.

D135 Student Presentation
IMPACTS OF THE COVID-19 PANDEMIC ON SKIN CANCER SURGERIES
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Background: 20% of Americans, by age 70, will have skin cancer, which has an 8% prevalence among geriatric populations. During the March 2020 COVID-19 pandemic peak, skin cancer biopsies and diagnoses were down up to 85%. The objective was to evaluate differences between pre- and post-COVID-19 cases of skin cancer at a large academic medical center to understand implications for providers and patients during COVID-19 spikes/other public health emergencies.

Methods: Single center, comparative cross-sectional retrospective study (3/2019–2/2021) of patients (N=549) undergoing surgery: all encountered melanoma cases (94) and a random sample of 238 basal cell carcinomas (BCC) and 217 squamous cell carcinomas (SCC) at the Mount Sinai Department of Dermatology. By cancer type, cases were split into pre-pandemic (3/2019-2/2021) and post-pandemic start (3/11/2020-2/2021) groups. From record review, we collected lesion size, melanoma staging/depth, closure dimensions, zip code, age, biopsy/surgery dates, biopsy/surgery locations, and total case volumes.

Results: Average age was 67.58. Lesion and closure sizes, and melanoma stage/depth, was the same in both periods. Biopsy to treatment time increased among SCC (+4.82 days, +7.87%) and BCC (+26.14 days, +34.40%, $p<0.05$) but decreased for melanoma (-9.80 days, -24.81%). Surgery stages increased for BCC by 0.21 (13.01%, $p<0.05$) and SCC by 0.15 (9.15%). SCC surgery volume decreased to 1 in 04/2020 and 5 in 05/2020; BCC volumes declined to 9 and 13, representing decreases of >74% from the respective average monthly cases prior; melanomas were not seen in 05/2020.

Conclusions: BCC surgery delays and more stages of surgery suggest potentially poorer wound healing/recovery. Overall cases were not more serious due to similar lesion characteristics in both pre- and post-periods, suggesting similar clinical outcomes. The more rapid treatment of melanomas, though not significant at the current level, may be a product of elective procedure postponement; impacts of treatment expediency on outcomes should be explored further. Case volume decreases broadly in the immediate periods following public health crises may indicate a need for greater vigilance among at-risk groups, including geriatric populations, to ensure that cases are diagnosed, followed-up on, and treated, as well as backlogs cleared.

D136 Student Presentation
Implementing a Frailty-Specific Postoperative Order Set for Frail Adults after Elective Thoracic Surgery
A. Allen, A. Edobor, J. Jatis, Y. Turner, M. Francisco, D. Rubin, M. Huisingh-Scheetz, L. Gleason, D. Bryan, J. Donington, M. Ferguson, M. Madariaga. *The University of Chicago Medicine, Chicago, IL.*

Background

Frailty is independently associated with adverse patient outcomes after surgery. The current standards of postoperative care do not consider frailty status. We implemented and assessed the feasibility of a frailty-specific postoperative order set for thoracic surgery patients.

Methods

A frailty-specific postoperative order set (FPOS) was designed based on best-practice guidelines for older adult surgical care and expert consensus. The FPOS included tailored nursing care, activity levels and nutritional goals. A pre-education survey followed by education modules were distributed to nursing staff on a dedicated thoracic unit. From April 2022 to September 2022, surgical teams were alerted to patients 50 and older screened as pre-frail/frail using Fried's Frailty Phenotype by the electronic medical record and instructed to order FPOS postoperatively. A post-survey was administered to nursing staff in November 2022. Feasibility was assessed by calculating the percent of nursing staff who completed the surveys and education module and pre-frail/frail patients who received FPOS, as well as staff-reported challenges to implementing FPOS.

Results

Completion rates varied for the pre-implementation survey (35/45; 77%), educational module (28/45; 62%) and post-implementation survey (20/50; 40%). Compared to pre-education surveys, more nurses on post-education surveys were able to answer correctly that frailty increases susceptibility to stressors (20/20; 100% vs 30/35; 86%), risk of postoperative complications (20/20; 100% vs 32/35; 91%), and hospital cost (19/20; 95% vs 29/35; 85%). Mean self-reported familiarity of frailty on a 10-point Likert scale significantly improved (4.51 to 7.22, $p=0.003$) and FPOS awareness significantly increased (2/35; 5.7% to 14/20; 70%, $p<0.001$). The FPOS was ordered for 24/30 (80%) pre-frail/frail admitted patients. The most reported barrier to FPOS completion was time constraints (7/20; 35%).

Conclusions

Our experience implementing frailty postoperative care in a thoracic surgery population showed improvements in frailty education and staff FPOS adherence. This can provide a framework to implement frailty-specific postoperative care pathways for surgical patients across multiple surgical specialties.

D137 Student Presentation
Association of Selective Serotonin Re-uptake Inhibitors and Delirium with Illness Severity Adjustment
I. Bazemore, C. A. Austin. *The University of North Carolina at Chapel Hill, Chapel Hill, NC.*

Background: Post-operative delirium is a prevalent condition that negatively impacts adults. It is associated with increased mortality, decreased functional recovery, and decreased long-term cognitive function, especially in older adults. Our group found an association between selective serotonin reuptake inhibitor (SSRI) administration and reduced delirium in a medical critically-ill population. We sought to evaluate this association in a surgical population. The role of SSRI's in delirium is not clear and further investigation is warranted.

Methods: We conducted a secondary analysis of an existing cohort study dataset. The original study included adults (Age 18-99) requiring at least 1 night of hospital admission following a scheduled non-emergent, non-elective surgery. Patients were enrolled from July 2019 to September 2019. Our primary outcome was the incidence of delirium 24 hours after administration of an SSRI. As we wished to study postoperative delirium, we limited our delirium assessments to the first 3 days after surgery. Our exposure variable was SSRI administration in the preceding 24 hours. We collected data on demographics and daily severity of illness via the Sequential Organ Failure Assessment (SOFA) score from review of the electronic medical record. We performed multivariate logistic regression analysis to assess the association of SSRI's and delirium controlling for age, severity of illness, and duration of anesthesia.

Results: We collected data on 191 patients. The mean age was 56.8 years old (SD +/- 16.7). 110 (57.6%) were female, and 149 (78%) were White. Most patients, 183 (95.8%) were non-Hispanic. 29 (15.2%) were prescribed SSRI's at any point during the study period and 59 (30.9%) were delirious. On unadjusted analysis patients receiving SSRI's had 1.56 the odds of being delirious the subsequent day but this value did not reach statistical significance (95% CI 0.85-2.87). Logistic regression analysis demonstrated that patients receiving SSRI's had 1.41 the odds of being delirious the subsequent day and again this value did not reach statistical significance (95% CI 0.75-2.69).

Conclusions: SSRI's administered in the post-operative period were not associated with delirium in the subsequent 24 hours. This

contrasts with our prior findings in a medical critically ill population. Further investigation into the association of SSRI's and delirium in different populations is warranted.

D138 Student Presentation
Association between Rehabilitation Services in the Postoperative Inpatient Period and Geriatric Comanagement among Older Adults with Cancer
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Background: Geriatric comanagement is associated with a lower 90-day postoperative mortality among older adults with cancer. This might be explained in terms of higher use of rehabilitation service such as physical therapy (PT) and or occupational therapy (OT). In this study we assess the relationship between geriatric comanagement and PT/OT use.

Methods: This is a retrospective cohort study of adults aged 75 years and older with cancer who underwent elective surgery at Memorial Sloan Kettering Cancer Center between February 2015 and February 2018 with a hospital stay of at least 2 days. We first used two separate multivariable logistic regression models for PT and OT, adjusted for age at surgery, gender, American Society of Anesthesiology score, preoperative albumin, operative time, and estimated blood loss. We also evaluated the association between frailty and receipt of PT and or OT using separate models by additionally including frailty as a primary predictor. Frailty was assessed by the Memorial Sloan Kettering Frailty Index (MSK-FI).

Results: 1650 patients were included in the study, of which 308 (19%) did not receive PT or OT, 747 (45%) received only PT, and 593 (36%) received both PT and OT. 381 (64%) patients in geriatric comanagement group received both PT and OT compared to 214 (36%) in surgical group. Geriatric comanagement was significantly associated with higher PT use (OR=1.58, 95% CI 1.19, 2.11, p=0.002) and higher OT use (OR=1.36, 95% CI 1.08, 1.71, p=0.010). The associations between geriatric comanagement and rehabilitation service remained after additional adjustment for frailty. Higher degree of frailty was also associated with higher PT use (OR=1.11, 95% CI 1.01, 1.22, p=0.033) and higher OT use (OR=1.25, 95% CI 1.15, 1.34, p<0.0001). For example, the probability of PT use for a patient on geriatric comanagement group with MSK-FI scores of 1 and 3 were 90% and 92%, compared to 85% and 88% on surgical group alone. The probability of OT use for the same MSK-FI score and comanagement statuses were 33% and 43% compared to 26% and 35%.

Conclusions: Geriatric comanagement and higher degree of frailty were associated with greater use of PT and or OT. Future studies should investigate appropriate referral criteria for rehabilitative services and its impact on functional recovery within and outside of geriatric comanagement programs.

D139 Student Presentation
The Six Pillars of Brain Health
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Dementia is growing exponentially in the United States and worldwide. Unfortunately, the treatment available does not reverse any type of cognitive impairment. As a result, healthcare professionals are focusing on other evidence-based options, such as Lifestyle Medicine. Current research demonstrates improvement in neurocognitive decline by applying the six pillars of Lifestyle Medicine – plant-based nutrition, physical activity, stress management, avoidance of risky substances, restorative sleep, and social connections.

Studies support that plant-based nutrition has a positive impact on cognition. For example, the Mediterranean-DASH diet Intervention for Neurodegenerative Delay (MIND) was developed with the goal of neuroprotection and prevention of dementia. One study showed a 53% decreased risk for Alzheimer's disease (AD) with high adherence to the MIND diet.

Physical activity stimulates brain chemicals and neuronal connections that may protect the brain and decrease with aging. In addition, exercise might prevent neurocognitive decline by increasing FNDC5/Irisin in the hippocampus. The FNDC5/Irisin pathway increases energy expenditure and prolongs exercise endurance. Stress management is another essential domain.

Higher perceived stress in adulthood was significantly associated with developing mild cognitive impairment and all-cause dementia.

The use of risky substances also may impact structural changes in the brain and lead to cognitive decline. For example, multiple studies found an association between alcohol use disorder, nicotine, and increased dementia risk.

Sleep disorders are associated with higher cognitive impairment. In addition, studies show a positive correlation between sleep and a rapid progression in cognitive decline by amyloid-beta (Aβ) buildup in Alzheimer's disease. Therefore, targeting sleep quality is a good measure of preventing neurocognitive disorders.

Finally, there is a positive connection between increasing social relationships and preserving brain matter. One study showed a significant increase in brain volume on magnetic resonance imaging with only one-hour group session three times a week. The reverse is also true with increased all-cause dementia in patients with social isolation. Lifestyle changes have a substantial impact on brain health. Therefore, the focus should always be on prevention as the primary treatment tool.

D140 Student Presentation
Caregiver Burden Assessment in Assisted Living Facilities
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Background:

With our aging population, caregiver burden is an increasing issue. Despite decreased physical demands, caregivers for people residing at Assisted Living Facilities (ALF) continue to experience caregiver burden. For these caregivers, burden can arise from medical decision-making, which is more complex if patients have multiple chronic conditions or dementia. While most studies analyze the association of burden with certain diseases, caregiver burden has not been evaluated for those caring for loved ones in ALFs. Our study aims to assess the burden in this population.

Methods:

We performed a cross-sectional study of caregivers of UT Southwestern patients in the Care of the Vulnerable Elderly house call program living in Dallas. Each caregiver was sent an electronic survey that assessed demographics, patient living situation, and duration of caregiving, along with the Short Form Zarit Burden Interview (ZBI-12). Caregivers who did not respond were called and asked to fill out the survey over the phone or via email.

Results:

Seventy-four of 364 surveys were completed. The majority of caregivers were white (81%), females (72%) with a college degree or higher (80%). About 93% were first-degree relatives or spouses. Over 50% of caregivers had been caring for their relatives for over 5 years. Men were found to have a higher personal strain (19.7) on the ZBI-12. Higher strain was associated with higher education (p-value = 0.043). Suprisingly, caregivers' strain for Alzheimer's disease (11.8 vs 16.2; p-value = 0.046) was lower compared to others. However, the number of chronic conditions was not associated with a higher personal strain (R-value = -0.4295)

Conclusion:

No significant difference in caregiver burden was identified for caregivers of patients in ALFs compared to other caregiver settings. Surprisingly, the ALF setting did not seem to lower the caregiver burden except for caregivers of patients with dementia. It is possible that the difference in caregiver burden for people with dementia was related to the physical support provided at ALFs. With our limited sample size, further studies will be needed to validate these results. Importantly, physicians need to continue to assess for caregiver burden, even if a caregiver is supporting a loved one living in an ALF.

D141 Student Presentation

What's in a Fall? A Study on the Influence of Age, Fall History, Independent Living, and Hearing Quality on Future Fall Risk

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Background: Falls are a major source of injury in the elderly and may result in disability, hospitalization, poor quality of life, loss of autonomy, or financial strain. While falls increase with age, a number of factors could affect fall risk.

Objective: We analyzed a number of factors in addition to the ones used for fall risk prediction to determine their importance in predicting fall risk. We hypothesized that increasing age, loss of independence, hearing loss and prior fall history will independently increase fall risk.

Methods: Participants (n = 97) were recruited from Isabella, Clare, and Gratiot County. Bilateral hearing quality was assessed using the Whisper Test, which rates the ability to hear a series of three letter or number phrases. Residence status was acquired by questionnaire. The Stay Independent Brochure (SIB) was used to gather fall history and assess fall risk.

Results: Hearing quality (p = .005) significantly predicted fall risk in older adults in linear regression analyses. A multiple regression model including all variables of interest revealed that age (p <.001), falls status (p <.001), and residence status are significant predictors of fall risk. Participants living in assisted-living facilities had a higher fall risk as compared to those living independently and alone by almost 3 points (p = .008; B = -2.993); and to those living independently with a spouse by almost 2 points (p = .015; B = -2.725). Also, participants who fell in the last year had a higher risk for repeated falls compared to those that did not report a fall (B = 3.993).

Conclusions: Fall risk has a significant association with loss of independence, and prior fall history. Age and hearing quality also significantly predicted risk of fall.

Significance: This study underscores the importance of preventing falls by focusing on modifiable factors to ensure that older adults are able to live independently longer. This promotes older adults' well being and prevents morbidity from falls.

D142 Resident Presentation

Perioperative Geriatric Co-Management in Cardiothoracic Surgery: A Pilot Study

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Background: As the population ages, the demand for surgical services will increase with the highest projections in 5 years being vascular (31 %). Survival estimates of octogenarians undergoing coronary artery bypass surgery (CABG) and open valve surgery have been found to be 90.4% at 5 years but with high rates of morbidity and functional decline. The objective of this pilot study was to evaluate outcomes of perioperative geriatric co-management in patients age 75-79 at high surgical risk (STS score > 3%) and those age 80 and over who underwent CABG and/or open valve replacement.

Methods: Prospective, cohort quality improvement study which followed high-risk elders (age 75+ and/or STS score > 3%) in the intervention group who underwent either CABG or open valve replacement. Intervention entailed co-management by a geriatrician in the perioperative period. Primary outcomes included hospital length of stay (LOS), mortality, discharge location and blood transfusion needs. The comparison group included historical controls, similar with regards to age and STS risk, who did not have geriatrics co-management.

Results: Intervention group contained 28 while there were 71 in the comparison group. Average age of the intervention group was 81.4, compared to 81.9 in the comparison group (p = 0.47). Approximately 53.5% (15/28) of the intervention group was discharged home, compared to 61.5% (40/65) of the comparison group (p = 0.63). Fewer patients died in the intervention group, 3.6% (1/28) compared to 8.5% (6/71) (p = 0.41). There was no difference in number of patients needing a blood transfusion (17/28 vs. 35/71 or 49.3%, p = 0.28). On average, those who were transfused in the intervention group required fewer transfusions (2.2 vs. 3.2). LOS was no different between the intervention group at 15.7 days as opposed to 11.1 (p = 0.11). Average STS score was 4% in the intervention group, compared to 6.1% (p = 0.49)

Conclusions: Comprehensive geriatrics co-management in the perioperative period of patients undergoing CT surgery demonstrated no difference with regards to mortality, discharge disposition, need for blood transfusion or length of stay. Larger studies are needed to further develop interventions and improve outcomes among older adults undergoing major surgery.

D143 Student Presentation

Investigation of Lipofuscin-Induced Senescence in Retinal Cells

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Background: Lipofuscin (LF), the waste material that accumulates in the lysosomes of non-dividing cells such as retinal pigment epithelium (RPE) cells, is considered a marker of aging and is implicated in the progression of retinal diseases, such as age-related macular degeneration (AMD). The underlying mechanisms by which LF affects the retina are not well understood. Our goal is to identify pathways and cellular processes triggered by LF.

We hypothesized that RPE cells loaded with significant LF buildup undergo senescence (an age-related process by which a few cells secrete soluble factors and induce the decay of neighboring cells). Through paracrine effects, these factors accelerate the aging of neighboring photoreceptors and potentially other retinal cell types. If this hypothesis holds true, it will yield novel drug targets to prevent and treat conditions associated with LF buildup.

Methods: We used RPE cell cultures fed with A2E, the most abundant lipid component found in ocular LF, to model LF buildup in vitro. Various amounts of A2E were added to the media to promote its incorporation into the lysosomes of RPE cells. At 1, 5, and 12 days, cells were fixed and stained to detect senescence-associated beta-galactosidase activity and p16, two markers of senescence, under the microscope.

Retinas from >2 yrs, 1 yr, and 1-month old mice with mutations in ABCA4 and RDH8 genes, which exhibit enhanced LF buildup, were dissected and mounted in 2% agarose, cross-sectioned, and stained using anti-p16 (senescence marker) and Cd11b (myeloid marker) monoclonals and fluorescently labeled secondary antibodies. Slides were imaged under a confocal microscope.

Results: In cell cultures, the degree and rate of senescence (shown by beta-galactosidase stain) increased with lipofuscin levels. In the mice model, we observed increased LF and p16 co-localization

in RPE as the mice aged. Microglial infiltration of the RPE appeared before senescence (p16) and also increased with age.

Conclusions: Cell culture models support the notion that increased levels of lipofuscin cause senescence. Mouse retinal cross-section images show that the RPE and microglial cells positive for the senescence marker p16 display high autofluorescence levels indicative of a connection between lipofuscin buildup and the occurrence of senescent areas.

D144 Student Presentation

Association of social support and perceived disability in chronic low back pain

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Background: Social support can be defined as a person's understanding of available social resources and can have a positive impact on reducing disability. The objective of our study was to evaluate the baseline association between social support and perceived disability of older Veterans with chronic back pain in the Aging Back Clinics Trial.

Methods: Veterans completed self-reported surveys regarding their perceived disability, pain, and social interactions. Perceived disability was assessed using the Oswestry Disability Index, measure of how pain affects everyday function. Social support was assessed using the Medical Outcomes Study Social Support Survey, including types of social support received (emotional, tangible, affectionate, positive social interaction, distraction from pain) as well as a total score. A Pearson correlation coefficient was calculated to assess the relationship between perceived disability and social support.

Results: 262 Veterans (age 65-89 years, 95% male) classified themselves as not disabled-7.6%, mildly disabled-46.9%, moderately disabled-36.3%, and severely disabled-9.2%. There was a significant negative correlation shown between each type of social support (emotional r=-.13, p=.04; tangible r=-.14, p=.02; affectionate r=-.14, p=.02; positive social interaction r=-.16, p=.009; distraction from pain r=-.13, p=.03) as well as total score (r=-.16, p=.008) and perceived disability.

Conclusion: Our study found that the different types of social support were significantly correlated with self-perceived disability among the study participants. Veterans with high levels of social support perceived themselves as less disabled, while Veterans with low levels of social support perceived themselves to be more disabled. Future interventions to increase social support for older Veterans with chronic back pain may lead to lower self-perceived disability.

D145 Student Presentation

Use of Chart-Based Frailty Assessment in Heart Transplant Candidates

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Background

Frailty has been associated with decreased 1-year post-transplant survival in heart transplant (HT) recipients, yet no ideal frailty measure has been established in this population. We examined the impact of frailty as measured by chart-based and physical frailty assessments on clinical outcomes including listing, transplantation, post-HT readmission, and mortality.

Methods

Physical frailty was measured using the Short Physical Performance Battery (SPPB) and Fried Frailty Phenotype (FFP). Chart-based frailty was evaluated by the Frailty Risk Score (FRS) and Frailty Index 20 (FI20), which include 16 and 20 biopsychosocial components, respectively. Consecutive HT candidates aged 55 years or older were included.

Results

175 HT candidates were reviewed from 2018-2021, (mean age: 62.2±7.9). The majority of patients were male (76.8%) and non-white (59%) with non-ischemic cardiomyopathy (57%) as the etiology of heart failure. Frailty as measured by all assessment tools was associated with decreased likelihood of being listed for transplantation. Patients who failed to undergo transplantation had lower SPPB scores (5.84 versus 7.59, $p<0.03$), indicating greater frailty. Candidates who died within one year of evaluation were more frail with higher FFP (3.53 versus 2.50, $p<0.01$) and lower SPPB scores (4.42 versus 7.58, $p<0.0007$). Patients who were readmitted within 6 months post-transplant had higher frailty scores as measured by FRS (6.46 versus 5.26, $p<0.01$).

Conclusions

Chart-based and physical frailty assessments were associated with various clinical outcomes, including waitlist status, transplantation, death, and readmission. Both chart-based and physical frailty assessments have potential to effectively characterize frailty in HT recipients and predict successful transplantation versus adverse events such as death. These findings may inform pre and post-operative interventions.

D146 Student Presentation

Geriatric Renal Transplant Co-Management Program: A New Model to Optimize Pre-Transplant Care and Evaluation for Frail Older Adults

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Background: Older transplant patients have higher rates of adverse post-transplant outcomes. The Renal Transplant Co-Management (RCOM) program is an interprofessional collaboration of surgeons, geriatricians, and social workers, to medically and psychosocially optimize older renal transplant candidates by providing

a comprehensive geriatric-centered frailty assessment with complementing medical and psychosocial interventions prior to renal transplant listing decision. The RCOM assessment aids the surgical team in deciding whether to list a patient for transplant. Understanding how geriatric and frailty assessments factor into transplant eligibility may be clinically valuable in pre-transplant care.

Methods: Fifty-five patients from a single metropolitan hospital were evaluated during the study period (1/1/22 to 6/16/22). RCOM assessment included frailty (Clinical Frailty Scale/CFS), functional status (Karnofsky score, Katz Index, Lawton-Brody) and cognition (MOCA) – factors that the renal transplant team considers in listing a patient for surgery (i.e., listed) or not (i.e., ineligible/removed from the list).

Results: In this cohort, 20 patients (36.4%) were female. Of the ineligible/removed (n=10) and listed/transplanted (n=45) patients, mean age was 74.7 (4.8) and 72.5 (3.8) respectively, with no differences in age, gender, race, education, or health insurance between groups. Patients who were listed/transplanted had a higher Lawton-Brody instrumental activities of daily living (IADL) score compared to those who were not listed (p=0.025, t-test). CFS (p=0.118), Karnofsky (p=0.09), Katz Index (p=0.074), and MOCA (p=0.094) scores were similar between groups but approached statistical significance despite a small sample size.

Conclusions: Functional status as measured by IADL may be a significant factor considered by the renal transplant team in determining the transplant eligibility of older adults. Ongoing study and a larger sample size may enable better delineation of specific measures of physical and cognitive functions that impact eligibility for transplant listing in frail older adults.

D147 Student Presentation

Polypharmacy and medication utilization over time among older adults with inflammatory bowel disease

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Introduction: As the prevalence of older adults with IBD is rising, more patients are prone to polypharmacy which has been shown to adversely impact clinical outcomes. We aimed to determine the predictors of polypharmacy in older adults with IBD and identify trends in medication utilization.

Methods: We performed a retrospective review of patients with IBD ≥ 60 years-old who obtain long term care (≥2 visits over ≥1 year) at a large tertiary care center in NYC from 6/1/13 to 7/15/22. Medications and comorbidities were manually abstracted from first and last IBD clinic visits. Frequency of polypharmacy and severity of polypharmacy, any potential drug interactions (PDI), and potentially inappropriate medications (PIM) (as informed by the AGS 2019 Beers Criteria®), were captured at first visit, with comparisons also made between first and last visit. Polypharmacy and severe polypharmacy were defined as taking ≥5 and ≥10 medications, respectively. Logistic regression was used to estimate the adjusted association between patient characteristics and polypharmacy at first visit.

Results: A total of 143 patients were included, with 71 (50%) having Crohn's disease, 62 with ulcerative colitis (43%), and 10 (7%) with indeterminate colitis. Mean age at first visit was 67 years-old, and 39% of patients were taking at least one Beers PIM. Older adults were taking on average more than 7 medications at initial visit, with 77% experiencing polypharmacy. When subclassified by severity, this corresponded to 27% having severe polypharmacy. This number increased to 38% at the last visit. Patients were more likely to have at least one contraindicated or major PDI (48% vs 40%, p=0.019) at the last visit compared to the first visit. On multivariable analysis, patients with a comorbidity score of ≥2 had a higher odds of polypharmacy as compared to patients with no comorbidities ($_{adj}$OR 5.22, 95% Cl, 1.41-19.38).

Conclusions: More than 75% of older adults with IBD experienced polypharmacy, with 40% having a Beers PIM at first visit. The risk of a severe medication interaction increased over time, suggesting that future studies should evaluate interventions focused on medication review and deprescribing.

D148 Student Presentation

The Impact of Surgery on Mortality in Elderly Patients With Proximal Humerus Fractures: A Retrospective Analysis of Medicare Beneficiaries

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Background

Proximal humerus fracture (PHF) is the third most common type of fracture in elderly patients and has been identified as a risk factor for 1-year mortality. The purpose of our study was to determine if surgical treatment for PHF in elderly patients is associated with higher mortality compared to nonoperative treatment.

Methods

This was a retrospective study using the Centers for Medicare and Medicaid Services Limited Data Set (CMS-LDS) between the years 2016-2020. All patients were over the age of 65. Patients with a diagnosis of PHF were identified using the International Classification of Diseases, 10th Revision (ICD-10) diagnosis code S42.2X. The surgical cohort was defined as any patient undergoing open reduction internal fixation (ORIF), hemiarthroplasty (HA), or total shoulder arthroplasty (TSA) within 30 days of initial PHF diagnosis. A multivariate logistic regression model was created to compare mortality between surgical and nonoperative groups while controlling for patient demographics and comorbidities.

Results

In total, 163,672 patients were included in the study. The mean age was 78.1 years, and 131,125 patients (80.1%) were female. 142,439 patients (87.0%) were treated nonoperatively, 6.3% underwent TSA, 5.9% underwent ORIF, and 0.8% underwent HA. Patients in the nonoperative group were older (78.5 years; p<0.001) and less likely to be female (79.7%; p<0.001). The 1-year mortality rates were higher in the nonoperative group (15.6%; p<0.001) than in the TSA (6.0%), ORIF (7.0%), and HA (8.6%) groups. Logistic regression analysis showed that TSA (OR: 0.43; 95% CI: [0.39, 0.47]; p<0.001), ORIF (OR: 0.55; 95% CI: [0.51, 0.60]; p<0.001), and HA (OR: 0.59; 95% CI: [0.48; 0.72]; p<0.001) remained associated with significantly lower 1-year mortality compared to nonoperative treatment.

Conclusions

When compared to nonoperative treatment, surgery was associated with lower 1-year mortality rates following PHF diagnosis which suggests that surgical treatment is protective against short-term mortality in elderly patients with a PHF.

D149 Student Presentation

Neighborhood Socioeconomic Disadvantage is Associated with Frailty in a General Thoracic Surgery Patient Population

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INTRODUCTION: Frailty is a syndrome characterized by decreased physiologic reserve and its presence predicts poor outcomes in surgical patients. Neighborhood disparities may be as important to surgical outcomes as individual patient characteristics. We evaluated the association of the Area Deprivation Index (ADI) and Social Vulnerability Index (SVI), two geospatial atlases that provide a multidimensional evaluation of neighborhood socioeconomic status, to frailty in a general thoracic surgery population.

METHODS: A retrospective single-institution study of patients undergoing routine frailty screening in a general thoracic surgery clinic was conducted from December 2020 to August 2022. Frailty was measured using Fried's Frailty Phenotype (FFP) and Modified 5-Item Frailty Index (mFI-5). National ADI and SVI percentiles were determined using patient ZIP and census tract codes. Univariable and multivariable logistic regression models were created to predict FFP and mFI-5 (α=0.05).

RESULTS: Of 372 screened patients, 41% (154) were women, median age was 68 (63-74), and 46% (170) identified as Hispanic, non-Hispanic Black, or other. Across ADI and SVI quartiles, higher number of comorbidities, FFP, and mFI-5 was associated with increasing deprivation and decreasing median income (p<0.01). In univariable regression, the two most deprived quartiles of ADI and most deprived quartile of SVI were independently associated with increased frailty by FFP (OR 5.7, p <0.01 and OR 3.1, p <0.01, respectively) and mFI-5 (OR 2.4, p<0.01 and OR 1.9, p=0.01, respectively). When controlling for age, sex, number of comorbidities, and cancer history, frailty was associated with the worst two quartiles of ADI (OR 2.8, CI: [1.46-5.42], p <0.01) and the worst quartile of SVI (OR 2.5, CI: [1.19-5.12], p=0.01).

DISCUSSION: Thoracic surgery patients who live in deprived neighborhoods are more likely to be frail. Interventions to reduce frailty should also address social determinants of health and neighborhood disadvantage.

D150 Student Presentation

Diagnostic Performance Comparison of Conventional Radiography to Magnetic Resonance Imaging for Suspected Osteomyelitis of the Extremities: A Multi-Reader Study

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Background: Osteomyelitis (OM) is an infection of the bone due to contiguous or hematogenous microbial seeding. OM is estimated to be the cause of 1 in 675 US hospitalizations, with the majority of cases occurring in older adults. Furthermore, OM resulting from diabetic foot ulcers (DFU) costs Medicare $13 billion dollars annually due to the treatment measures needed to manage the condition. Due to these health complications and associated expenses, accurate and timely diagnosis of OM is vital. We conducted a systematic large consecutive sample multi-reader study in which we directly compared plain film radiographs and MRI in diagnosing extremity OM and soft tissue abscesses in pathology proven cases.

Methods: In this cross-sectional study, three musculoskeletal fellowship trained radiologists evaluated cases of suspected OM in two rounds – first using radiographs (XR), then again four weeks later with conventional MRI. Previously described radiologic signs for OM were recorded. Each reader recorded individual findings on both modalities and rendered a binary diagnosis along with certainty of final diagnosis on a confidence scale of 1-5. This was compared with the pathology-proven diagnosis of OM and no OM to determine diagnostic performance. Intraclass correlation (ICC) and Conger's Kappa were used for inter-reader assessment.

Results: XR and MRIs of 213 pathology proven cases were included in this study, with 66 being negative for both OM and abscess, 49 diagnosed with both soft tissue abscess and OM, 30 positives for OM only, and 68 with soft tissue abscess. 139 were males (age= 51.1 +/- 14.7 years, mean +/-SD) and 74 females (age= 51.3 +/- 13.6 years, mean +/-SD) with bones of interest in the upper and lower extremities in 29 and 184 cases, respectively. MRI showed significantly higher sensitivity and NPV than XR (P<0.001 for both metrics). Conger's Kappa for OM diagnosis was 0.62 and 0.74 on XR and MRI, respectively. Reader confidence improved slightly from 4.54 to 4.57 when MRI was used.

Conclusion: MRI is a diagnostically more effective imaging modality than XR for finding extremity osteomyelitis with better inter-reader reliability.

D151 Student Presentation

Foot Symptoms are Associated with Reduced Time to Mortality: the Johnston County Osteoarthritis Project

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Background: Osteoarthritis is a common condition affecting older adults worldwide, and the effects of joint symptoms can be disabling. Adults with foot symptoms (i.e., pain, aching, or stiffness), versus those without, may have reduced time to mortality. The purpose of this study was to evaluate whether foot symptoms were independently associated with all-cause mortality in older adults.

Methods: We analyzed data from 2613 participants from the Johnston County Osteoarthritis Project, a longitudinal population-based cohort. Participants completed questionnaires at baseline to determine presence of foot symptoms and relevant covariates. Baseline walking speed was measured via an 8-foot walk test. To examine the association of foot symptoms with mortality risk, hazard ratios (HR) and 95% confidence intervals (CI) were calculated using Cox regression models adjusted for potential confounders (demographics, comorbidities, physical activity, and knee and hip symptoms).

Results: We observed 818 deaths over a period of 11.4 years. At baseline, 37% of participants (65% women, 33% Black, mean age 63 years, mean BMI 31 kg/m^2) had foot symptoms. Moderate to severe foot symptoms were associated with reduced time to mortality over follow-up after adjustment for all confounders included in the fully adjusted model (HR=1.30, 95%CI=1.09-1.54). Importantly, this association was not altered by walking speed, despite its known associations with pain and mortality.

Conclusions: Individuals with moderate to severe foot symptoms had an increased risk of all-cause mortality compared to those with no foot symptoms. These effects were independent of key confounders and were not moderated by walking speed. Early identification of moderate foot symptoms may prove useful in reducing excess mortality. Future studies could assess whether modifiable *mediators* (for example weight, depression, physical function, sleep) of this association exist and estimate both direct and indirect effects of this association.

D152 Student Presentation

Age-Related Changes in Visual Field Reliability

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Background: Evaluating changes in visual field (VF) testing is critical for monitoring progressive diseases like glaucoma. However, few studies have established the exact relationship between VF reliability and age. Previous research regarding the linearity of VF sensitivity with age is inconclusive (Spry et al. 2001). A recent study by Shirakami and colleagues concluded that in healthy subjects, certain VF parameters decline consistently with age until a sharp drop in the 8th decade of life, while others remain stable after middle age. We

characterized these age-related VF reliability changes in glaucomatous patients, where VF changes are especially important in monitoring disease progression and guiding treatment options.

Methods: In this retrospective study, we used data from 403 pre-glaucomatous and glaucomatous patients seen in the outpatient clinic at UT Southwestern who had a Humphrey Visual Field Test done between 2019-2022. Patient demographics, exam findings, optical coherence tomography data, and VF test data were collected. VF indices, including mean deviation (MD), pattern standard deviation (PSD), fixation losses (FL), false positives (FP), and false negatives (FN) were stratified into 6 different groups by age. Kruskal-Wallis tests were performed to compare each VF reliability index to age. We also compared VF reliability between patients below and above age 75 using Mann-Whitney U tests.

Results: FNs, MDs, and PSDs exhibited significant age-dependent changes ($p=0.0004$, $p<0.0001$, $p=0.0018$, respectively), while FLs and FPs did not show age-dependent changes. FNs steadily increase after age 50, with the sharpest increase after the 8th decade of life. When comparing results in patients above and below age 75, there were no significant differences in FLs and FPs, but FNs, MDs, and PSDs showed significant decline in the older age group ($p=0.0055$, $p=0.0005$, $p=0.0004$, respectively).

Conclusions: Aging most significantly affects the reliability of FN, MD, and PSD. Deteriorating macular function, increased comorbidities, and technical difficulties with testing associated with aging may be factors contributing to the decline of reliability of certain VF parameters. Understanding which VF test parameters are most reliable for the older patient helps inform how to best screen and follow older adults with glaucoma, optimizing their treatment.

D153 Resident Presentation
A Novel Approach to Addressing Neuropsychiatric Symptoms in the Emergency Department: Code DICE

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Background:

Neuropsychiatric symptoms (NPS) of dementia and delirium, including confusion, disorientation, refusal of care, and agitation, frequently occur in older adults presenting to the emergency department (ED). We could not identify alternative behavioral approaches for NPS in the acute care setting in the literature. The DICE Approach^{TM} (Describe, Investigate, Create, Evaluate) method was developed to address outpatient management of NPS.

Methods:

We assembled an interprofessional team from Emergency Medicine, Geriatrics, Psychiatry and Pharmacology to design a patient-oriented protocol for a new rapid-response team in the ED. We adapted the DICE Approach^{TM} to combine behavioral and pharmaceutical interventions to address NPS. A new nursing record was created in the EMR to capture this activity.

Results:

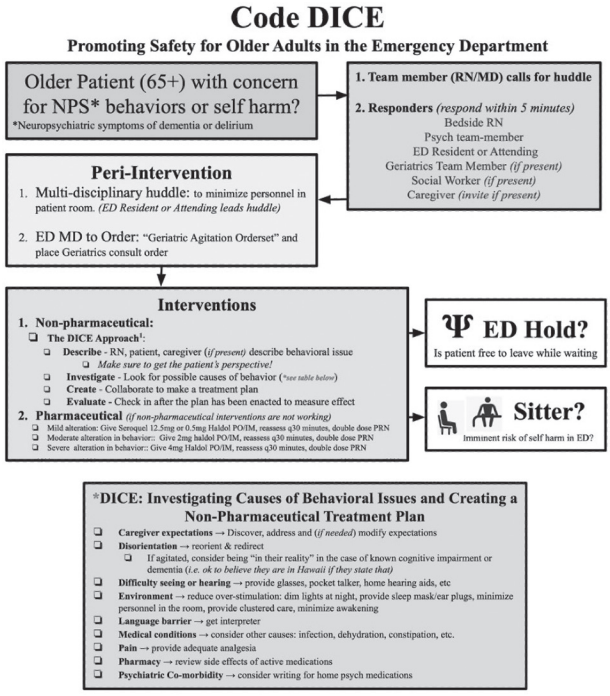
The Code DICE rapid response team was assembled 7 times in 6 weeks. NPS were identified earlier in the ED course. Behavioral approaches alone were unsuccessful in some cases, however, there were no injuries to patients or staff and less physical restraint utilization. Nursing EMR documentation was infrequently completed.

Conclusion:

A rapid response team to manage NPS in the ED is feasible. Further study is necessary to identify the optimum mix of interventions for NPS.

Reference:

Gerlach LB, Kales HC. 2018



Code DICE Process Flowchart

D154 Student Presentation, Encore Presentation
A rare case of Kartagener Disorder

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Introduction: Kartagener syndrome(KS) subdivision of primary ciliary dyskinesia is a rare autosomal recessive genetic ciliary disorder with an estimated incidence of 1 in 30,000 live births1. It comprises a triad of situs inversus (50%), bronchiectasis, and sinusitis2 and results in recurrent sinopulmonary infections and infertility. The diagnosis of the disease is complex with no standard gold test and treatment options include aerosol administration, nasal steroids, inhaled bronchodilators, positive expiratory pressure masks, forced oscillation techniques, and physical activity. The prognosis of KS is good, with a normal life expectancy.

CASE: A 48-year-old female with a past medical history of Kartagener syndrome with situs inversus, bronchiectasis with recurrent pneumonia, and GERD, presented to a tertiary hospital center with complaints of shortness of breath and cough for one month. She was seen by her pulmonologist and received a 2-week course of amoxicillin with no improvement. She was hemodynamically stable, and CT thorax without contrast showed multifocal pneumonia. Pseudomonas was suspected, given her history, and she was started on tobramycin and cefepime in the hospital, as well as a course of prednisone. The patient continued to improve and was discharged home.

Conclusion: Patients with Kartagener syndrome presenting with persistent cough and requiring recurrent hospitalization for sinus infections and lower respiratory tract infections need special considerations for treatment and care. Additionally, patients with infertility or a history of ectopic pregnancy should strongly consider undergoing evaluation for the disease. Although there are no particular diagnostic criteria or cure for this clinical entity, early recognition and treatment can help prevent recurrent admissions, unnecessary testing, and long-term complications.

References

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2) Tadesse A, Alemu H, Silamsaw M, Gebrewold Y. Kartagener's syndrome: a case report. J Med Case Rep. 2018;12(1):5. Published 2018 Jan 10. doi:10.1186/s13256-017-1538-2

D155 Resident Presentation

Creation of the GERI-VET ED Pharmacist Medication Review Consult Service

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Background

The Veterans Affairs Salt Lake City (VASLCHCS) emergency department (ED) is striving to ensure older patients receive well-coordinated, quality care at every ED encounter. The Geriatric Emergency Room Interventions for Veterans (GERI-VET) program was adopted to help optimize the care geriatric veterans receive. Integrating a pharmacist (PharmD) into a specialized interdisciplinary geriatric ED team allows the medication experts to complete comprehensive medication reconciliations to minimize use of potentially inappropriate medications (PIM) and optimize medication prescribing based on patient's goals. The objective of this quality improvement project is to determine which age; VIONE, a VA specific initiative that stratifies a patient's risk for polypharmacy related adverse effect; and number of PIMs would be optimal for a GERI-VET ED PharmD Medication Review Consult.

Methods

A retrospective medication use evaluation (MUE) was conducted to identify all patients ≥ 65 years who had an ED visit and were taking ≥5 medications from 2/14/22-3/14/22. Data was extracted from the VIONE dashboard via the VA National Academic Detailing service. Using data from this dashboard, patient were stratified by their age, VIONE Risk Primary Care Dashboard score, and # of PIMs. Various combinations were evaluated to determine approximate total daily consults. Goal patient capture was determined based on existing ED PharmD staffing.

Results

Given VHASLCHCS ED PharmD workload, the results of the MUE indicates optimal patients to target for ED PharmD Review Consult Service include noninstitutionalized veterans, age ≥75 years, prescribed ≥15 medications, VIONE Risk Primary Care Dashboard score ≥7, and ≥1 PIM per 2019 AGS Beers Criteria, leading to roughly 29 consults per month.

Conclusion

MUE results show ED patients at the VASLCHCS are in need for PharmD medication review to address polypharmacy and PIM use. ED PharmD consult visits will be conducted from November 2022-April 2023. In collaboration with ED providers, the ED PharmD will complete a thorough medication reconciliation, identify risks associated with medication compliance, make recommendations to optimize medication therapy for individualize safe medication prescribing, and place appropriate referrals.

D156 Student Presentation, Encore Presentation

Association of Prurigo Nodularis and the Development of Dementia in Geriatric Patients: A Multi-Center Cohort Study

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BACKGROUND: Prurigo Nodularis (PN) is characterized by pruritic nodules distributed symmetrically over extremity surfaces. This inflammatory skin condition has been associated with systemic inflammation and several systemic conditions, such as chronic kidney disease. Although cases of PN are seen throughout many age groups, most cases present in elderly patients between the ages of 51 and 65. Studies have shown chronic inflammation to play an important role in the pathogenesis of dementia. Thus, PN may be considered a risk factor associated with the development of dementia and used as an indicator for earlier identification of cognitive impairment in elderly patients. Our study aimed to investigate the link and risk between geriatric patients with PN and the development of dementia.

METHODS: Diagnoses of PN were identified using the International Classification of Diseases, tenth revision, clinical modification (ICD10-CM) code L28.1. Patients at or above 65 years of age, with diagnosed PN, 1-year of follow-up prior to the index date, and 1 year of continuous follow-up after the index date were included. Cohorts were balanced at baseline for the following covariates: sex; ethnicity/race; major depressive disorder; primary hypertension; ischemic heart diseases; diabetes mellitus type 2; gabapentin; diphenhydramine; hydroxyzine; pregabalin; doxepin. Primary outcome measures were 1-year diagnosis of dementia, defined using ICD-10-CM codes F01-F03.

RESULTS: The 1-year risk of dementia in older adults with PN was 1.252%, while it was 1.012% for older adults without PN. Absolute risk difference between the two groups was 0.24%. A Kaplan-Meier survival curve showed poorer survival in elderly patients with PN than those without PN.

CONCLUSION: Our results expanded upon a smaller retrospective study which found cognitive impairment of vascular and degenerative origin to be present in inpatient PN population. Our findings indicate that elderly patients with PN have a small increased risk of incident dementia when compared to elderly patients without PN. These findings suggest that the chronic inflammation associated with PN could be a potential pathogenic player in the development of dementia. Future research could investigate the impact of earlier screening for cognitive impairment in elderly patients with PN, and the possible consequent impact on earlier diagnoses of dementia.

D157 Resident Presentation

Clinical and Patient-Centered Outcomes in Older Patients Discharged to Postacute Care After a Trauma Admission

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Background

Older hospitalized trauma patients are often discharged to skilled nursing facilities (SNF); however, the relationship between post-discharge outcomes and discharge locations are understudied in this population. We sought to compare post-discharge outcomes (i.e., mortality, readmission, and days at home) among older trauma patients discharged to SNF versus home with home health care.

Methods

We conducted a retrospective cohort study using Medicare claims data of adults ≥65 years discharged after a trauma admission between January 1, 2014, and December 31, 2015. The primary outcome was mortality within a year of hospital discharge. Secondary outcomes included 30-day mortality, 30-day readmission, and days at home during the 365-day period following hospital discharge. To address confounding by indication, inverse probability weighting using propensity score was performed. Analysis was stratified by frailty status.

Results

There were 447,797 patients in our cohort (mean age [SD], 83.8 [8.1] years; 70.2% female; 91.9% white): 80.9% discharged to a skilled nursing facility and 19.1% to home health. Compared to patients discharged to SNF, patients discharged to home health care had lower risk of 30-day mortality (RR [95% CI], 0.57 [0.54, 0.61]; RD [95% CI], -2.32 percentage points [-2.52,-2.12]), 1-year mortality (RR [95% CI], 0.72 [0.70, 0.74]; RD [95% CI], -5.16 percentage

points [-5.52, -4.78]), and more healthy days at home in 1 year (16.5 days; 95% CI,15.4-17.7), but higher risk of 30-day readmission (RR [95% CI], 1.09 [1.06-1.12]; RD [95% CI], 1.13 percentage points [0.79, 1.46]). Among patients who were frail, those discharged to home health had better outcomes for all three measures compared to those discharged to SNF.

Conclusions

Discharge to home with home health care was associated with lower mortality, more healthy days at home, and yet higher readmission rates. These results should be considered when discharge planning for older trauma patients.

D158 Student Presentation, Encore Presentation
Risk of Periprosthetic Fracture in Uncemented Total Hip Arthroplasty is Significantly Higher in Patients 74 Years and Older

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Background

Uncemented elective total hip arthroplasty (THA) in the older population remains controversial due to concern about the increased risk of periprosthetic fractures (PPF). We aimed to determine specific age cutoffs where surgeons should consider cemented over uncemented THA to reduce PPF risk.

Methods

Older patients aged between 65-85 years who underwent elective primary cemented or uncemented THA from 2010 to 2020 were identified using the PearlDiver Database. Age cohorts were identified using the stratum-specific likelihood ratio (SSLR) methodology. Univariate analysis was conducted on demographic characteristics comorbidities, and postoperative complications using Pearson chi-square analysis. Cox proportional hazard's model and logistic regression model was used for multivariate analysis, and Kaplan-Meier analysis was used to estimate survival free period from PPF in both age cohorts.

Results

In total, 52,165 patients over the age of 74 underwent uncemented THA and 29,520 underwent cemented THA. In comparison, 46,572 patients between the ages of 65 to 73 underwent uncemented THA and 6,487 underwent cemented THA. Univariate analysis demonstrated patients between 65 to 73 who received an uncemented THA had a lower incidence of PPF than those who underwent cemented THA. Patients over 74, who underwent an uncemented THA were found to have a higher incidence of PPF. Multivariable Cox proportional hazards analysis confirmed patients aged 65 to 73 who underwent uncemented THA demonstrating a lower hazard ratio for PPF compared to those who underwent cemented THA. Patients over 74 years old who underwent uncemented THA demonstrating a higher hazard ratio for periprosthetic fracture.

Conclusion

Using stratum-specific likelihood ratio analysis, we identified that patients specifically those aged 74 and higher who receive an uncemented THA are at a significantly increased risk of PPF. This age threshold should be considered alongside other markers of poor bone health to help surgeons optimize which patients may be better served with cemented THA. Further research should elucidate why uncemented THA is associated with higher PPF in older adults but lower PPF in younger adults.

D159 Student Presentation
Cognitive burden of anticholinergic medications in the older adults with HIV

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Background: Polypharmacy is prevalent among the older adults (≥50 years) with HIV due to HIV and chronic comorbidities. Medications with anticholinergic activity have been associated with adverse impact on cognition, physical function, and an increased risk of mortality among older adults. Our hypothesis is that cognitive burden from anticholinergic medications is associated with cognition and health-related quality of life in the older adults from the BICEP Study (NCT05064020).

Methods: Cognitive burden was quantified using the Anticholinergic Drug Scale (ADS) for individual medications to generate a composite score. The ADS ranged from 0 to 3, a higher score indicating more anticholinergic activity. A medication review was performed to assess the cognitive burden as a sum of ADS. Association between cognitive burden, neurocognition, and quality of life was evaluated using the Montreal Cognitive Assessment (MoCA) and 20-question HIV Symptom Index (HSI).

Results: 147 participants (69.7% male) with a median age of 50 (IQR: 37-59) on bictegravir/emtricitabine/tenofovir alafenamide were included. The average number of non-HIV drugs was 7.93, representing a polypharmacy prevalence of 72.8%. 65 participants (49.2%) were on >1 ADS drug, with an average composite of 1.47. Benzodiazepines were the most prescribed (ADS=1, 12.1%) followed by cyclobenzaprine (ADS=2, 11.4%) and hydroxyzine (ADS=3, 9.1%). Male sex ($p=0.008$) and age ($p=0.001$) were associated with ADS drug use as well as polypharmacy ($p<0.0001$). Neurocognitive impairment (MoCA<26) was associated with cognitive burden ($p=0.038$), but not after adjusted for age, gender, and polypharmacy. Significantly higher HSI were noted among ADS group (23 IQR: 6-25 vs. 13 IQR: 11-37, $p=0.006$), indicating lower health-related quality of life. HSI was not associated with the ADS drug use after an adjustment of age, gender, and polypharmacy.

Conclusions: Cognitive burden from anticholinergic medication use is common in the older adults with HIV and may be associated with cognitive function changes. The effect of cognitive burden warrants further evaluation to benefit polypharmacy management.

D160 Student Presentation
Intraoperative Hypotension; its Association with Frailty and Adverse Surgical Outcomes among Older Adults with Cancer.

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Background: Intraoperative hypotension (IOH) has been associated with adverse surgical outcomes. However, the data is limited in older adults with cancer. In this study we aim to assess the relationship between IOH and adverse surgical outcomes in a cohort of older adults with cancer.

Methods: IOH was defined as 20% reduction from the baseline. Adverse surgical outcomes were a composite outcome of major complication, emergency room visit, or hospital readmission (within 30-days), or 90-day mortality. We evaluated the association between IOH and adverse surgical outcome on univariable and multivariable logistic regression, adjusting for whether patients were managed by the surgical team along or co-managed with the Geriatric service, age, gender, ASA-PS, preoperative albumin, operative time, and intraoperative blood loss. The multivariable model was additionally adjusted for frailty on a separate analysis

Results: 1798 patients were available for analysis. IOH was present in 97% of patients. In our cohort, 426 (24%) of patients experienced adverse surgical outcomes. Patients who experienced IOH had longer operation times (182 min vs. 103 min). While frailty did not differ between two groups, patients in the geriatric comanagement group were more likely to experience IOH than patients who did not receive geriatric comanagement. IOH was not associated with adverse surgical outcomes on univariable or multivariable analysis (OR 0.61, 95% CI 0.35, 1.07; OR0.72, 95% CI 0.40-1.29, respectively). Results were unchanged after additionally adjusting for frailty.

Conclusion: In this study, IOH, defined as 20% reduction at any time during surgery compared to baseline, was not statistically associated with adverse surgical outcomes in the cohort of older adults with cancer. Future studies should assess the impact of IOH by different old and new definitions on adverse surgical outcomes.

Table 2. Results of multivariable logistic regression model evaluating the association between reduction of more than 20% from baseline MABP at any time during the operation and adverse outcomes, with and without frailty included in the model

	Odds Ratio	95% CI	p-value
MSK Frailty Index	0.94	0.87, 1.02	0.15
Reduction of more than 20% from baseline MABP	0.72	0.40, 1.29	0.3
Geriatric Co-management	0.89	0.70, 1.12	0.3

D161 Resident Presentation

Medication-related fall risk among anticoagulated older adults evaluated for a fall-related injury in an emergency department: identification and communication during the transition of care

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Background: From 2014-2017, it was estimated that there is an annual average of approximately 29 million ED visits for adults 60 and over. Most of these visits are fall-related with medications being a common observed reason. Patients presenting to our institution's ED with a head injury while anticoagulated are evaluated using a trauma service activation policy as a priority 3 trauma. The study's objectives are to assess changes in medication-related fall risk after hospital discharge (ED or inpatient stay) and evaluate communication about medication-related fall risk at the time of discharge

Methods: Retrospective observational chart review for ED visits between October 1, 2021, to September 30, 2022 meeting criteria for trauma service activation for a priority 3 trauma (typically over age 65, receiving an anticoagulant, and suspected head injury related to a fall). Patients under age 65 were excluded. Patient medication lists will be evaluated for the presence of fall risk-increasing drugs including the total drug burden index at the time of admission and discharge. EHR documentation of medication-related fall risk will be assessed through a review of the ED and hospital discharge summaries. Final data analysis will be performed using SAS (Version 9.4) Descriptive analysis will be performed to report mean, standard deviation, and frequency for respective variables. Student's t-test to analyze continuous variables and Fisher's Exact Test will be used for categorical variables. Also, addition univariate multiple logistic regressions will be used to determine patient outcomes. A $p<0.05$ will be considered a statistically significant value and all comparisons will be done at a 95% level of significance.

Results: Analysis of medication-related fall risk is underway.

Conclusion: Results from this study could be used to help reduce future fall-related injury in older adults through development of procedures in the ED to improve recognition and documentation of medication-related fall risk.

Patient Characteristics

Gender	189 Female 136 Male
Age	Average 79
Race	1 patient refused to disclose 1 Asian 11 Black or African American 312 White
Location when discharged	Emergency 172 Observation 27 Inpatient 126

D162 Resident Presentation

Sexual Disinhibition in dementia patients: an uncommon and distressful challenge faced by caregivers

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Introduction:

Dementia is a prevalent neurocognitive disorder, and most patients have psychiatric and behavioral issues. Inappropriate sexual behavior(ISB) is an uncommon complication with a significant impact on caregivers and is challenging for medical professionals due to a lack of treatment guidelines. This can be a safety issue if patients are in contact with children and warrants urgent management. We present a case of Alzheimer's dementia with inappropriate sexual behavior requiring management with behavioral modification and medications.

Case:

A 69-year-old male with a PMH of Alzheimer's dementia, Hypertension, and Post-traumatic stress disorder presented to the clinic for a comprehensive geriatric assessment. He had severe dementia with an MMSE of 5 and answered only yes or no questions. His wife reported patient was exhibiting continuous and progressive episodes of excessive masturbation for the last few months. His wife felt immense pressure and difficulty managing the patient, causing difficulty socializing and putting strain on their relationship. He depended on his wife to handle indoor and outdoor activities, including his finances and transportation. The family was educated about non-pharmacological management, including daily exercise, crosswords and puzzles, and frequent reorientation. They were advised to avoid any movies and TV shows that can exacerbate, and most importantly, he should not be left unattended with children. His symptoms did not resolve entirely despite the measures. On follow-up visits, he was started on trazodone to reduce ISB at nighttime, but it only partially helped. Due to a lack of guidelines to treat ISB in dementia patients, he was subsequently given a trial of Escitalopram as per available literature. Overtime patient symptoms improved, relieving stress on family and improving quality of life

Conclusion:

ISB is a disruptive and challenging situation faced by caregivers and physicians due to the urgency of the situation and the lack of treatment guidelines. This requires timely treatment to ensure the safety of the patient and family and mainly focuses on behavior modification, removing any inciting cause, and frequent reorientation. As no clear treatment guidelines exist, the choice of medication is based on the degree of dis-inhibition and comorbid conditions.

D163 Student Presentation

The Impact of Arthritis and Arthroplasty on a Group of Older Adults with Multiple Medical Conditions in Hopkins Elder Plus, a PACE Site in Maryland.

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Background: As seen in recent years, more individuals are living longer and with numerous chronic conditions. It is important to evaluate the outcomes associated with common procedures, like total knee and hip arthroplasty (TKA/THA), in these older and more complex

patients as the demographics in the United States change. The Program for All-Inclusive Care for the Elderly (PACE) provides coordinated care to community-dwelling adults who are nursing home eligible. The impact of arthritis and arthroplasty on functional outcomes among PACE participants has not been evaluated. The aims of this study were to (1) describe the rates of arthritis and arthroplasty within one PACE site and (2) measure outcomes related to mobility, falls, and fall prevention as they relate to these procedures.

Methods: Medical charts of 200 PACE participants were queried for patient demographics, BMI, hierarchical condition category (HCC), dementia status, diagnosis of arthritis, and history of joint arthroplasty. Measured outcomes were: living arrangements, Berg Balance Scale (BBS) score, Timed-Up-and-Go (TUG) score, opioid use, and falls within the last year. We used proper statistical analysis to determine the association between all variables and measured outcomes.

Results: Mean age was 77 yrs; 71% were female; avg HCC was 2.446; 34% had a diagnosis of dementia; 39.5% had a BMI >30.0; 83.5% had arthritis; and 21.5% had at least one joint arthroplasty. When adjusted, there is a significant association between arthritis and increased TUG [Regression coefficient: 0.5; CI: 95%; $P < 0.0001$] and increased number of falls [Regression coefficient: 0.6; CI: 95%; $P = 0.002$]. In the adjusted analysis, arthroplasty is associated with an increased number of falls [Regression coefficient: 0.264; CI: 95%; $P = 0.038$].

Conclusion: Arthritis is associated with increased TUG time, suggesting increased fall risk and decreased mobility, and increased number of falls. Participants who had arthroplasty were more likely to have experienced a fall in the last year. While joint replacement is a valuable treatment for arthritis, it may expose older adults with multiple medical conditions to more situations where they could fall. PACE participants who have joint replacements may require additional interventions to prevent falls.

D164 Student Presentation

Prevalence of anticholinergic burden prior to hematopoietic cell transplantation in older adults.

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Background: Hematopoietic cell transplantation (HCT) has a profound negative effect on physical function and quality of life due to the intensity of the treatment. Older adults undergoing HCT are vulnerable for functional decline, therefore optimizing physical function prior to HCT is important to improve outcomes in this population. One potentially important factor is the anticholinergic burden (ACB), which is the accumulation of anticholinergic effects from one or more anticholinergic medications (1). However, the prevalence and association of ACB and physical function in the HCT setting is unknown. The objective of this study is to examine the prevalence of ACB and association with physical function pre-HCT in adults ≥60 years.

Methods: Medications were examined pre-HCT to determine the prevalence of ACB. The Anticholinergic Burden (ACB) Scale was used to assess anticholinergic burden. Medications with potentially or known anticholinergic properties were assigned a score from 1-3. The Short Physical Performance Battery (SPPB) was used to assess physical function. Linear regression was used to examine the association between medications with ACB and SPPB.

Results: A total of 169 patients, mean age 68 years (range 60-81 years) completed SPPB. The mean number of medications was 12 (SD 5.8). The ACB mean score was 2.9 (SD 2.5), and 61% (n=103) of patients were categorized as high risk ACB. High risk ACB category included patients with a total ACB score over 3 or with any single medication with a score of 2. ACB total scores were marginally associated with physical function ($\beta = -.12$, $p = .068$).

Discussion: Older patients are more susceptible to side effects of medications with anticholinergic properties. Our study describes a high prevalence and a trend in association between ACB with physical function prior to HCT. Decreasing or stopping medications with anticholinergic properties may be an important strategy to improve older HCT recipients' physical function and quality of life. Future studies with larger sample sizes are needed to confirm our findings and examine ACB and post-HCT outcomes.

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D165 Student Presentation

Age as a Predictive Factor of MIGS Outcomes in Primary Open Angle Glaucoma

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Background: With an increasingly aging population, the need to examine the effects of minimally-invasive glaucoma surgeries' (MIGS) effects on older adults arises. Proper patient selection is one of the most critical and challenging aspects of successful MIGS, and predictive factors for angle-based MIGS are yet to be defined. The purpose of the study is to compare outcomes between patients of different age groups with primary open angle glaucoma (POAG) who have undergone various angle-based MIGS.

Methods: A retrospective, multicenter cohort study comprising 117 eyes of 91 adult patients (63 unilateral, 27 bilateral) with POAG who were treated with MIGS at Wilmer Eye Institute between July 2018 and May 2022 with a minimum 6-month follow-up. Demographic and clinical data were collected from medical records. Patients were stratified into 3 age groups by 10-year age ranges (60 to 89). A target intraocular pressure (IOP) was established for each eye based on disease severity and the rate of visual field progression preoperatively. The primary outcome was the rate of success, defined as 6-month postoperative IOP at or below target, without additional ocular hypotensive medications or secondary surgical interventions.

Results: Baseline characteristics of all groups were found to be similar, including the target IOP ($p > 0.05$, mean 17.07 mmHg). Patients in their 80s attained the highest success rates at 60.6% ($p < 0.01$). The difference in mean age of patients meeting success (75.58 ± 7.14 years) and not meeting success (70.47 ± 6.33 years) was found to be statistically significant ($p < 0.05$). 6 month postoperative IOP reduction was also significantly better in patients in the older age group (20%) compared to those in the younger age group (2%) ($p<0.05$), whereas the reduction in medication remained similar ($p > 0.05$). The rate of adverse events as not found to vary significantly between age groups ($p > 0.05$). The z score for age group as a predictive factor of success was 2.82 ($p < 0.01$) with an odds ratio of 1.14.

Conclusions: Angle-based MIGS procedures may have greater success rates in patients in their 80s, with a 14% increase in success rate per decade of age, and no change in adverse events.

D166 Student Presentation

Functional Outcome Following Minimally Invasive Evacuation of Intracerebral Hemorrhage in the Geriatric Population

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Background

Intracerebral hemorrhage (ICH) is the most devastating type of stroke with 40% mortality at one month, and 75% deceased or severely disabled at six months. Advanced age is a major risk factor for ICH since the most common underlying pathologies, hypertension and cerebral amyloid angiopathy (CAA), are age-related illnesses. Advanced age is also an independent driver of poor outcomes. Minimally Invasive (MIS) evacuation is a promising technique to prevent further neurological damage in severe ICH. Few studies have

analyzed MIS ICH evacuation specifically in patients of advanced age, and most randomized controlled trials enroll patients younger than 80 years. We aimed to analyze functional outcomes following MIS evacuation in patients of advanced age.

Methods

Patients with ICH presenting to a large urban system between December 2015 and December 2021 were triaged to a primary hospital for MIS evacuation. Criteria for inclusion were age ≥ 65 years, hematoma volume ≥ 15ml, NIHSS score ≥ 6, premorbid mRS score ≤ 3, and time from ictus ≤ 72 hours. Patients were subdivided into early elderly (EE: 65-80 years) and advanced elderly (AE: >80 years) groups.

Results

MIS evacuation was performed on 77 EE patients (72.0±3.8 years) and 31 AE patients (84.0±4.2 years). In the EE cohort, 55 patients (72.3%) had hypertension and 27 of 67 patients (40.3%) biopsied had CAA. In the AE cohort, 23 patients (76.7%) had hypertension and 13 of 23 patients (56.5%) biopsied had CAA. 52.8% and 55.2% of EE and AE patients had intraventricular extension, respectively. In the EE group, the preoperative volume was 56.7±36.7 mL and postoperative volume was 11.7±16.1 mL, resulting in a 79.2±22.9% evacuation rate. In the AE group, the preoperative volume was 60.0±36.9 mL and postoperative volume was 14.6±16.2 mL, resulting in a 80.1±15.5% evacuation rate. One month after hemorrhage, 9 of 67 EE patients (13.4%) with available data had expired and 4 of 27 AE patients (14.8%) with available data had expired. At 6 months, 17 of 58 EE patients (29.3%) with available data and 4 of 27 AE patients (14.8%) with available data had improved to a favorable outcome (mRS≤3).

Conclusions

This study suggests that MIS evacuation can be safely performed in patients older than 65 and 80 years. It also provides long-term functional outcome data that can aid the design of future MIS evacuation clinical trials.

D167 Student Presentation
Systematic Review of Deprescribing Outcomes in Older Adults with Polypharmacy

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Background: Mixed findings about deprescribing impact have emerged from varied study designs, interventions, outcome measures, and targeting sub-categories of medications or morbidities. This systematic review (SR) controls for study design by reviewing randomized controlled trials (RCT) of deprescribing interventions using comprehensive medication profiles. The goal is to provide a synthesis of interventions and patient outcomes to inform providers and policy makers about deprescribing effectiveness.

Objectives: This SR aims to 1) review RCT deprescribing studies focusing on complete medication reviews of older adults with polypharmacy across all health settings 2) map patients' clinical and economic outcomes against intervention and implementation strategies 3) inform research agendas of benefits and best practices.

Method: The PRISMA framework for SR was followed. Databases used are EBSCO Medline, PubMed, Cochrane Library, Scopus, and Web of Science. Risk of bias was assessed using the Cochrane Risk of Bias tool for RCTs.

Results: Fourteen articles were included. Interventions varied in setting, countries, intervention and implementation strategy. Thirteen studies (92.9%) found deprescribing interventions reduced the number of drugs and/or doses taken. No studies found threats to patient safety in the primary outcomes including morbidity, hospitalizations, emergency room use, and falls. Four studies identifying health related quality of life (HRQOL) as a primary outcome found significant effects associated with deprescribing. Two studies with cost as their primary outcome found significant effects as did two with cost as a secondary outcome. Studies did not systematically study how intervention components influenced deprescribing impact. To explore this gap, this SR mapped studies' primary outcomes to deprescribing intervention components using the Consolidated Framework for Implementation Research. Five studies had significant, positive primary outcomes on HRQOL, cost, and/or hospitalization, with four reporting patient-centered elements in their intervention.

Conclusion: Primary outcomes in RCTs found deprescribing is safe and reduces pill burden. Five RCTs found significant deprescribing impact on HRQOL, cost, or hospitalization. Important future research agendas include analyzing 1) understudied outcomes like cost, 2) intervention and implementation components that enhance effectiveness, such as patient-centered elements.

D168 Student Presentation, Encore Presentation
Investigating the Cause of Death Among Patients Admitted with Pulmonary Embolism

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Background

Pulmonary embolism (PE) remains one of the leading causes of cardiovascular death, responsible for approximately 100,000 to 200,000 deaths annually in the United States. However, many patients present with advanced multisystem conditions such as undiagnosed malignancy. Due to the fatal consequences associated with PE, our study aims to comprehensively analyze the mortality markers and causes of death in PE patients.

Methods

We identified 243 patients with massive and submassive PE admitted to the University of North Carolina – Chapel Hill Hospital between November 2016 and May 2022. All patients were entered into a prospective registry to track clinical outcomes, approved by the UNC IRB (17-0263). Medical records were reviewed to identify clinical information and investigate specific cause of death.

Result

207 out of 243 (85%) patients experienced submassive PE at the time of presentation. We identified 55 mortality events (22.6%) ranging between 4 days and 5 years from the presentation. Inpatient mortality was 4.5% (n=11). The significant mortality markers identified by univariate logistic regression were BMI>30, history of cancer, tobacco use, systolic heart failure, and bleeding events. The most common cause of death in patients admitted with PE was malignancy (43%), followed by respiratory disease (13%), dementia (11%), cardiac disease (8%), CVA (6%), PE (6%), infectious disease/ sepsis (4%) and unknown causes (8%).

Conclusion

While mortality risk persists after discharge in patients admitted for pulmonary embolism, malignancy is the most common cause of death among patients discharged following submassive or massive pulmonary embolism. Additional information regarding short- and long-term prognosis for admitted patients with submassive and massive PE will benefit teams considering invasive/mechanical therapies for this complex patient population.

D169 Resident Presentation
Glucagon-like peptide-1 Receptor Agonists as Potential Treatments for Inflammatory Myopathies
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Background: Inflammatory myopathies—PM, IBM, DM—are major contributors to increased disability, poor quality of life, and accelerated frailty in adults. Prolonged corticosteroids therapy is usually one of the mainstay managements, but it paradoxically worsens muscle function and sarcopenia, accelerates disability, and may even lead to diabetes and obesity. Through its anti-inflammatory properties, GLP-1R agonism is gaining much attention in the treatment of such conditions. In 2021, FDA approved PF1808 (a GLP-1R agonist) for the treatment of polymyositis.

Objective: We aim to provide a comprehensive review of existing literature to inform clinicians and provide an updated understanding of GLP-1R agonism on inflammatory myopathies.

Methods: We employed a systematic search of the literature in the PubMed database mentioning GLP-1 AND Inflammatory Myopathy OR GLP-1 and Skeletal Muscle from 2010 up to October 2022.

Results: GLP-1 agonism reduces muscle inflammation, as demonstrated by the improvement of inflammatory markers and post-treatment,

biopsy-proven reduction of inflammation. It preserves muscle mass and improves function, which is correlated with improvement in muscle weakness and endurance. It increases protein synthesis and myotubular differentiation by modulating myogenic and atrophic factors and reducing intramyocellular lipid deposition. GLP-1 agonism also improves muscular microvascular circulation independently as well as nitric oxide-dependent mechanisms, leading to better oxygen utilization and nutrient delivery. This is important because it can potentially enhance the delivery of therapeutic medications to affected myocytes.

Conclusion: GLP-1 agonism, through its anti-inflammatory properties, has drastically improved our understanding of the treatment of inflammatory conditions. Its benefits on muscle health show a promising future in the treatment of inflammatory myopathies and potentially other inflammatory conditions.

D170 Student Presentation
Aging with HIV
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Introduction: Geriatric practices will see more people living with human immunodeficiency virus (HIV) as their life expectancy is close to the general population due to effective retroviral treatments. Geriatricians focus more on HIV-associated non-acquired immunodeficiency syndrome (AIDS) disorders than HIV alone. We will review the most common chronic illnesses and conditions associated with aging and HIV. *Falls and Functional Limitations:* Even though fall frequency in older adults living with HIV is similar to or lower than in people without HIV, fall assessment is appropriate, especially in the high-risk elderly living with HIV. *Neurocognitive Function:* HIV impacts motor function and memory loss, especially in advanced cases. In addition, several antiretroviral therapy (ART) drugs don't cross the blood-brain barrier leading to major neurocognitive disorders with age. *Cardiovascular Disease (CVD):* The etiology of HIV and CVD is multifactorial, including the effect of medications such as ART drugs. If statins are recommended, pitavastatin and pravastatin cause fewer interactions with ART. *Bone Disease:* While the treatment for HIV decreases the risk of opportunistic infections, it may cause several bone-related abnormalities, including low bone BMD, osteoporosis, osteopenia, osteomalacia, and fractures. *Polypharmacy:* Polypharmacy is associated with falls, frailty, cognitive decline, functional decline, disability, and mortality. It also can increase the risk of ART drug-drug interaction. *Oral Health:* The oral health status of HIV-infected patients is unsatisfactory, leading to weight loss and malnutrition. Studies showed that having a dental care manager may improve clinical outcomes and increase medication adherence. *COVID-19:* People aging with HIV (PAWH) have an increased mortality risk when coinfected with COVID-19. Quarantine and social distancing decreased access to routine HIV medical care, decreasing ART compliance. *Conclusion:* Older adults living with HIV may face unique challenges. Therefore, providing comprehensive medical care and psychosocial support through an interdisciplinary team can significantly impact their lives.

D171 Student Presentation
Sirolimus safety and therapeutic drug monitoring in older adults after lung transplantation
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Introduction: Clinical studies of mTOR inhibitors have not included a sufficient number of older patients to determine whether they will respond differently than younger patients to treatment. Aging significantly impacts pharmacokinetics by altering absorption and distribution volume, delaying metabolism, and impairing excretion of medications. Consequently, in older adults, there is no clear consensus on therapeutic drug monitoring or the range of trough concentrations to be used. While there is recent preclinical evidence for the role of sirolimus in slowing aging processes, there are few studies evaluating the effects of age on sirolimus safety and efficacy in older adults. We report our experience using sirolimus for older lung transplant recipients with renal insufficiency.

Methods: We retrospectively reviewed clinical and laboratory data on lung transplant patients with renal insufficiency in whom sirolimus treatment was initiated based on physician discretion between June 2011 and September 2017 at the University of Maryland Medical Center.

Results: Of 49 lung transplant patients who received sirolimus as part of their immunosuppression regimens after they developed renal insufficiency, 25 group were 65 years of age or older. Sirolimus was well tolerated in these older adults. Therapeutic target whole blood levels of sirolimus were between 4 – 8 ng/ml. Mean trough levels were reviewed within the first week (4.8 ng/ml; SD+/-5.56), 1 month (5.2 ng/ml; SD+/-2.94), and 3 months (4.8 ng/ml units/ SD+/-3.88) after sirolimus initiation. Levels were similar to those in lung transplant recipients younger than 65 years. Demographic data of lung transplant recipients ≥ 65 years of age in this study included a mean age of 69.8 years; gender: 60% male, 40% female; race: 20% African American, 80% Caucasian.

Conclusion: Our results suggest that lung transplant recipients older than 65 years who develop renal insufficiency may be safely managed using sirolimus. Sirolimus may be an anti-aging therapeutic target and therefore, further clinical trials are necessary to compare sirolimus safety, drug exposure and intermediate drug effects in older adults.

D172 Student Presentation
Smartphone based walking cadence as a measure of mobility in older adults
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Background: Functional capacity assessment is a critical aspect of the preoperative evaluation in identifying older adults with a higher risk of complications following a major non-cardiac surgery. Previous studies demonstrated that standardized physical function questions are sensitive but not specific in identifying these patients and that objective physical function exams are not routinely performed in clinic. Pilot studies have demonstrated feasibility in using walking cadence from smartphones as a measure to estimate functional capacity. In our study, we continue to build on the relationship between walking cadence and other objective assessments of mobility in older adults.

Methods: We performed a prospective observational cohort study within the Frailty, Activity, Body Composition and Energy Expenditure in Aging study at the University of Chicago. Participants underwent an assessment of physical performance using SPPB and a 6-minute walk test. The same cohort also wore a hip accelerometer (Actigraph wGT3x-bt) for 7 days. Cadence was measured using an iOS smartphone during the 6MWT and the accelerometer output was estimated using Adaptive Empirical Pattern Transformation software. In-clinic and at-home cadence from the two sources were compared for similarity and appropriateness in using one as a proxy for another. Cadence from the two sources were also analyzed against the physical performance score.

Results: Thirty-six patients successfully participated in both the in-clinic assessments as well as wearing the hip accelerometer at home. The mean age was 71.5 years with females making up 97% of the cohort. In-clinic and at-home assessments of cadence showed overall similarity in a Bland-Altman plot, with only one data point falling outside +/- 2SD. There was also a significant difference in both in-clinic and at-home cadence when looking at SPPB scores of less than 10 compared to scores greater than or equal to 10.

Conclusions: Our pilot study at its current state demonstrates feasibility in using smartphone accelerometer data as a proxy for in-clinic cadence assessment. This data could then be further used to assess for functional capacity. However, our results are limited by a small cohort size and should be investigated further with more participants.

D173 Student Presentation
Impact of COVID-19 on Recruitment in the PRIME-KNEE Study
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Background: COVID-19 continues to impact research efforts and pose particular challenges in recruitment of older adults. The goal of this study is to assess COVID-related effects on recruitment of special groups.

Methods: The sample is from PRIME-KNEE, an ongoing prospective study following participants age ≥ 60 undergoing total knee replacement recruited from Duke hospitals. This analysis includes data through 11/01/22. Statewide data on COVID-19 cases are from the NCDHHS (https://covid19.ncdhhs.gov/dashboard). Descriptive and quantitative analyses were performed with R. Low (vs. high) enrollment periods were defined as months with < 5 participants enrolled. Those missing relevant data were excluded. Chi squared tests were performed on total enrollment during high and low enrollment periods by age group (60s, 70s, and 80s), race (White, Black), multiple morbidity (self-report ≥ 2 of the following: chronic lung disease, vascular disease, heart failure, chronic liver disease, diabetes, non-skin cancer), and financial stress (self-report survey). Additional race and ethnicity data were not included due to insufficient data to meet chi squared assumptions. Significance level was set at $\alpha = 0.05$ (Bonferroni corrected $p = 0.0125$).

Results: Study demographics include n=173, median age = 71, 60.1% women, 81.5% White, 14.5% Black, 4% Hispanic. Enrollment per month varied with pandemic-related events (Figure 1). Chi squared tests did not show significant deviation from the expected distribution.

Conclusions: COVID-19's impact on enrollment follows a pattern of case spikes and secondary effects such as staff shortages. This suggests long lasting implications for research as new variants and waves arise. Specific recruitment strategies or study designs that account for intermittent drops in enrollment are merited. Preliminary data show no disproportionate impact on special groups during low or high enrollment periods, though limited by sample size.

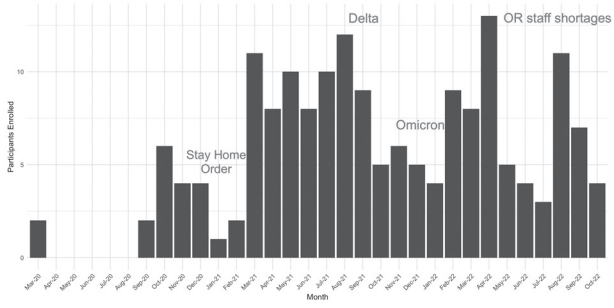

Figure 1

D174 Student Presentation
Characteristics of Older Adults with Positive Neurocognitive Screens in the Geriatric ED
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Background: The older adult population has a higher risk for developing neurocognitive disorders and is rapidly increasing worldwide, leading to increased use of emergency services. Geriatric Emergency Departments (GEDs) with specialized geriatric nurses can improve the identification of neurocognitive disorders and change clinical management. The purpose of this study is to describe characteristics of older adults with positive neurocognitive screens, and determine whether seeing specialized geriatric nurses changes clinical management.

Methods: We conducted a retrospective study among older adult patients (>=65 years) who received care at Level 1 Accredited GED from 12/1/2016 through 6/30/2022. Demographic (sex, age, and ethnicity) and specialized screening results were compared between patients with positive and negative neurocognitive screen for screens for delirium, cognition, and Alzheimer's. Statistical analysis included two sample t-tests, and p-values <0.05 were considered statistically significant.

Results: 56,326 patients over 65 were seen in the La Jolla ED, 22,200 (39.4%) of which qualified to received specialized services. Of these patients, 5,355 (24.1%) patients were seen by a specialized geriatric nurse and 463 (8.6%) of these patients had positive neurocognitive screening results. Patients with positive screening results had a higher average age included more minority populations (avg age = 82 vs 77; race = 37.5% Black, Asian, and other/mixed race combined vs 32.2%; and Hispanic ethnicity = 13.8% vs 12.7%; 32.2%; p's<0.05). There were no significant differences in sex (p>0.05). Patients with positive neurocognitive screens had higher positivity rates on screening assessments for Activities of Daily Living (54.9%), depression (41.2%), elder abuse (1.2%), and malnutrition (42.6%) compared to their counterparts (26%, 31.3%, 0.8%, and 26.6%, respectively;

p's>0.05). A total of 59.7% of patients who saw a specialized geriatric nurse were referred, compared to only 13.5% of patients who did not see one (p<0.05).

Conclusions: Overall, patients who were seen by specialized geriatric nurses had higher detection rates on neurocognitive screens, had more referrals, and were more likely to be positive on other screens. The implementation of geriatric EDs and specialized geriatric nurses has great implications for the care and quality of life of the aging population.

D175 Resident Presentation

Disparities in healthcare utilization and outcomes for older adults with infected stones

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Background: An obstructing urinary tract stone complicated by infection (septic stone) requires urgent intervention with both antibiotics and urinary tract decompression. Delayed treatment can lead to significant morbidity and sometimes mortality. Given a rapidly aging population and advances in critical care, we sought to examine healthcare utilization and outcomes in patients with sepsis secondary to obstructing stones in a contemporary cohort, with a focus on older adults.

Methods: We conducted a retrospective cohort study using data from the nationwide Premier Healthcare claims database (2016-2020) to identify hospital inpatients aged 18-95 treated for septic stones, using ICD-10 diagnostic codes consistent with sepsis and urinary stones. Patients were stratified into two age groups: adults ≥ 65 years old ("older adults"), and adults aged <65 years (the "younger cohort"). Multivariable regression models were adjusted for sociodemographic factors and comorbid conditions. Hospital mortality, discharge status, and 30-day readmission were compared in the two groups.

Results: The study cohort included 27,976 patients of whom 54.7% were older adults. The overall cohort had an average age of 64.1 years (SD = 16.2). 41.7% were male and 76.6% were non-Hispanic white individuals. In unadjusted analyses, older adults received higher levels of care (invasive mechanical ventilation, vasopressor use), had a longer length of stay, incurred higher costs, and had a higher mortality. In adjusted analyses, older adults had a higher mortality (OR 2.14, 95% CI 1.84-2.49, p<0.0001) and were less likely to be discharged home (OR 0.42, 95% CI 0.39-0.45, p<0.0001).

Conclusions: Our data highlight that older adults encounter a disproportionately higher acuity and burden of septic stone disease. Healthcare utilization for septic stones is higher for older adults across multiple dimensions including hospital costs, length of stay, and post-discharge care. Additional investigation is needed to identify patient, clinician, and facility-level drivers of these outcomes to create pathways to reduce disparities and optimize outcomes for older adults.

D176 Student Presentation

Hospital readmissions after epilepsy related surgical intervention in older adults in the US – a population-based study

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Background: The incidence of epilepsy is highest in those over 65 years of age. In 2018, Medicare patients accounted for 60.3% of the $57 billion spent on readmissions. Understanding causes for readmission in persons with epilepsy post-surgery is important to implement future quality improvement efforts. Identifying preventable causes of readmissions in this population will optimize treatment strategies and reduce healthcare costs. We investigated readmission rates (RR) and predictors after epilepsy related neurosurgery in older adults.

Methods: A retrospective cohort study was performed using the 2019 Nationwide Readmissions Database, a population-based dataset capturing over 18 million hospitalizations in the US. Individuals 65 years or older with epilepsy were identified using previously validated ICD-10-CM codes. Patients were further categorized by surgical procedures: resective surgery, vagus nerve stimulation (VNS), deep brain stimulation (DBS), responsive neurostimulation (RNS), Laser interstitial Thermal Therapy (LiTT), intracranial EEG (iEEG) and radiosurgery at index admission. The primary outcome was 30-day readmission following epilepsy surgery. Descriptive statistics were used to determine weighted frequencies and cause of 30-day readmission. Predictors of readmission in older adults with epilepsy were identified using logistic regression.

Results: Of the 29092 patients with epilepsy who underwent surgery, 1842 were readmitted within 30-days post-surgery (6.35% RR). Epilepsy RR for patients 65+ was 8.60% while RR for age 18-64 was 6.2% (OR: 1.42; 95% CI: 1.28 – 1.59; p < 0.01). RR for patients 65 and older were: 1) resective surgery: 9.87%, 2) VNS: n/a, 3) RNS/DBS: 6.25%, 4) LiTT: 10.53%, 5) iEEG: 8.50%, 6) Radiosurgery: 0%. Factors associated with 30-day readmission were Medicare status, increased length of stay (LOS), and increasing Elixhauser comorbidity index (p < 0.05).

Conclusions: Older patients undergoing epilepsy-related neurosurgery have higher risk of readmission within 30-days compared to those younger. Readmission is most commonly due to post-operative epilepsy, showing that it is difficult to manage in this population. Targeted interventions to reduce LOS after epilepsy surgery in older patients, particularly those with Medicare and comorbidities, can improve healthcare outcomes for these patients.

D177 Student Presentation

Caregiver involvement in end-of-life discussions is associated with home hospice enrollment

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Background: Prior research suggests that hospice services delivered at home are associated with better quality of life at end-of-life (EoL) for patients and caregivers.[1] Nevertheless, referrals to, and enrollment in, home hospice often occur too late, limiting benefits to patients and caregivers. Here we examine how caregiver involvement in EoL discussions with advanced cancer patients and their oncologists relate to home hospice enrollment.

Methods: Data from advanced cancer patients and their family caregivers (N=164 dyads) were derived from Coping with Cancer III, an NCI-funded, multisite, longitudinal cohort study of ethnic disparities in EoL care. Reports of EoL discussions between patients, caregivers, and patients' oncologists were obtained in structured patient and caregiver interviews. Cox regression analyses were conducted to examine relationships between EoL discussions and home hospice enrollment.

Results: In 11.6%, 10.4%, 5.5%, and 72.6% of dyads, both patient and caregiver, only patient, only caregiver, and neither patient nor caregiver, respectively, reported EoL discussions with patients' oncologists. When only caregivers reported EoL discussions with patients' oncologists, patients were more likely to enroll in home hospice (AHR: 6.73; p=0.002). In 42.7%, 16.5%, 12.8%, and 28.0% of dyads, both patient and caregiver, only patient, only caregiver, and neither patient nor caregiver, respectively, reported EoL discussions within the dyad. When only patients reported EoL discussions with caregivers, patients were more likely to enroll in home hospice (AHR: 4.12; p=0.024).

Conclusions: Our findings highlight the important role caregivers play in mediating health utilization outcomes through their role in EoL discussions and shared decision making. To optimize patient care and autonomy, healthcare professionals should take greater care to involve caregivers in EoL discussions.

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D178 Student Presentation

Drug Class Combinations Associated with Ground-Level Falls in Geriatric Trauma

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Background

Ground-level falls (GLF) in the elderly have been associated with polypharmacy (≥5 medications) and certain high-risk psychiatric (P), neurologic(N), and cardiovascular(C) medications. We aim to identify the combinations of these drug classes associated with GLF in geriatric trauma patients.

Methods

We retrospectively identified trauma patients >65 years old admitted to the ICU for > 48 hours from our single-center trauma registry over 23 months and recorded P, N, and C medications. Multivariate logistic regression adjusted for gender, age, injury severity score (ISS), Charlson-comorbidity index (CCI) and 5-factor modified-frailty index (mFI-5) was performed for a primary outcome of GLF and secondary outcomes of traumatic brain injury (TBI) and 30-day mortality.

Results

From 617 patients identified with a median age of 77 (IQR 70-85), 398 (64.5%) sustained GLF, 337 (54.5%) sustained TBI, and 70 (11.4%) had 30-day mortality. Logistic regression showed that antiplatelets (OR 1.59 [95%CI 1.06-2.33], p=0.02), anticoagulants (OR 2.04 [95%CI 1.20-3.45], p=0.008), and loop diuretics (OR 1.75 [95%CI1.12-2.70], p=0.01) were associated with GLF. At least 1 C agent, 5 or more regular medications, and a combination of N+C were associated with GLF (Table 1). Only antiplatelets were significantly associated with TBI (OR 1.80 [95%CI 1.20-2.70], p=0.004) and antidepressants with 30-day mortality (OR 2.08 [95%CI 1.03-4.17], p=0.04). The combination of a P+N medication was also associated with TBI (OR 2.13 [95%CI 0.99-4.57], p=0.05).

Conclusions

Older adults taking at least 1 cardiovascular agent, especially antiplatelets, anticoagulants, and loop diuretics have an increased risk of GLF or TBI. Preventive strategies should target these combinations: N+C for GLF or P+N medications for TBI.

Table 1. Logistic Regression* for Polypharmacy Associated with Ground Level Falls

	Adjusted OR (95% CI)	P-value
Use of ≥ 1 medication from each category		
Psychiatric	1.20 (0.79 – 1.85)	0.40
Antidepressant + benzodiazepine	1.10 (0.26 – 4.54)	0.89
Antidepressant + antipsychotic	2.38 (0.62 – 9.09)	0.21
Neurologic[1]	1.52 (0.98 – 2.33)	0.06
Cardiovascular	1.64 (1.09 – 2.50)	0.02
Number of regular medications		
≥ 2	1.18 (0.53 – 2.63)	0.69
≥ 3	1.49 (0.69 – 3.23)	0.31
≥ 5	1.61 (1.01 – 2.56)	0.05
Use of medication combinations		
Psychiatric + neurologic[1]	1.21 (0.57 – 2.56)	0.63
Psychiatric + cardiovascular	1.35 (0.84 – 2.17)	0.21
Neurologic[1] + cardiovascular	1.73 (0.99 – 3.01)	0.05

*Adjusted for gender, age, ISS, CCI, and mFI-5

D179 Student Presentation

Perceived changes in cognition and daily life in older hematopoietic stem cell transplant recipients.

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Background: Hematopoietic cell transplantation (HCT) is a life prolonging treatment for hematological malignancies. Older adults undergoing HCT are at high risk for cognitive decline and pervasive cognitive deficits. Subjective phenomena of cognitive changes in older recipients have not been explored. The objective of this study is to explore older survivors' perceptions of cognitive impairment and its impact on daily life at 12 months post-HCT.

Methods: Patients completed the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30)-cognitive function subscale at pre-HCT and 12 months post-HCT. Brief semi-structured interviews regarding perceived cognitive changes were completed at 12 months post-HCT.

Results: 17 HCT survivors with a mean age of 70 (60-76) completed the questionnaire at two timepoints and interviews at 12 months. Overall, 16 patients (94%) reported cognitive impairments post-HCT – in memory (58%), attention (41%) and executive function (41%). Table 1 displays activities affected and attributions for cognitive changes. At 12 months, five patients (29%) reported decline (mean,-16 points) and 4 (24%) reported improvement (mean,+20.6 points) in cognitive function compared to baseline on the EORTC QLQ-C30.

Discussion: A subset of patients continue to experience cognitive decline at 12 months post-HCT. Patients who report no change or improvement in cognitive function report changes in executive function, attention, and memory affecting their daily activities. Future studies integrating a mixed methods approach including neuropsychological testing and semi-structured interviews can elaborate on our findings.

Table 1. Change in subjective cognition and activities affected by cognitive impairment.

Change in subjective cognitive function at 12 months from baseline as measured by questionnaire.	Decline (n=5, 29%)	No change (n=8, 47%)	Improve (n=4, 24%)
Activities affected by cognitive impairment*	Leisure/reading books, games, following TV shows storyline Occupation/teaching (more time needed for class preparation) IADLs/management of checkbook (require oversight) General/multitasking Social interactions (coming up with words)	Leisure/reading books IADLs/medication and financial management	Leisure/board and card games, reading books IADLs/ medication management, lists for shopping and errands Social interactions (coming up with words)
Attributions to current cognitive symptoms*	Anxiety and fatigue	Aging and fatigue	Aging and fatigue

***Coded from interviews**

D180 Student Presentation

Risk Factors in Pituitary Surgery Amongst Octogenarians: A Comparative Study with Younger Patients Undergoing Pituitary Surgery

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Background: As life expectancy has increased, the number of elderly patients has grown rapidly. Pituitary adenomas (PA) are known to occur more frequently in patients of increasing age. This study aimed to evaluate trends in pituitary surgery and characterize differences in comorbidities, length of stay, and in-hospital mortality between octogenarians and younger patients 65-79 and <65 years old.

Methods: The 2016-2019 National Inpatient Sample (NIS) dataset was utilized as a data-source for this analysis. Hospitalizations for PA surgery were distinguished by the appropriate diagnosis related group (drg) code. Comorbidities were classified based on the Elixhauser Comorbidity Index mapping of ICD-10 codes. Patients were stratified to age categories as follows: 80+, 65-79, <65. 1-way ANOVA tests accounting for the sampling design, were performed to determine differences in comorbidity prevalence, in-hospital mortality, and length of stay between the three groups.

Results: The number of pituitary surgeries performed per year has increased over the 4 years (13,355, 14,414, 16,320, 17,015). Octogenarians had higher comorbidities compared to patients 65-79 and <65: congestive heart failure (8.0% vs. 5.3% vs. 2.0%;p<0.001), peripheral vascular disease (14.1% vs. 4.3% vs. 1.5%;p<0.001), pulmonary disease (10.3% vs. 6.3% vs. 5.8%;p<0.001), and renal disease (14.9% vs. 11.2% vs. 3.9%;p<0.001). Octogenarians also significantly experienced more in-hospital mortality (1.5% vs. 0.4% vs. 0.3%;p=0.001) in unadjusted analysis. Though not statistically significant, octogenarians experienced a longer mean length of stay, (4.37 vs. 3.84 vs. 3.97;p=0.117).

Conclusions: The known higher incidence of PA with older age and increase in the aging population may contribute to the trend of increased pituitary surgery per year. As expected with older age, octogenarians had significantly more comorbid conditions compared to patients 65-79 and <65. Octogenarians also experienced higher in-hospital mortality rates, calling for identification of predictive comorbidities for octogenarians and operative selectivity for these patients.

D181 Student Presentation
Association of Age on Stage IV NSCLC Cachexia Incidence and on Cachexia Specific Survival

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Background:

Cancer is predominately a disease of older adults in which they are often diagnosed at later stages of disease. Cancer cachexia, a syndrome of muscle and adipose wasting, is seen in all stages of many primary cancers. It is observed in 50% of all solid tumors and accounts for 30% of cancer related deaths, reducing survival by 50% in all stages. In this study, we evaluated the association of age on cachexia incidence and cachexia specific survival in stage IV NSCLC patients.

Methods:

958 patients with stage IV NSCLC diagnosed between 2014-2020 comprised our final cohort. Patient tumor qualities, comorbidities, demographic information, and treatment history were assessed. Statistical evaluations included multivariate logistic regression, and Kaplan Meyer survival analyses. Age was defined at time of diagnosis and cachexia was defined as having developed prior to oncologic treatment.

Results:

Incidence of cachexia was determined for patient age groups <65(41.31%), 65-71(43.28%) and >72 (45.75%). Patient characteristics that demonstrated a decreased risk of cachexia were female gender (p=0.0186, OR=0.711) and having private insurance (p=0.0009 OR=0.623). There was no significant change in risk of cachexia for any of the patient age cohorts <65(p=0.852), 65-71(p=0.6207), and >72(p=0.6515). In patient populations with and without cachexia, our cohorts demonstrated that increasing age was associated with decreased overall survival when comparing patients <65 and >65. The absolute detriment in median survival with and without cachexia is most significant in the youngest age cohort (<65).

Conclusions:

While age was not a significant predictor of cachexia incidence in stage IV NSCLC patients, we did demonstrate two novel findings: the presence of cachexia had the greatest effect in reducing median survival in the youngest age patient cohort, and older adults demonstrated decreased survival compared to younger adults with the same disease state and cachexia status.

Cohort	Median Survival in days (95% CI)
No Cachexia <65	566 (483, 649)
No Cachexia 65-71	421 (283, 559)
No Cachexia >72	377 (229, 525)
Cachexia <65	287 (167, 407)
Cachexia 65-71	234 (186, 282)
Cachexia >72	248 (167, 329)
Total	376 (315, 437)

D182 Student Presentation
Risk Factors for Free Flap Complications for Head and Neck Cancer Defects in the Elderly

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Background:

Evaluating risk factors for surgical complications amongst elderly patients remains challenging, as there is not yet a consensus on how to predict post-operative complications for an aging population with increasing comorbidities. Free flap tissue transfer is a complicated and highly invasive procedure that is performed in patients for reconstruction of defects after resection of head and neck cancer. It is frequently performed in older patients given the prevalence of head and neck cancer in the elderly population. The purpose of this study is to define risk factors for post-operative complications of free flaps in older adults, such as flap failure, surgical site complications, and systemic infection.

Methods: Between 2016 and 2018, 150 free flaps with microvascular transfer were performed at a single institution as part of head and neck reconstruction for cancer patients aged 60 and older. Electronic medical records of these were reviewed, and demographics, medical history, and surgical history were recorded and analyzed using ANOVA and multiple linear regressions. Comorbidity status was graded using the Adult Comorbidity Evaluation-27 Index (ACE-27).

Results: The average age of the cohort was 74 and the flap failure rate was 3%. Age was not independently associated with flap failure, sepsis, or revision surgery, although it was associated with increased overall number of surgical site complications. High ACE-27 score was a significant risk factor for systemic issues such as sepsis, pneumonia, and delirium. History of prior head and neck radiation was associated with an increased number of surgical site complications.

Conclusion: Older age is not a risk factor for flap failure. Amongst elderly patients, prior history of radiation therapy and previous cancer excision should be taken into account while monitoring the vascular integrity and wound healing of free flaps in the post-operative period. The ACE-27 Index score, designed specifically for evaluating cancer patients, may be helpful in identifying elderly patients who are at higher risk of developing systemic infection or delirium that could lengthen their hospital stay.

D183 Student Presentation
Activity resumption 6-12 months following hematopoietic cell transplantation in older adults

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Background: Returning to life activities is important to quality of life in older adults post-hematopoieitic cell transplantation (HCT).[1] Change in activity level from pre- to post-HCT in older survivors has not been explored. The objective of this study is to describe activity resumption 6-12 months post-HCT in adults ≥60 years.

Methods: Patients completed the modified Activity Card Sort (ACSm)[2] assessing 80 activities in four domains (instrumental, low demand leisure, high demand leisure, and social). Patients reported if and how the activity had changed since HCT and their five most valued activities.

Results: Thirty-seven patients, ages 60-77, at least 6 months after HCT completed the ACSm. Social activities followed by high demand leisure were most valued by patients. **Figure 1** presents the percent of pre-HCT activity retention in four domains and total activities. Patients retained the greatest proportion of their low demand leisure activities (89%), followed by instrumental (84%), social (79%) and high demand leisure activities (59%).

Discussion: Older patients report lower retention of high demand leisure activities 6-12 months post-HCT. This may reflect persistent challenges such as fatigue and impaired nutrition. Future studies are needed to assess clinical and age-related factors associated with activity resumption.

References:

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2. Lyons KD, Li Z, Tosteson TD, Meehan K, Ahles TA. Consistency and construct validity of the Activity Card Sort (modified) in measuring activity resumption after stem cell transplantation. *Am J Occup Ther*. Jul-Aug 2010;64(4):562-9.

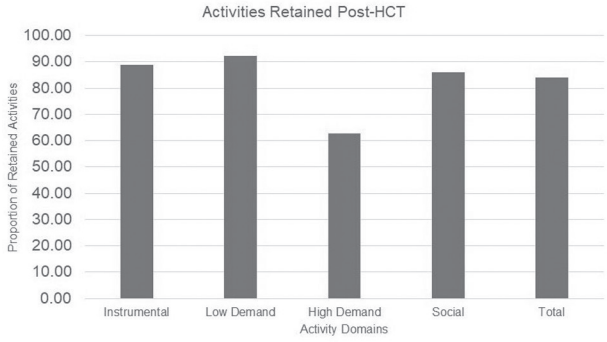

Figure 1: Percent of pre-HCT activity retention

D184 Student Presentation, Encore Presentation
Frailty Assessment and Post-operative Survival in Patients Undergoing Radical Nephroureterectomy for Upper Tract Urothelial Carcinoma

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Background: Frailty has been shown to predict early mortality in patients undergoing major urologic surgery. However, its impact on post-operative outcomes following extirpative surgery for upper tract urothelial carcinoma (UTUC) remains poorly elucidated. As UTUC is most often diagnosed in the elderly, characterizing this relationship may uncover actionable interventions to improve outcomes. We aimed to assess the prevalence of frailty in patients undergoing radical nephroureterectomy (RNU) for UTUC and its impact on post-operative survival.

Methods: We performed a retrospective, observational cohort study using our institutional experience of patients who underwent RNU for UTUC from 2004-2022. We evaluated frailty using the 9-point Clinical Frailty Scale. Patients were grouped by score (1-3 'Managing Well', 4 'Vulnerable', 5-9 'Frail'). Baseline clinicopathologic variables were collected for each patient including age, sex, receipt of perioperative chemotherapy, pathological grade, and N stage. We then compared overall (OS) and cancer-specific (CSS) survival outcomes using Kaplan-Meier estimates and multivariable Cox regression.

Results: We included 141 patients with a median follow-up of 14 months. 92 (65.25%) were categorized as 'Managing Well', 30 (21.28%) as 'Vulnerable', and 19 (13.48%) as 'Frail.' The frail group exhibited a median post-operative survival duration of 16.7 months compared to 48.2 and 36 months for the managing well and vulnerable groups, respectively. While clinically notable, this difference did not achieve statistical significance (p=0.27). No significant differences in CSS were observed among frailty groups. In multivariable Cox regression analysis, frailty did not associate independently with mortality (frail group: HR 1.8 [95% CI 0.53-6.15, p=0.3).

Conclusions: A clinically notable trend, although not statistically significant, was exhibited towards worse survival with increasing frailty. Further investigation using larger cohorts of UTUC—including non-operative patients—will be needed to further illuminate these observations. Implementation of prehabilitation and rehabilitation programs may be warranted to help improve outcomes in this group of patients at large.

D185 Student Presentation, Encore Presentation
Perceptions and Preconceptions Related to Ageing Facial Appearances

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Background:

Facial appearances play a crucial role in the perception of self as well as the perception of others. These appearances can be altered by periocular conditions that falsely reflect increased age. This study investigated the impact of blepharoptosis, upper eyelid dermatochalasis, and eyebrow ptosis on pre-judgments and pre-conceptions.

Methods:

This observational survey study utilized data collected from surveys administered in and around the community of Chapel Hill, North Carolina in people over the age of 18. Participants were categorized into four distinct age groups and were shown a series of close-up photographs demonstrating various isolated and specific periocular age-related anatomical changes and asked to rate the face in each photograph in terms of their perception of several specific personality or behavioral traits based on facial appearances. The central tendency of each face was calculated based on the aggregation of scores from each character scale, which was further analyzed via ANOVA.

Results:

Upper eyelid involutional ptosis and upper eyelid dermatochalasis, were each independently found to be associated with an appearance of "elderly," "sad," and "tired." Eyebrow ptosis was similarly associated with an appearance of "sad" and "tired." ANOVA revealed that there was a statistically significant difference between the periocular conditions when considering young versus elderly and energetic versus tired. A single-factor ANOVA to compare the four age groups of the young/elderly, happy/sad, and energetic/tired characteristics and found minimal statistically significant difference amongst the perceptions between the age groups

Discussion:

The conditions investigated in this study reduce the subject's palpebral aperture to appear more narrow than normal. It was shown that eyebrow ptosis was less indicative of being perceived as being elderly, sad, or tired when compared to dermatochalasis and less indicative of being perceived as being elderly or tired when compared to upper eyelid ptosis. This is explained by the notion that eyelid ptosis yields the strongest association with a narrow palpebral aperture. These findings demonstrate the impact these conditions can have

on the perception and well-beings of individuals and could explain behaviors that lead patients to seek surgical intervention.

D186 Student Presentation
Assessing Frailty-Specific Treatment Effect in Cardiovascular Disease: A Systematic Review

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Background: It remains uncertain whether interventions to reduce cardiovascular disease (CVD) events are similarly effective between older adults with and without frailty.

Methods: A systematic literature search was undertaken in PubMed, adhering to PRISMA guidelines. Key inclusion criteria were randomized controlled trials between 2007 and 2022 with CVD outcomes as an endpoint and data on frailty-specific treatment effects. Data was collected for population characteristics, intervention, follow-up time, frailty measure, outcome rates, and frailty subgroup treatment effect.

Results: The search identified 86 studies of which 12 were included (Table). Using Cochrane Risk of Bias 2.0, 11 out of the 12 studies have a low risk of bias. The intervention was more effective in frail participants than in non-frail counterparts in 2 studies (e.g. exercise), less effective in frail participants in 1 study (intensive lifestyle change), similarly effective across frailty levels in 6 studies (e.g. prasugrel), and inconclusive in 3 studies (e.g. edoxaban). Some treatments (e.g. dapagliflozin) were similarly effective across frailty level by hazard ratio, but had a greater reduction in absolute risk for frail versus non-frail patients.

Conclusion: Cardiovascular interventions may provide differential benefits by patients' frailty. These findings suggest the potential utility of frailty assessment for optimizing cardiovascular interventions.

Table. Post-hoc Analysis of Frailty-Specific Treatment Effects in Randomized Controlled Trials of Cardiovascular Disease

RCT (Publication year)	Population (Mean age, y)	Intervention	Primary outcome	Follow-up (median, y)	Frailty measure	Treatment Effect		
						Frailty level	Rate	MD or HR (95% CI)
Pulignano et al., (2010)	Heart failure (77)	Multidisciplinary management vs usual care	CV death or HF hospitalization	2.0	Modified Frailty phenotype	Non-frail	23.5% vs 10.0%	2.51 (0.46-13.69)
						Frail	76.9% vs 100%	0.37 (0.15-0.89)
HYVET (2015)	Hypertension (84)	Indapamide vs placebo	Stroke	1.8	Deficit accumulation (60 items)	Non-frail	NR	0.75 (0.40-1.38)
						Frail		0.41 (0.10-1.65)
TRILOGY ACS (2016)	ACS (74)	Prasugrel vs clopidogrel	MACE	1.4	Modified frailty phenotype	Non-frail	21.8% vs 24.3%	0.90 (0.77-1.06)*
						Frail	41.8% vs 37.9%	0.89 (0.54-1.46)*
SPRINT (2016)	Hypertension (80)	Intensive BP control vs standard treatment	MACE	3.1	Deficit accumulation (37-item)	Non-frail	0.8% vs 1.7%	0.47 (0.13-1.39)
						Frail	2.9% vs 3.5%	0.68 (0.45-1.01)
TOPCAT (2018)	HFpEF (84)	Spironolactone vs placebo	CV death or HF hospitalization	3.0	Deficit accumulation (39 items)	Non-frail	5.9% vs 6.6%	0.89 (0.77-1.04)
						Frail		
ENGAGE AF-TIMI 48 (2020)	Atrial fibrillation (72)	Edoxaban vs warfarin	Stroke or systemic embolism	2.8	Deficit accumulation (40 items)	Non-frail	1.5% vs 1.7%	1.03 (0.71-1.49)
						Frail	1.9% vs 3.4%	0.54 (0.20-1.50)
Look AHEAD (2021)	Overweight/obese T2DM (NR)	ILI vs DSE	MACE	10.0	Deficit accumulation (38 items)	Non-frail	38.2% vs 40.0%	0.73 (0.55-0.98)
						Frail	61.4% vs 56.4%	1.15 (0.94-1.42)
REHAB-HF (2021)	Heart failure (73)	Rehabilitation vs usual care	SPPB	0.5	Modified Frailty phenotype	Non-frail	7.9% vs 7.2%	0.70 (-0.10 to 1.50)
						Frail	8.1% vs 6.0%	2.10 (1.30-2.80)
ICOR (2021)	Heart failure (74)	Telemedicine vs usual care	HF exacerbation	0.5	Eight frailty-related dimensions	Non-frail	23.8% vs 60.0%	0.30 (0.10-0.85)
						Frail	21.9% vs 41.7%	0.45 (0.18-1.11)
DAPA-HF (2022)	HFrEF (66)	Dapagliflozin vs placebo	CV death or HF exacerbation	1.5	Deficit accumulation (32 items)	Non-frail	9.1% vs 12.6%	0.72 (0.59-0.89)
						Frail	18.4% vs 26.3%	0.71 (0.54-0.93)
HF-ACTION (2022)	HFrEF (59)	Aerobic exercise vs usual care	Hospitalization or death	2.9	Deficit accumulation (36 items)	Non-frail	NR	1.04 (0.87-1.25)*
						Frail	NR	0.83 (0.72-0.95)*
DELIVER (2022)	HFpEF (72)	Dapagliflozin vs placebo	CV death or HF exacerbation	2.3	Deficit accumulation (30 items)	Non-frail	5.8% vs 6.9%	0.85 (0.68-1.06)
						Frail	11.4% vs 15.4%	0.74 (0.61-0.91)

Abbreviations: ACS, acute coronary syndrome; AHEAD, Action for Health in Diabetes; BP, blood pressure; CI, confidence interval; CV, cardiovascular; DAPA-HF, Dapagliflozin and Prevention of Adverse Outcomes in Heart Failure; DELIVER, Dapagliflozin Evaluation to Improve the LIVEs of Patients With PReserved Ejection Fraction Heart Failure; ENGAGE AF-TIMI 48, Effective Anticoagulation with Factor Xa Next Generation in Atrial Fibrillation–Thrombolysis in Myocardial Infarction 48; HF, heart failure; HF-ACTION, Heart Failure: A Controlled Trial Investigating Outcomes of Exercise Training; HR, hazard ratio; HFpEF, heart failure with preserved ejection fraction; HFrEF, heart failure with reduced ejection fraction; HYVET, HYpertension in the Very Elderly Trial; ICOR, insuficiencia Cardiaca Optimitzacio Remota; ILI, intensive lifestyle intervention; DSE, diabetes support and education; LVEF, left ventricular ejection fraction; MACE, major cardiovascular event; MD, mean group difference; NR, not reported; RCT, randomized-controlled trial; REHAB-HF, Rehabilitation Therapy in Older Acute Heart Failure Patients; SPPB, Short Physical Performance Battery; SPRINT, Systolic Blood Pressure Intervention Trial; TOPCAT, Treatment of Preserved Cardiac Function Heart Failure with an Aldosterone Antagonist; TRILOGY ACS, Targeted Platelet Inhibition to Clarify the Optimal Strategy to Medically Manage Acute Coronary Syndromes.
*P-value for interaction by frailty status was less than 0.05.

Table. Post-hoc Analysis of Frailty-Specific Treatment Effects in Randomized Controlled Trials of Cardiovascular Disease

D187 Student Presentation
Usability and Acceptability of the "My Hip Fracture" Risk Communication Tool Among Clinicians

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Background:

Over 250,000 Americans suffer a hip fracture (HF) yearly. Morbidity and mortality from HF is significant with a 30-day mortality rate of 5-10% and a 30-day risk of other major complications up to 13%. Patients are often unaware of the severity of HF despite the clinical importance of understanding prognosis. Using a model adapted from the National Surgical Quality Improvement Project, we developed the web application My-Hip Fracture (My-HF). My-HF provides personalized risk estimates of 30-day mortality and complications and relevant HF education. We report on the usability and acceptability of My-HF amongst clinicians.

Methods:

We recruited clinicians from a single academic center and obtained baseline demographics including experience with HF care and electronic health resources. Clinicians were then introduced to My-HF and observed navigating through My-HF data entry fields using a simulated patient case. We invited feedback on the resulting risk estimates and patient education web pages. We also assessed usability and acceptability of My-HF via a survey adapted from the mHealth App Usability Questionnaire.

Results:

16 clinicians took part in the study. 62.5% of participants were female. Median age was 39.5 years with a median of 5.5 years in practice. 100% of participants agreed that My-HF was easy to use, easy to learn how to use, and navigation was consistent between screens. 100% also agreed that My-HF provided an acceptable delivery of healthcare services, including educational material. 93.75% of participants liked the app interface, would use it again, and believed it would be useful for their medical practice. Unfortunately, data entry errors were frequent (all participants had at least 1). In 2 cases, the error prohibited My-HF from calculating a risk estimate. 3 errors led to substantial reductions in risk estimates, and 3 errors led to substantial increases in risk estimates.

Conclusions:

My-HF appears to be an acceptable platform to enhance risk communication (RC) after HF. Current app design permits opportunities for data entry error. Iterative changes and continued assessment are necessary for improved accuracy of data entry and resultant risk estimation. Little is known about the accuracy of data entry and risk estimation amongst other available electronic RC tools. More research is needed into existing and future electronic personalized RC tools.

D188 Student Presentation
Racial/ethnic differences in the prevalence of caregiver-reported Veteran needs and its association with caregiver burden

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Background. Veteran limitations with activities of daily living (ADLs) and instrumental activities of daily living (IADLs) affect both Veterans and their caregivers. We aim to assess the prevalence of Veterans' ADL, and IADL needs by race/ethnicity, the degree those needs are met, and their association with caregiver burden.

Methods. We conducted the Hero Care Survey of 20,000 Veterans and their caregivers. Data from 2,562 caregiver survey respondents were used. Caregivers were asked if the Veteran they care for had difficulty with eight ADLs and seven IADLs and the level of help received/needed. The Zarit 4-item Caregiver Burden (CGB) Scale measured CGB. We used multivariable logistic regression to examine the associations between ADL and IADL needs and CGB controlling for covariates.

Results. Caregivers were mostly NHW (72.1%), females (83.9%), aged 69.6 (SD:12.7), and spouses (65.0%); 28.0% reported high CGB.

For ADLs, 41.9% of NHW caregivers reported Veteran unmet needs (vs. 55.9% of NHB, and 50.9% of Hispanic (both $p<0.01$)). Caregivers reporting unmet needs were 4.40 (95% CI: 3.48-5.57) times more likely to (MLT) have high CGB than those reporting no unmet needs. Of NHW caregivers, 22.3% reported that all needs were met (vs. 17.0% of NHB, and 19.0% of Hispanic (both $p<0.01$)). Caregivers

reporting that Veteran needs were met were 1.54 (95% CI: 1.15-2.05) times MLT have high CGB than those who reported no Veteran needs.

For IADLs**,** 45.6% of NHW caregivers reported Veteran unmet needs (vs. 48.9% of NHB (p=0.56), and 53.3% of Hispanic (p<0.01)). Caregivers who reported unmet needs were 7.52 (95% CI: 4.96-11.40) times MLT have high CGB than caregivers who reported no needs. Of NHW caregivers, 37.9% reported Veteran needs were met (vs. 36.4% of NHB (p=0.56), and 31.6% of Hispanic (p<0.01)). Caregivers reporting Veteran met needs were 2.56 (95% CI: 1.66-3.94) times MLT have high CGB than caregivers reporting no Veteran needs.

Conclusion. Caregivers reporting unmet Veteran ADL and IADL needs are more likely to report high CGB; Unmet ADL needs were more prevalent for NHB and Hispanic Veterans. Understanding the impact of unmet needs on CGB is crucial to equitably supporting caregivers by identifying areas where more help is needed and increasing awareness and access to caregiver resources.

D189 Student Presentation

Cognitive Outcomes Among Older Veterans Receiving Cognitive Behavioral Therapy for Insomnia

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Background: Cognitive behavioral therapy for insomnia (CBT-I) is the first-line therapy for chronic insomnia in older adults. Because chronic insomnia is a risk factor for cognitive decline, we sought to evaluate the association between completion of CBT-I and incident cognitive impairment within the Veterans Health Administration (VHA) which nationally expanded its CBT-I services in 2011.

Methods: This was a retrospective cohort study using national VHA corporate warehouse data of Veterans ≥50 years old with a diagnosis of insomnia who received outpatient care from 2015 to 2021. Only Veterans referred to CBT-I were included to examine those considered eligible for CBT-I by their provider. Administration of any CBT-I was further classified by the number of sessions attained within 6 months as either inadequate (1–4) or adequate (≥4) CBT-I. Unexposed Veterans received a referral to CBT-I but completed no sessions. Incident cognitive impairment was defined by mild cognitive impairment, dementia-related diagnosis codes, or an associated medication prescription. We estimated the relative risk (RR) using multivariable logistic regression with demographics and common chronic conditions.

Results: Of the 84,739 Veterans that met inclusion criteria (89.7% male; mean age, 63.9 years ±8.9, Non-Hispanic Black/White, 18.3%/65%), 89.8% completed no CBT-I and 10.2% completed ≥1 CBT-I session, of which 4,818 (55.9%) received an adequate course of CBT-I. Although there was an unadjusted decreased incidence of cognitive impairment for older Veterans completing any CBT-I compared to referral alone, RR=0.905 (95% CI: 0.846–0.969), there was no significant difference when controlling for age, gender, and chronic condition count, RR=0.99 (95% CI: 0.93–1.06). There was also no significant difference between adequate CBT-I completion and referral alone, RR=0.98 (95% CI: 0.90–1.08).

Conclusions: While our study did not show a definitive association between CBT-I completion and incident cognitive impairment among older Veterans, most Veterans did not complete adequate CBT-I which limited our evaluation. Based on the importance of treating insomnia for overall health, further research to enhance CBT-I completion is warranted.

D190 Resident Presentation

Frailty assessments for the non-converted: testing the validity of quick and easy-to-apply bedside tools

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Background: Effective frailty assessment in hospital settings is an ongoing debate. While some tools leverage data from medical records and are to information provided by diagnosis codes, others, like the Clinical Frailty Scale (CFS), require time-consuming comprehensive geriatric assessments (CGA). We examined the accuracy of two quick and easy-to-apply tools to detect frailty in hospitalized older adults, comparing their predictive validity for in-hospital adverse outcomes.

Methods: We used data from the CHANGE Study, an ongoing cohort of people aged ≥ 65 years admitted to 15 hospitals throughout Brazil. Trained physicians completed detailed CGAs on admission and ranked patients according to the CFS (1-9; frail ≥5), a well-validated approach to detect frailty. Frailty was also assessed using the Study of Osteoporotic Fractures (SOF) and the FRAIL (fatigue, resistance, ambulation, illnesses, and weight loss) indexes, two validated quick bedside tools. We used areas under the curve (AUC) to compare the accuracies of SOF and FRAIL scores to identify frailty according to CFS. We also used logistic regression models (adjusted for sociodemographic factors, comorbidity, illness acuity, and hospital) to explore the association between both tools and prolonged hospital stay (≥10days) and in-hospital mortality.

Results: In a sample of 463 patients (mean age=81years; women=63%; non-White=43%), 58% were frail, according to CFS. FRAIL scores discriminated between frail and non-frail patients better than SOF scores (AUC=0.80vs.0.67;p<0.001). We further observed that the SOF frail category was not independently associated with adverse in-hospital outcomes. Conversely, patients classified as frail using the FRAIL scale had a higher risk of prolonged stay (56%vs.34%; adjusted odds ratio [aOR]=3.2;95%CI=1.6–6.3) and in-hospital mortality (22%vs.5%; aOR=3.8;95%CI=1.2–12.5) compared to robust patients.

Conclusions: FRAIL tool successfully detected frailty and predicted adverse outcomes in hospitalized older adults. Non-specialists should be aware that they can use this quick and easy-to-apply bedside tool to assess frailty and support prognostication and resource allocation in the hospital.

D191 Student Presentation

An Observational Study of Urinary Incontinence and Its Correlation with Mental Health and Well-Being In a Primary Care Population

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Background:

The prevalence of urinary incontinence and frailty increases with ageing. As an adaptive mechanism patients become socially isolated resulting in worsening of mental health anxiety and depression.

Aims/Objectives:

We undertook a retrospective observational study of frail patients with an eFI above 0.33 to look for a correlation between eFI, GAD and phQ-9 scores.

Methods:

The records of 600 patients with an eFI above 0.33 (n=600) were analysed for declared symptoms of incontinence using the Michigan Incontinence Score Index (MISI) to see if there was a correlation with mental health problems, anxiety (GAD tool) and depression (phQ-9) scores.

Results:

Irrespective of age or comorbidity we found the score ranges of eFI (0.36-0.75), MISI (0-40), GAD (0-18) and phQ-9 (0-24). The correlation of the eFI severity, MISI and worsened GAD and phQ-9 score achieved statistically significant P values of 0.006882.

Conclusions and Recommendations:

Increasing frailty accompanied by urinary incontinence contributes to embarrassment and social isolation as a compensatory mechanism and is under reported due to an acceptance of this condition. It needs to be actively screened for as part of a frailty assessment, to ensure early referral to the continence services for support and patient education to mitigate these risks. We will be following up these patients to see if supportive management of their urinary incontinence improves their mental health and well-being.

D192 Student Presentation

Exploring the physical impact of social isolation in older adults and the potential mitigating impact of physical activity

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Background

With COVID-19 causing the more vulnerable older adults to physically isolate, the effects of social isolation are becoming better understood. Most studies focus on the impact social isolation can have on mental health, with few examining the physiological changes. We aimed to review the literature on the physical impacts of social isolation in older adults with the goal of informing the design of an evidence-based, virtual physical activity intervention targeting physical well-being and social connectedness in this population.

Methods

We defined physiological effects as all physical health issues, including cognitive decline, but excluding mental health issues. Utilizing PubMed we included in the review, articles which (1) examined a physiological effect of social isolation that can be reduced with exercise, particularly cognitive decline and cardiovascular disease (CVD); (2) included older adult populations (defined as age >65) (3) were published within the last 10 years. We used the key terms "social isolation + physiological effects" (315 results), "social isolation + cardiac" (615 results), and "social isolation + cognitive decline" (421 results).

Results

We identified 9 articles with evidence substantiating the link between physiological health issues and social isolation. Three articles reported social isolation increasing the likelihood of developing CVD with two studies citing an increased risk of developing CVD by 29-42%, and one citing an expected increase in CVD death by 25-50% due to physical inactivity during the COVID pandemic. Three articles reported social isolation to be linked to a higher chance of having cognitive decline, and more rapid decline. The remaining three studies described links to an increase in strokes and atherosclerosis attributed to social isolation and the impact on inflammatory markers.

Conclusions

Strong evidence exists in the medical literature linking social isolation to cardiovascular risks - based on this, evidence-based interventions that address both interconnected problems are needed. As a next step, our team designed a pilot study using virtual paired physical activity to facilitate interpersonal interactions and decrease physical inactivity and hopefully mitigate developing linked physical health issues.

D193 Student Presentation

Sensor-based Frailty Assessment in Hospitalized COPD Patients: Predicting Post-Exacerbation Outcomes

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Background

Chronic obstructive pulmonary disease (COPD) is a global leading cause of death. Functional capacity assessment can guide health management methods of individuals with COPD. However, typical methods in assessing disease severity are either inaccurate or impractical for bed-bound patients. We investigated the use of an upper-extremity functional (UEF) assessment and musculoskeletal arm model to predict adverse outcomes in hospitalized patients.

Methods

We recruited 156 patients (age $\geq$ 55 years) hospitalized for COPD-related exacerbations who performed the UEF test involving 20-second rapid elbow flexion recorded by forearm and upper-arm sensors. Kinematic parameters (a previously validated UEF score) score patients from 0 (not frail) to 1 (extremely frail) based on slowness, weakness, exhaustion, and flexibility. We also calculated parameters representing muscle performance using a 7 muscle arm model. Significant relationships between UEF score and muscle model parameters with in-hospital and 30-day post-discharge adverse outcomes (extensive length of stay, re-hospitalization, death, and complications) were investigated.

Results

Of the 156 recruited individuals (age = 67 ± 7.4 years), 15 were excluded due to duplication or missing signals. Demographic parameters (age, sex, body mass index, and smoking status) and other survey scores (COPD assessment test and clinical frailty score) were not significantly different between patients with and without adverse in-hospital or 30-day outcomes ($p > 0.10$). ANOVA models showed significant difference in UEF score and musculoskeletal parameters, including co-contraction and mean flexion muscle force, between those with in-hospital and 30-day outcomes and those without outcomes ($p < 0.05$, effect size = 0.79 ± 0.084). Using the above two musculoskeletal parameters and UEF score, an AUC of 0.79 was achieved for 30-day (0.83 sensitivity, 0.68 specificity) and 0.74 for in-hospital outcome predictions (0.82 sensitivity, 0.52 specificity).

Conclusion

Results suggest that while demographics and questionnaires related to COPD progression were not significantly associated with disease outcomes, a quick objective function test may efficiently predict both in-hospital and post-discharge outcomes. Findings also suggest that musculoskeletal parameters along with kinematics may improve outcome prediction within the function test.

D194 Student Presentation

Conventional Versus New: Comparing Aducanumab with Acetylcholinesterase Inhibitors and N-methyl-D-aspartate Receptor Antagonist in the Management of Alzheimer's Dementia

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Alzheimer's dementia is the most common major neurocognitive impairment and the fifth leading cause of death in older adults in the United States. The diagnosis is clinical; however, laboratory tests and imaging frequently rule out secondary causes of dementia. Unfortunately, the treatment available for Alzheimer's dementia does not reverse dementia, but it may help improve the symptoms and slow the progression of the disease. The conventional treatment, acetylcholinesterase inhibitors (AChEIs) therapy, and N-methyl-D-aspartate

(NMDA) receptor antagonist enhance executive function, overall cognition, and activities of daily living. AChEIs such as donepezil, rivastigmine, and galantamine and approved for mild to moderate dementia. Furthermore, memantine, an NMDA receptor antagonist, is authorized for moderate to severe dementia. Aducanumab, the newest drug available, is an amyloid-beta monoclonal antibody approved only for mild Alzheimer's dementia. Research demonstrates that treatment with either acetylcholinesterase inhibitors or memantine is more cost-effective than aducanumab and the best supportive care. Aducanumab has specific recommendations with strict monitoring and several adverse effects, including amyloid-related imaging abnormalities. The most common adverse effects of acetylcholinesterase inhibitors and memantine include gastrointestinal symptoms, dizziness, confusion, and headaches. Therefore, monitoring should be periodically at the clinician's discretion for clinical response and tolerability of medication. Conventional therapies are only for symptom management but are still beneficial to patients and caregivers. Unfortunately, at this time, aducanumab's risks outweigh the benefits with a questionable approval process by the United States Food and Drug Administration. However, given the potential disease-modifying capabilities of Aducanumab, several clinical trials continue to investigate other disease-modifying options by possibly reducing inflammation, preventing amyloid-beta plaques from clumping, or keeping tau proteins from tangling.

D195 Student Presentation
Openness to Pain Management Modalities Among Caregivers of Older Adults with Dementia
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Background: Pain is highly prevalent among older persons with dementia (PWD), most of whom depend on informal caregivers (family, friends). Caregivers' roles are paramount in determining the care PWD receive, especially when cognitive impairment impedes communication and decision-making capacity. This study aimed to better understand caregivers' openness to various pain management modalities for their care recipients.

Methods: Surveys were completed by N=26 caregivers of PWD enrolled in a managed long-term care organization in NYC. Their openness to the PWD being treated with 13 pain management modalities was measured on separate Likert scales from 1 (not at all open) to 5 (very open). These modalities were grouped into 4 categories: (1) opioid, (2) non-opioid pharmacologic (e.g., NSAIDs, Tylenol), (3) physical nonpharmacologic (e.g., physical therapy, heating pad), and (4) non-physical nonpharmacologic (e.g., music, distraction). Mean openness to each category was calculated, as were bivariate associations between openness to opioids and each of the other 3 categories.

Results: Participants were a mean age of 59 years and 81% female. The sample was highly diverse: 27% Black, 31% Hispanic, and 35% White. Mean receptivity ratings were lowest for opioids (M=2.5); openness to other modalities were similar (non-opioid pharmacologic, M=4.1; physical nonpharmacologic, M=3.8; non-physical, nonpharmacologic, M=4.0). A small but significant association was found between caregivers' openness to opioid and non-opioid pharmacologic treatments (r^2=0.22, p=0.01). No other significant associations were observed.

Conclusions: Data collection is ongoing. These preliminary findings suggest that, although caregivers were most open to non-opioid pharmacologic therapy and least open to opioids, there may be a correlation between openness to non-opioid medications and to opioids. Given the range of efficacious pain management modalities which may be indicated in different contexts, understanding caregivers' decision-making tendencies is important. This study is limited by small sample size; further research must seek to understand *why* caregivers make pain management decisions and how to most effectively target counseling.

D196 Student Presentation
Clinician and Patient Perspectives on Aging and Serious Illness among Homeless Older Adults: Recommendations for Policy and Practice
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Background: Older adults experiencing homelessness constitute the fastest-growing segment of the homeless population in the US. Previous research has found older homeless adults to have more chronic health conditions, greater odds of physical disability, and experience accelerated aging. Little is known about the role of street medicine in providing care and support to aged and aging unsheltered homeless patients. Therefore, the purpose of this study was to elicit the perspective of clinicians and unsheltered homeless patients on aging and managing serious illness.

Methods: Individual interviews with clinicians via video conferencing and in-person interviews with patients recieving street medicine. Interviews were guided by a semi-structured research protocol developed by the team, audio recorded, and transcribed verbatim. Due to environmental noise and choice, field notes were gathered during patient interviews. Transcripts and field notes were analyzed by two independent coders following a thematic analysis approach.

Results: Eight clinicians from street medicine and eight patients were interviewed. On average, clinicians were 41 years old and identified as white (50%) females (50%) with varying experience in street medicine (1-16 years). Participants were multidisciplinary. Patients identified as male (63%), having 3+ chronic health conditions (100%), and aged on average 56 years. Thematic analysis of the clinician interviews revealed four major themes: characteristics of older homeless adults, challenges, end-of-life conversations, and recommendations for improved support of older homeless adults. Overriding themes from the patient interviews were related to aging, illness, and the street medicine model of care.

Conclusions: Clinician and patient perspectives on aging and serious illness while living outside offer insight into significant challenges faced when balancing the restrictive healthcare system with the needs of their patients/self. Results highlight constraints placed on clinicians and patients by the rigid healthcare system and incompatibility with the unique circumstances of unhoused people and the street medicine model of care. Findings from this study suggest actionable strategies that hold implications for policy and practice to better meet the needs of unsheltered homeless older adults.

D197 Student Presentation
Rural Older Adults' Experience of Telehealth Services
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Background: The increasing number of older adults, particularly those with complex healthcare and social service needs, will precipitate a demand for alternative ways to provide healthcare, social services, long-term care, and formal support for aging adults. This need is especially pronounced in rural areas with high proportions of older adults, but limited resources. Telehealth is a potential alternative to provide needed resources to this growing population. **Methods:** This study describes the benefits and challenges to participation in, and potential improvement to telehealth. A semi-structured interview protocol was conducted with older adults in a rural Rocky Mountain area exploring the participants' experience using telehealth. Questions included in the interview inquired about the benefits and challenges to participating, and ideas to improve telehealth delivery. The interviews

were transcribed and coded utilizing the Framework Analysis method. **Results:** Twenty older adults (75.0% female, 25.0% male; mean age = 72.85 years) were recruited through primary care service providers, senior centers, and mental health service providers. The identified themes related to the benefits of telehealth for rural older adults include ease of healthcare access, increased healthcare access, COVID-19 safety measures, and facilitates social connection. Three themes were identified as the challenges to participation including technology difficulties, telehealth limits, and poor coordination. Ideas for improving telehealth experiences for rural older adults include improvement of technology and cost, additional training for health care professionals, and additional instructions for using telehealth. **Conclusion:** Telehealth presents significant benefits for older adults in rural areas such as removing barriers that prevent access to healthcare, including traveling long distances specifically to see specialist providers. Telehealth also presents unique challenges (e.g. unreliable internet connection, lack of technology assistance resources) that should be addressed to improve telehealth effectiveness for rural older adults. Qualitative data gathered from older adults in a rural Rocky Mountain area provides unique insights into the benefits, challenges to participation, and improvement ideas for telehealth.

D198 Student Presentation
Individual Socioeconomic Factors Have a Greater Impact On Proxy-Reported End-of-Life Care Outcomes Than Regionality
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Background: End-of-Life (EoL) healthcare provided to Americans in urban and rural settings is distinct in terms of both available and delivered services. But much less is still known about which geographic, demographic, and health indicators drive disparities in satisfaction with EoL care outcomes. Our study aimed to assess how regional indicators and degrees of rurality affect proxy-reported Quality of Care (QoC) during the Last Month of Life (LML) across individual socioeconomic factors.

Methods: This is a cross-sectional study of N=2778 decedents whose proxies completed the LML questionnaire distributed by the National Health and Aging Trends Study (NHATS). The NHATS is a nationally representative cohort study of adults over the age of 65. The data was linked at the zip code level to United States Department of Agriculture (USDA) Economic Research Service Typology Codes, USDA Urban Influence Codes, and University of Wisconsin County Health Rankings. We tested association of individual and regional characteristics using two way frequency tables and simple logistic regressions.

Results: County rurality index (p=0.70) and county health factors (p=0.75) were not correlated with proxy-reported QoC during the LML, after adjusting for age, race, and sex. The cohort that reported excellent care versus not excellent care differed significantly by race (p=0.05), education level (p=0.05), and income quartile (p=0.000) after appropriate survey weighting.

Conclusions: Proxy-reported satisfaction with EoL care may be more dependent on individual socioeconomic factors than a wide range of regional indicators including degrees of rurality. Clinicians in both metropolitan and rural areas should strive to more comprehensively recognize the interplay of individual characteristics and regional indicators to provide more personalized care to their patients and to achieve higher levels of patient satisfaction at this critical juncture.

D199 Student Presentation, Encore Presentation
The State of Funding for Palliative Care, Supportive Care, and Geriatrics Research in Advanced Liver Disease
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Advanced liver diseases (AdvLDs), such as cirrhosis and hepatocellular carcinoma, account for approximately 3.5% of deaths across the world and are a significant source of disability and reduced quality of life across all age groups. Despite need, there is limited evidence for interventions that improve delivery of patient-centered care in this population. The primary aim of this study was to characterize national funding for palliative care (PC), supportive care (SC), and geriatrics research focused on AdvLDs.

We identified studies with federal funding (NIH, AHRQ, FDA, VA) using the NIH Research Portfolio Online Reporting Tools Expenditures and Results (RePORTER) system. Using key terms informed by a literature review (Table 1), we identified grants awarded from 2016-2022 involving: 1) AdvLDs; 2) domains of patient-centered care (PC, SC, geriatrics) and 3) both AdvLD and patient-centered care. Searches were conducted from June to August 2022. Next, two abstractors (M.H. and S.P) performed structured reviews of titles and abstracts to confirm their inclusion. We calculated number of grants and direct costs.

We identified 346 AdvLD, 264 PC or SC, and 2,482 geriatrics-related funded grants. Of the 346 AdvLD grants, only 4 grants (1.16%) - 3 funded by NIA and 1 by NIDDK - involved AdvLD and one of the three domains related to patient-centered care. Additionally, three were R series grants and one was a P series grant. The total amount of funding awarded for these four grants was $3,522,286, which represented 2.41% of funds allocated towards AdvLD research, 0.76% of PC or SC research and 0.08% of geriatrics research (Table 2).

Evidently, funding for patient-centered research within AdvLD is critically low. To meet the multi-dimensional needs of patients with AdvLD, a population that is growing in size and age, greater priority should be placed in funding this field of research.

D200 Resident Presentation
Deprescribing in an Interdisciplinary VA Telemedicine Consult Service
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Background: Deprescribing is increasingly recognized as an important clinical outcome within geriatric interventions. This study aimed to evaluate deprescribing as a clinical outcome of an interdisciplinary geriatric telemedicine VA consult service.

Methods: A retrospective chart review of telemedicine consult encounters occurred 6 to 12 months after time of encounter. Abstracted data included patient characteristics, modality of visit, and number of medications at time of encounter and chart review. Descriptive statistics and within-group analysis with t-testing was used to evaluate deprescribing trends.

Results: 495 patient encounters (366 unique patients) were reviewed. The population was 97% men, 87% white, and 100%

rural with an average age of 77. At first encounter, 88% had greater than 4 medications (60% greater than 9), while 83% had at least two chronic health conditions. 377 encounters occurred by clinic-to-clinic videoconferences (CVT) and 118 occurred through team-informed E-consults. Medication count was not statistically different at time of first encounter between CVT and E-consult (p=0.07). A net decrease in medications occurred in 147 CVT encounters with an average reduction of 4 (range 1-27). A net decrease in medications occurred in 46 E-consult encounters with an average reduction of 3 (range 1-11). Both CVT and E-consult had 38.9% encounters results in a net decrease in medications. Medication count was significantly less at time of chart review with CVT (p=0.035) but not with E-consult (p=0.55).

Conclusions: In this population with high polypharmacy and limited healthcare access, deprescribing is occurring via telemedicine. However, there is room for significant improvement in these efforts which could be the focus of future quality improvement interventions. Both CVT and E-consult had the same percentage of encounters leading to deprescribing, but the effect may be stronger with CVT based on a statistically significant reduction in medications. This may be related to the fact CVT is a modality of care with more patient and physician interaction.

D201 Resident Presentation

Center based versus home based geriatric rehabilitation on sarcopenia components: a systematic review and meta-analysis

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Background: To investigate the available evidence on the components of sarcopenia in geriatric rehabilitation and to examine whether changes in different settings are associated with sarcopenia.

Methods: PubMed, the Cochrane Central Register of Controlled Trials in the Cochrane Library, and Embase were searched from initiation to August 30, 2021. We included randomized controlled trials of older adults receiving geriatric rehabilitation that included strength exercise training. The following study contents were extracted: study design, patient characteristics, sample size, description of the rehabilitation setting, follow-up time point, and outcomes. The main outcomes were muscle mass, muscle strength, and physical performance. Weighted mean difference for Timed Up and Go score and standardized mean difference for other parameters were calculated.

Results: We found that center-based exercise improved lower limb strength and TUG score to a greater extent than home-based exercise in elderly people, but not other components of the sarcopenia diagnostic criteria, including muscle mass, upper limb strength, gait speed, and the 6-minute walk test (6MWT).

Conclusions: Center-based geriatric rehabilitation improved lower limb strength and Timed Up and Go test score to a greater extent than homebased geriatric rehabilitation in elderly people. Center-based training seems to show a minor superior effect on gait speed in prolonged follow-up rather than at the endpoint of intervention. To draw a stronger conclusion, further high-quality trials with standard protocols and longer follow-up are needed.

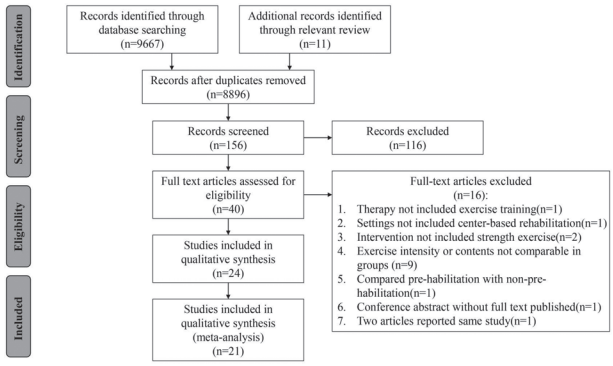

Figure 1. Summary of study selection process

D202 Resident Presentation

The Digital Shift: Are Older Adults Willing to Use Online Forms and Questionnaires?

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Background: As healthcare becomes increasingly digitalized, institutions are shifting away from paper-based forms and questionnaires to online versions for patients to fill out via patient portals. However, given known disparities in technology use by patients of different races, ethnicities, education status, and age, there is a need to study the abilities, attitudes, and willingness of patients, specifically older adults, regarding electronic-based forms. This study assesses the willingness of older adults to complete online forms and questionnaires and identifies potential contributing factors.

Methods: Self-reported data for 4105 Kaiser Permanente Northern California (KPNC) members aged 65-85y who responded to the 2020 KPNC Member Health Survey were used to estimate percentages of older adults who use the internet with or without help and who indicate willingness to complete forms/questionnaires online via a patient portal. Data were weighted to the age-sex-racial/ethnic composition of the 2019 KPNC adult membership. Estimates were reported for the overall population, two age groups, and four racial/ethnic groups. Adjusted prevalence ratios were produced using modified Poisson regression models that included age group, sex, race/ethnicity, education, and ability to use the internet.

Results: Among adults aged 65-85y, 48.1% (95%CI 45.3-50.8%) indicated willingness to complete online questionnaires/forms, 27.1% were not willing, and 24% were not sure. Willingness to complete online forms was greater among White (vs. Black, Latino, and Asian/Pacific Islander) adults, those ≤75y, those with at least some college, and those who used the internet on their own (vs. not at all and or with help). The multivariable models found that higher percentages of adults with at least some college and ability to use the internet without help were willing to fill out forms online, while lower percentages of Latino adults and adults age >75y were willing to do so.

Conclusions: These findings suggest that digital disparities exist in the older adult population and that there is a need to provide certain groups (non-White and older aged) with training, technical support, and encouragement to improve digital equity and enable the whole population to feel comfortable making the shift to digital health care forms via patient portals.

D203 Student Presentation

Health Effects of Social Connectedness in Older Adults Living in Long Term Care Settings

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Background: Social connectedness with others in long-term care settings (e.g., assisted living, nursing homes) is thought to be crucial to residents' well-being. Our study aimed to synthesize the literature regarding the health impact of social connectedness among older adults living in long-term care settings.

Method: Using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, we reviewed 7,343 articles published between 1990-2021 from five databases. Articles meeting criteria (n=105) included 18 cohort (follow-up range: 1 month - 10 years), 77 cross-sectional, 8 qualitative, and 2 mixed methods studies. Methodological quality was evaluated using standard criteria.

Results: The Minimum Data Set Social Engagement Index (n=14) and Multidimensional Scale of Perceived Social Support (n=13) were the most commonly used measures of social connectedness. In all studies, reduced social connectedness was common. The most common health outcomes studied were depression (n=33), quality of life (n=15), mood and affect (n= 13), life satisfaction (n=11), and death (n=4). Most cross-sectional studies demonstrated a link between higher social connectedness and reduced depression, higher life satisfaction, better quality of life, and more positive mood and affect. Cohort studies suggest that more social connectedness delays time to death while studies with depression as the outcome were mixed. Studies of other health outcomes (e.g., cognitive decline) were scant. Most qualitative studies (n=4) examined factors that influenced quality of life. Social connectedness improved residents' quality of life and reduced depression but residents may face difficulties forming social connections.

Conclusion: Our findings show that additional longitudinal studies are needed to understand the impact of reduced social connectedness on health outcomes in older adults living in long-term care settings. Such studies can inform the development of rigorous evidence-based interventions to improve social connectedness in these settings.

D204 Resident Presentation

Cost-effectiveness of a technology-based rural weight management intervention in older adults with obesity

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Background: Obesity is prevalent in older adults and is associated with higher rates of functional decline, institutionalization, and increased health care costs. Obesity rates are higher in rural populations where access to care may be limited. The economic burden of obesity is severe, with medical spending for adults with obesity higher than their normal-weight peers. We aim to quantify the cost-effectiveness of a telehealth-based weight loss intervention.

Methods: We previously established the efficacy of a six-month telemedicine-delivered physical therapy-led exercise and registered dietitian intervention that led to clinically significant weight loss. Outcome measures included effectiveness as measured in quality-adjusted life years (QALYs) gained, cost/patient (adjusted to 2022 USD), and incremental cost-effectiveness ratio (ICER, cost/QALYs gained) of the intervention compared to no intervention. Of the n=53 enrolled, 44 completed the trial. Self-reported health was assessed using PROMIS and converted to EQ-5D index values using published algorithms. Cost data were obtained from study records. ICERs were calculated for the telehealth intervention using TreeAge Pro Healthcare software (Williamstown, MA).

Results: The intervention resulted in a gain of 0.0287 QALYs (0.707 to 0.735 QALYs). Cost per patient (including supplies, PT, and RD costs) was $1,153. The ICER for the intervention was $41,509/QALY gained compared to no intervention. At a societal willingness-to-pay (WTP) of $100,000/QALY, the intervention remained cost-effective until the cost per patient exceeded $2780. At baseline cost, the intervention remained cost-effective at a WTP of $100,000 until the QALYs gained decreased below 0.0115.

Conclusions: The telemedicine-based weight loss intervention resulted in small but significant QALYs gained as determined via EQ-5D index values. Cost per patient was low, and the intervention was cost-effective at accepted societal WTP thresholds. The intervention remained cost-effective even with a substantial increase in cost, a critical finding given rising labor costs in healthcare. Similar interventions could be considered for broader application as they appear clinically beneficial and cost-effective.

D205 Student Presentation

The Social Determinant Health Needs of The Geriatric Population

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Background: Social determinants of health (SDH) are the conditions where people are born, live, work, and age[1] and account for 80% of their health outcomes[2]. SDH have proven impacts on geriatric health outcomes such as hospital readmission rates and patient functional status[3,4]. This study looks to identify and compare the most common SDH challenges faced by this population.

Methods: Data was collected by the University of Connecticut Health Leaders program, which trains volunteers to screen for and address SDH. Volunteers screen patients in Connecticut primary care clinic waiting rooms and inpatient stays. The survey is hosted on the Research Electronic Data Capture Program and includes questions about demographics, housing, food insecurity, and more. Significant differences between the SDH needs of patients younger than 65 years old (y/o) and 65 y/o and older were found using chi-square analysis with a p-value <.05. This study is IRB exempt per UConn School of Medicine.

Results: From 09/21 to 05/22, 2399 patients were screened (566 ≥65 y/o, 1833 <65 y/o). Of the older group, 41.3% experienced at least 1 SDH barrier, and the most common SDH identified were former smoking status (36%), education less level than high school diploma (13%), preferred language other than English (12%), veteran status (10%), and lack of transportation (10%). Patients ≥65 y/o were statistically more likely to be former smokers (p<.01) and veterans (p<.01) and have an education level less than a high school diploma (p<.01) in comparison to patients <65 y/o.

Conclusion: Nearly half the geriatric patients surveyed faced SDH barriers, with certain needs disproportionately affecting them. Identifying SDH needs are essential steps to address them and improve health outcomes.

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D206 Student Presentation

Improving Communication Around Medications in Skilled Home Healthcare: The HOME Tool Feasibility and Usability Pilot in EPIC

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Background

Communication between providers and skilled home healthcare (SHHC) clinicians concerning medication management is deficient due to health system fragmentation and communication barriers, including lack of interoperability across different electronic medical record (EMR) systems. Our aim: conduct a feasibility and usability pilot of the HOME Tool (HT), an informatics tool, in the EPIC EMR to improve communication between patients, primary care providers (PCPs) and SHHC clinicians on medication-related issues in SHHC.

Methods

Pilot was conducted in 10 SHHC encounters among 3 Johns Hopkins (JH) home-based or ambulatory PCPs, and 4 SHHC clinicians (nurses and therapists). We tested feasibility through automated data extraction methods that pulled medication data directly from the EPIC EMR to populate two versions of the HT (patient and PCP/SHHC clinician). A web-based EPIC application integrated the HT with the patient encounter within the EPIC EMR when the HT was accessed by a PCP/SHHC clinician and printed for the patient. To assess usability, we used a modified version of the System Usability Scale (SUS) with three separate versions tailored for patients, SHHC clinicians, and PCPs. Participants were asked to rate usability of the HT on a 1 to 4 scale (1=strongly disagree, 4=strongly agree).

Results

The HT was successfully generated in the EPIC EMR and printed for all 10 patients. 100% response rate from 4 SHHC clinicians and 3 PCPs for usability scores. SHHC clinicians found the HT easy to use (3.75,SD=0.43) and reported that they would use it frequently (4.0,SD=0.00). PCPs found the tool less easy to use (3.0,SD=1.0) and would not use the HT as frequently (2.0,SD=2.0). PCPs did not endorse the HT to obtain a better understanding of the patient's medications. Only 1 of 10 patients have returned the SUS survey and they did not complete the SUS.

Conclusion

The pilot of the HT in the EPIC EMR was feasible for all users. However, usability and HT ability to provide a better understanding of patients' medications were mixed between SHHC clinicians and PCPs. Key factors for mixed usability results may be due to design issues and/or insufficient education on HT use to improve communication through the EPIC EMR. Feedback from patients around usability is also needed.

D207 Resident Presentation

Impact of Primary Care Model on Collection of Quality of Care Metrics in High-Risk Older Adults

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Background

The Veterans Affairs (VA) health care system has developed primary care models focused on care for complex older Veterans (GeriPACTs), including essential screening for important geriatric syndromes. These GeriPACT clinics are staffed with geriatrics-trained professionals, but have limited availability. There is a need to understand what types of patients would benefit the most from this geriatrics-focused primary care model. The goal of this analysis was to examine whether the effects of GeriPACT on collection of quality of care (QOC) metrics differs in three high-risk clinical subgroups.

Methods

This is a secondary analysis of data from a prospective matched cohort study that enrolled 568 patients from GeriPACT and PACT clinics and followed them for 18 months. Data were obtained via EHR, chart review, and telephone-based survey. QOC outcomes were rates of geriatric syndrome screening (i.e. falls, functional status, incontinence) and advance directive completion. Logistic regression models with interaction terms estimated odds of these outcomes by prespecified high-risk subgroups: cognitive impairment (CI), functional impairment, and multiple (≥3) comorbid conditions (MCC).

Results

Study participants had a mean age of 80.5 years, and were mostly male (98.2%) and white (80.3%). The two treatment populations were well matched. Odds of completing QOC metrics were directionally higher in GeriPACT versus PACT in patients with and without CI, functional disability, and MCC (Table). Tests of interaction between GeriPACT/PACT exposure and subgroups of interest were not statistically significant.

Conclusions

GeriPACT participants were more likely to receive screening for geriatrics syndromes and to complete advance directives than their PACT counterparts without substantial differences by cognitive status, functional disability, or multimorbidity. These results do not support limiting GeriPACT access to only certain high-risk populations.

Odds Ratio (Odds Confidence Interval):

	Cognitive Impairment (n=187)	No Cognitive Impairment (n=381)	Functional Disability (n=317)	No Functional Disability (n=251)	≥3 Chronic Conditions (n=314)	<3 Chronic Conditions (n=254)
Incontinence Screen (n=468/559)*	2.4 (0.9-6.6)	2.9 (1.8-4.7)	2.1 (1.2-3.8)	3.6 (2.0-6.4)	2.3 (1.4-3.7)	3.6 (1.7-7.6)
Functional Screen (n=482/568)	2.8 (1.1-7.4)	4.9 (2.7-8.9)	2.9 (1.6-5.2)	5.2 (2.5-10.6)	3.9 (1.9-8.1)	4.5 (2.7-7.5)
Falls Screen (n=535/568)	1.5 (0.4-5.2)	3.6 (1.7-7.8)	2.2 (1.0-5.0)	3.7 (1.7-8.0)	2.5 (1.2-5.2)	3.3 (1.4-8.1)
Advance Directives (n=44/430)*	2.0 (0.5-9.2)	2.2 (1.0-4.7)	2.1 (0.9-4.9)	2.3 (0.5-9.9)	1.4 (0.7-3.1)	6.4 (1.4-28.9)

***Individuals with condition in pre-exposure period were excluded**

D208 Student Presentation

"They Were Referred to 200 Nursing Homes and Received 200 'No's':" Examining a Nursing Home Release Model for Incarcerated Older Adults

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Background:

Many adults are aging in prison, with the incarcerated older population increasing by 280% from 1998-2016. Some adults with significant physical and cognitive impairments qualify for early release contingent on a discharge plan, but face difficulties finding long-term care. Several states are considering transfers of eligible individuals from Departments of Corrections (DOC) to nursing homes, a model known as "Nursing Home Release" (NHR).

Methods:

To understand barriers and facilitators to early release, we conducted semi-structured interviews with 39 individuals across 9 states: 12 public defenders (30%), 13 nonprofit-based advocates (33%), 11 Departments of Corrections staff (28%), and 3 state government officials (7%). Two readers independently analyzed interviews in Atlas.ti using a coding framework developed using grounded theory.

Results:

NHR emerged in 2012 as a partnership between a CMS-certified nursing home and Connecticut's DOC, motivated by reported 50-80% reductions in state healthcare costs. The model is now under

consideration in at least 6 states. CT-based legislators and public defenders expressed optimism about NHR (*AG: "guaranteed bed placements [...] would be a game changer." MP: "you can't keep people locked up simply because you can't find a place to put them."*). However, former government officials and corrections staff also described blurred boundaries between parole officers and clinical staff. Nursing home and parole staff collaborated closely to restrict behavior, based on concerns over age, health, or behavior (*RG: "the officer is able to kind of settle the issue along with the nursing home staff, kind of like a unified front, and get them into compliance."*). While CMS certification requires operational separation, respondents also described workarounds that allow the state to maintain supervision of the individual.

Conclusion:

Aging in prison is often at odds with patient well-being and dignity, and with the stated rehabilitative aims of incarceration. NHR offers a way forward for seriously ill older adults who face placement barriers into community-based long-term care. However, as multiple states consider NHR, it is crucial to understand how the model potentially reproduces carceral dynamics and to ensure operational separation.

D209 Student Presentation

Characterizing Homebound Patients Who Benefit From Home-Based Vaccinations During The Covid-19 Pandemic

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Background: Homebound patients are especially susceptible to COVID-19 because they tend to be older and have multiple comorbidities. Yet, many experienced difficulties getting vaccinated due to their inability to routinely leave the home. Although many home-based primary care (HBPC) programs offered vaccinations to their homebound patients, it is not known whether these efforts successfully improved vaccination levels, in particular among racial and ethnic minorities.

Methods: We evaluated whether vaccination via HBPC can improve vaccine efforts for marginalized subpopulations. We conducted Chi-square and t-tests across multiple clinical and socioeconomic variables to characterize patients who were vaccinated at home.

Results: We found that patients were on average 83.0 years old (SD 14.1), female (76.4%), nonwhite (65.5%), and had 3.8 Elixhauser comorbiditiess (SD 2.6). In comparison to patients in the HBPC program who were able to get a vaccine outside the home, those who were vaccinated at home tended to have higher rates of dementia (53.4% vs. 41.4%), live in public housing (25.0% vs. 13.3%), have Medicaid (53.8% vs. 42.6%), were more likely to be enrolled in HBPC for longer than four years (50.7% vs. 39.2%), and live in neighborhoods with higher proportions of immigrants (77.9% vs. 76.0%), lower computer usage (86.2% vs. 88.6%), and greater poverty (18.0% vs. 13.4%). Thus, patients in the HBPC program who were vaccinated elsewhere tended to have markers of greater socioeconomic access as compared to patients who were vaccinated at home. They were also enrolled for shorter durations as compared to patients vaccinated at home.

Conclusions: Our analysis suggests that patients who relied on vaccination at home were less resourced. Furthermore, our data suggest that offering home-based vaccination by providers with long-standing relationships can increase vaccination rates among patients who might otherwise have waited or were unwilling to get vaccinated. Therefore, home-based vaccination campaigns may serve as a lever for health equity. Thus, health systems and HBPC programs should consider launching home-based vaccination campaigns as an important strategy to reduce barriers to vaccination.

D210 Student Presentation

The impact of medication reviews on clinical outcomes in persons with dementia: A scoping review

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Background: Older adults with dementia are often prescribed multiple medications with complex regimens to manage comorbidities. The high prevalence of polypharmacy and inappropriate medication use in this population demands regular review of medications to provide quality care. However, limited evidence is available regarding the effectiveness of medication reviews in older adults with dementia.

Objective: To identify gaps in current knowledge about the impact of medication reviews on clinical outcomes in older adults with dementia.

Methods: A scoping review was conducted utilizing the 5-stage framework by Arksey and O'Malley and PRISMA Extension for Scoping Reviews (PRISMA—ScR) guidelines for reporting. Ovid MEDLINE, Ovid EMBASE, and Scopus were searched in consultation with a librarian in January 2022 for relevant literature utilizing a combination of medical subject headings and keywords related to medication review, older adults, and dementia. Observational and interventional studies investigating medication reviews in older adults (≥ 55 years) with dementia were included.

Results: The initial search yielded 8346 citations. After deduplication, two independent reviewers screened 5296 articles by title and abstract, of which 5091 did not meet inclusion criteria. The full texts of the remaining 205 articles were screened; of these, 21 articles and one conference abstract met the inclusion criteria. Two quasi-experimental pre-post studies, 14 observational studies, four randomized controlled trials, and two mixed methods feasibility studies reported fifty-seven outcomes relating to medication reviews, including drug-related problems (n=10), drug-related interventions (n=11), evaluation of medication use (n=17), cost-effectiveness (n=2), and secondary outcomes such as dementia-related behavioral symptoms (n=8), drug-related admissions (n=1), and other outcomes (n=7).

Conclusion: This scoping review identified gaps in the number of studies measuring quality of life, mortality, medication management, and medication adherence as outcomes of medication reviews. The lack of standardized criteria to identify and categorize drug-related problems and lack of dementia-specific core outcomes should be addressed in future research studies.

D211 Student Presentation, Encore Presentation

"Advocating for what we need": A CBPR Approach to ACP in Latinx Older Adults

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Background: Advance care planning (ACP) is low among Latinx older adults. We used community-based participatory research (CBPR) to increase ACP in this population.

Methods: In partnership with San Francisco community-based organizations, clinicians, and local government, we formed a Latinx Community Committee (n=13). We conducted 6 focus groups with Latinx-identifying, English or Spanish-speaking older adults (age≥55), caregivers, and community leaders to assess ACP barriers/facilitators. Based on focus group learnings, we designed and implemented

community-based ACP events. Using a validated survey, we assessed acceptability and pre-to-post-event ACP readiness (scale 1-4; 4=most ready; 0.2=clinically meaningful).

Results: Focus groups included 10 older adults, 8 caregivers, and 10 community leaders. Themes highlighted the importance of ACP (eg, means of advocacy), barriers (eg, how to start conversations), and facilitators (eg, trusted community spaces) in the Latinx community. Participants emphasized the Latinx community is not monolithic, intergenerational approaches are important, and vulnerable groups (eg, LGBTQI+ and immigrants), may have different needs regarding ACP. 97 people attended 5 events targeting 3 Latinx populations (LGBTQI+, intergenerational, and older adults). Participants were 82% Hispanic/Latinx, 61% women, and 32% sexual minorities. Overall pre-to-post-event ACP readiness demonstrated a clinically meaningful change (2.62/4 (SD 0.97) to 2.95 (0.93); P=0.05). Readiness to document wishes increased significantly (2.44 (1.0) to 2.98 (0.95); P=0.003). Most reported being comfortable attending events (85%) and would recommend them to others (90%).

Conclusions: This study describes a feasible, acceptable, and effective CBPR ACP intervention. Co-developed community events represent a promising approach to reducing disparities in ACP among the Latinx population.

D212 Student Presentation

Cognitive, Physical, and Visual Deficits That Can Affect Everyday Medication Use Among Older Adults: A National View

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Background:

Age-related changes in cognitive, physical, and visual ability make medication use difficult. These challenges can be lessened by moving to higher levels of care or having medication management help. We lack knowledge about the prevalence of cognitive, physical, and visual impairments that might impact medication use and how these impairments vary across living sites and if someone receives help with medication management.

Methods:

From the 2015 National Health and Aging Trends Study, we performed a cross-sectional study of older adults who reported taking a prescription medication in the last month. Key impairments included: cognition (defined as possible/ probable dementia, which may indicate issues with remembering medication schedules and doses), self-reported physical ability (defined as difficulty opening a jar, which may suggest difficulty opening pill bottles), and vision (defined as being blind or difficulty reading newspaper print, which may represent issues reading medication labels). Number of impairments was graded (0, 1, ≥2) and (1) stratified across living sites (community versus facility) and (2) by whether participant self-managed or received some/complete help with medications.

Results:

The unweighted sample included 6,592 individuals, representing over 35 million older adults; 55% were 65 to 74 years old, 32% were 75 to 84 years old, 13% were ≥85 years, and 56% were women. Most (95%) lived in the community. Overall, 28% had one measured impairment and 9% had ≥2 impairments. The most common impairment was physical (26%), followed by cognitive (16%), and visual (4%). Percentage of people with ≥2 impairments increased with living site care level (e.g., 35% in the community, 95% in nursing homes). Of those who managed medications independently (N=5,365), 31% had at least one impairment, with inability to open a jar as the most common challenge.

Conclusion:

Many older adults have cognitive, physical, and visual impairments that can negatively impact medication use. Patients, particularly those with multiple impairments, should be assessed for challenges in medication use and need for support in this instrumental activity.

D213 Student Presentation

Sliding Scale Insulin Use in Nursing Homes Before and After Onset of the COVID-19 Pandemic

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Background: Sliding scale insulin (SSI) therapy is a common method of glucose management in nursing home (NH) residents. Although SSI may be appropriate in short-term, transitional, or acute care situations, long-term SSI use puts patients at risk for hypoglycemia, which can cause falls, decline in cognition, and other negative outcomes. Moreover, SSI use may have changed during the COVID-19 pandemic due to competing care demands, increased use of steroids, and staffing shortages. Our objective was to characterize SSI use in a broad, generalizable NH population over the course of the COVID-19 pandemic.

Methods: We used data from 12 NH chains (approximately 1,600 facilities) that shared a common electronic health record system. First, we estimated the average monthly prevalence of SSI use among all residents. We used interrupted time series analysis (ITS) with segmented linear regression using data from January 2019 to May 2021 to examine whether the monthly prevalence of SSI use changed at the onset and after the COVID-19 pandemic (March 2020). Next, among all residents with at least 1 administration of SSI documented in the electronic medication administration record, we described patient demographics, frequency of SSI monotherapy versus combination therapy, and number of daily capillary blood glucose readings ("fingersticks") per day and hypoglycemia (capillary blood glucose <70 mg/dL; severe hypoglycemia <50 mg/dL) in the 30 days after first SSI use.

Results: The overall prevalence of SSI use was 3.0%. The ITS analysis identified no major change in SSI use at the onset of the COVID-19 pandemic (p=0.48) nor over time afterwards (p=0.74). There were 129,829 unique NH patients with SSI use (51% women, average age 71.3 [SD 11.7] years). Of these, 36% patients received SSI monotherapy and 65% received SSI combination therapy. Residents received an average of 3.85 (SD 1.36) fingersticks per day. Overall, 26% of SSI users experienced any hypoglycemia and 7.3% experienced severe hypoglycemia within 30 days of the first SSI dose.

Conclusions: SSI use and fingerstick burden are high in nursing home patients. Hypoglycemia occurred commonly in all patients on SSI. Future research should compare hypoglycemia between SSI monotherapy and other diabetes medication regimens.

D214 Resident Presentation

Racial and Ethnic Differences in Patient Portal Use by Older Adults in an Integrated Healthcare Delivery System

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Background

Clinicians and patients are increasingly communicating and accessing health information electronically using patient portals. Older adults may benefit from electronic access to providers and records due to increased burden of chronic health conditions but may be less comfortable using a patient portal. Previous studies have found lower rates of telehealth use among Asian, Black, and Latino patients. This study examines demographic differences in use of a patient portal among a racial/ethnically diverse population of older adult Kaiser Permanente Northern California members, including a subset with diabetes.

Methods

This cross-sectional study used electronic health record (EHR) data for 353,490 White, 39,155 Black, 46,613 Latino, 30,828 Filipino, 21,332 Chinese, 7138 Japanese, 1677 Korean, and 9108 South Asian adults aged 65-85y who were KPNC members all of 2019 and whose preferred spoken language was English. All patients had access to the same patient portal. We compared the percentages of adults by race and ethnicity and age group (≤75y vs. >75y) who had activated patient portal accounts by December 2019. Among those with activated accounts, we compared the percentages who sent ≥1 secure message and viewed ≥1 lab result through the patient portal in 2019. We also evaluated racial/ethnic and age group differences in portal use for a subset of 122,881 adults with diabetes.

Results

Black, Latino, Filipino, and Korean adults were less likely than White, Chinese, Japanese, and South Asian adults to have an activated portal account by the end of 2019. Among those with portal accounts, these same groups were less likely than White adults to have sent secure messages and viewed lab test results online. These racial and ethnic differences were observed in both age groups and among adults with diabetes. For all demographic groups, use of secure messaging and online lab result views were lower in the >75y age group but did not significantly differ by sex.

Conclusions

Our findings are consistent with previous research demonstrating lower rates of patient portal use among older adults as well as among Black, Latino, and Asian adults. As the healthcare system becomes increasingly digitalized, older adults and racial/ethnic minority subgroups may need additional social and technical support to increase use of patient portals.

D215 Student Presentation

Burden and Depression among Empirically-Derived Subgroups of Family Caregivers for Individuals with Dementia

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BACKGROUND: Dementia caregivers have varied caregiving experiences, but most existing interventions address caregiver needs in a one-size-fits-all approach. The aims of this study were 1) to determine if there are distinct profiles of "strained caregivers" in adult child and spousal caregivers, and 2) to investigate if these profiles differ in caregiver burden and depressive symptoms.

METHODS: Family caregivers (N=250) were recruited to participate in a telephone intervention study for individuals with dementia. To meet inclusion criteria, the caregiver endorsed strain in at least two areas of psychosocial functioning. The variables used in the latent class analysis (LCA) models included self-efficacy for symptom management, self-efficacy for support services, activities of daily living, instrumental activities of daily living, dementia severity, caregiver age, length of time spent caregiving, caregiver health, relationship satisfaction with care recipient, care recipient behavior problems, and positive aspects of caregiving.

RESULTS: Caregivers were mostly female (78%) and white (96%) with a mean age of 63 years. The LCA models results showed that a four-profile model was the best fit for both spousal and adult children samples. Spousal caregiver profiles were identified as low self-efficacy/high strain, advanced dementia, resilient, and least severe dementia/low strain, and differences in burden and depression were found by profile. Adult-child caregiver profiles were similarly identified as low self-efficacy/high strain, advanced dementia, most behavioral problems, and high self-efficacy/low strain, and differences in burden were found by profile.

CONCLUSIONS: We identified four distinct profiles each for spousal and adult child caregivers. Among spousal caregivers, the high strain profile was found to have higher depressive and burden symptoms. Among adult child caregivers, the low strain profile had the lowest burden, but there was no significant difference in depression between the four profiles. Our findings demonstrate the diversity of the caregiving experience and suggest that future psychosocial interventions should be tailored to the needs of caregiver subgroups.

D216 Student Presentation

Pain Management Challenges for Family Caregivers of Hospice Patients with Dementia: A Qualitative Evaluation

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Home hospice heavily relies on family caregivers charged with numerous caregiving tasks, often including the oversight of and communication about pain management for their loved one. Persons with dementia (PWD) are prone to pain due to ineffective communication as the disease progresses and common misinformation about using pain medications. Untreated pain can cause physical disability, discomfort, and agitation, increasing caregivers' burden. Many hospice family caregivers express the need for resources and guidance to manage PWD's pain appropriately and for tools to identify and communicate their challenges and needs.[1] Addressing this need can help avoid untreated pain, reduce caregiver burden and improve quality of life. The study objective was to explore family caregivers' challenges in managing pain for a PWD in hospice. We performed a deductive content analysis of transcribed sessions between a therapist and a caregiver as part of a larger ongoing clinical trial that tests a supportive intervention based on Lazarus and Folkman's stress and coping theory.[2] We used an established pain management framework to inform coding.[1] We analyzed a total of 16 sessions for 8 family caregivers. Each session lasted, on average, 55 minutes. Five major themes were identified: Caregiver-Centric Issues, Caregiver Medication Skills and Knowledge Issues, End-of-Life Symptom Knowledge Issues, Communication and Teamwork Issues, and Patient-Centric Issues[1] (see Table 1). Half of the participants reported communication and teamwork issues as their main challenges in pain management.

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Major Themes and Quotes from Participants

Major Themes	Subthemes	Quotes from participants
Caregiver-Centric Issues	Caregivers' poor emotional and physical health	My mom is extremely high right now and has multiple issues that everything that seems to be coupling on right now. It is a problem for me because when my mom is not sleeping, I'm not sleeping right. I know that she's you know. She can see that I'm not doing well, then that also affects her [E2-1044]
Caregiver Medication Skills and Knowledge Issues	Misconceptions about pain medications Concerns for side effects of pain medications	I did have some concerns about the dying process started. Traditionally, why do we want her on morphine? I know I mean, people said it would help with pain and all other reasons to control symptoms. Now I understand them since she is on it. But I had those concerns initially. [E4-1092] But she's not pretty good without the everyday but because it's slowing down and so hard digestion, you know it's not what it should be yeah, absolutely as her body is changing… Just thinking about what a side effect can add to that is ridiculous, and as far as thinking about it [E3-1143]
Organizational Skill Issues	Staffing issues	I know because of the COVID, the nurses who work there were not there. So I spent whole chunk of the time to gather the fact instead of reacting. [E2-1065]
Communication and Teamwork Issues	Caregivers- healthcare providers' communication issues Hospice services-facility's teamwork issues	I'm wondering if I'm inflicting emotional pain on [patient name] and this is why they, the healthcare workers, have said don't talk about this issue. [E2-1039] They decided to change pain medication regimen but didn't tell me, you know, and I'm sort of caught off guard about it. [E2-1065] I don't think they freely give information unless I ask for it. [E3-1219] They were sort of resisting to the lots of challenges and how do we do this. Because they were not willing giving her as easily as some pain medicine that were prescribed. I was struggling with the professional staff because they didn't believe it. And she didn't look at her pain at all a week or so. [E2-1065]
Patient-Centric Issues	Lack of effective communications as diseases progress	Whatever my mom has no idea. So if she missed something or didn't get something, or she is getting something like she's my mom wouldn't know the difference. [E3-1219] I don't think she could get addicted. She doesn't know what it is. But I can't tell, because she can't tell me. [E3-1143]

D217 Student Presentation
The Role of Pneumocephalus in Patients with Chronic Subdural Hematoma

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Background: Post-operative pneumocephalus is a commonly described and typically benign radiological finding after neurosurgical procedures. In chronic subdural hematoma (cSDH) patients, pneumocephalus has been examined as a risk factor for recurrence. However, the literature addressing potential associations between pneumocephalus and cSDH is limited and conflicting, especially when examining factors such as pneumocephalus volume and clinical symptomatology.

Methods: To evaluate the role of pneumocephalus in cSDH outcomes, a systematic review of the literature was completed following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Prospective or retrospective studies on adult cSDH patients with clinical details on pneumocephalus and cSDH outcomes were included. Meta-analyses and studies not available in English or with pediatric patients, less than 5 patients, or insufficient information were excluded. Patient demographics and outcomes related to cSDH and pneumocephalus were extracted. The studies were not meta-analyzed due to methodological heterogeneity.

Results: Of 444 identified studies, 62 underwent full text screening. 36 studies (n=5,885 patients) were included. Mean patient age was 69.8 years old. 70.4% of patients were male. 19 studies found higher pneumocephalus rates or volumes in patients that also had greater cSDH recurrence. The minimum pneumocephalus volume related to increased cSDH recurrence ranged from 4 cm^3 to 15 cm^3. Three studies demonstrated complete resolution of intracranial air without apparent symptoms. Two studies found asymptomatic pneumocephalus to occur more frequently in elderly patients. 21 studies found that less intracranial air was related to cSDH outcomes including lower reoperation rates, post-operative seizures, length of stay, and short-term Markwalder scores.

Conclusions: While many studies demonstrated an association between pneumocephalus and worse outcomes in cSDH patients, there is not a consensus on the mechanism or on a causal role, especially given the lack of uniform pneumocephalus data. Less intracranial air was found to be associated with lower rates of cSDH recurrence.

D218 Student Presentation, Encore Presentation
Pandemonium: COVID-19 and Emotional Experience in Older Adults

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Background

Throughout COVID-19, the emotional and physical well-being of older adults was detrimentally impacted.

This study examined changes in positive and negative emotional experiences as it related to life domains affected by the pandemic among older adults with and without a history of major depressive disorder (MDD). We hypothesized that those with MDD would have a more negative sum of emotional experiences from COVID related changes in emotional and social health.

Methods

The study population included older adults previously diagnosed with MDD and a cohort of never-depressed older adults enrolled in the N-BOLD study at the UConn Health Center. Data collection occurred from May 2020 to Fall 2021 via the Epidemic Pandemic Impacts Inventory-Geriatric Adaptation (EPII-G) and the Sum of Emotional Experiences (Sum EE). Spearman Correlation Testing was used to evaluate the relationship between EPII-G components and the positive and negative sum of emotional experiences.

Results

Initial analysis showed a negative impact on home life positively correlated with a negative Sum EE, with a correlation coefficient (CC) of 0.5 and p-value of 0.02 in the group with MDD during 2020. Social activity positively correlated with positive Sum EE (CC=0.42 and p=0.057) and negatively correlated to a negative Sum EE (CC= -0.46 and p=0.03). In the control group, a negative impact on emotional health and well-being (EHWB) positively correlated with a negative Sum EE (CC=0.75 and p=0.03) and negatively correlated with a positive Sum EE (CC= -0.65 and p= 0.08). In 2021, both cohorts saw negative EHWB and physical health problems positively correlated to negative Sum EE.

Conclusion

When an individual's psychosocial support was threatened by the pandemic, there was an increase in the overall experience of negative emotions. Our previous study found that both groups saw an increase in overall depression scoring, which may have led to an increase in psychological vulnerability. In those with strong social support, overall emotional experience was more positive. More optimistic emotions may contribute to an individual's resilience, allowing a more successful adaptive response to stressors. By further analyzing the data, we can trend changes in emotional experience, further determining which pandemic-related factors were most detrimental and which may have contributed to resilience.

D219 Student Presentation
Afferent Visual System Integrity in Dementia: Feasibility and Preliminary Results

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Background: Alzheimer's Disease affects 6.5 million Americans and is the most common cause of dementia followed by Dementia with Lewy Bodies, vascular dementia, and frontotemporal dementia. The precise mechanism of each dementia is distinct, but there are many common aspects of the diseases that generalize, including insidious progression and cognitive dysfunction. Preliminary data indicate that the visual system is generally impaired in dementia, and with retinal imaging technology, several biomarkers are in development for dementia diagnosis. Most recently, optical coherence tomography (OCT), which captures retinal structure, and optical coherence tomography angiography (OCT-A), which visualizes retinal

microvasculature, are non-invasive imaging that have shown promise as potential robust and generalizable diagnostics for the disease. While several retinal technologies are being developed as diagnostic tools, the relationship between their findings and the pathophysiology of the dementias is unknown. One of our aims was to generate preliminary data on how these retinal biomarkers relate to non-visual neurological circuitry, most notably the regulation of sleep and circadian rhythms.

Methods: Patients from the University of Texas Southwestern Medical Center Memory Clinic were prospectively enrolled on a rolling basis in an observational cohort study. Patients were assessed for baseline cognitive function and sleepiness with Montreal Cognitive Assessment and Epworth Sleepiness Scales, respectively. Patients completed actigraphy for 2 weeks to track activity during the day, sleep at night, and total light exposure. Patients also had OCT and OCT-A scans to quantify the retinal structure and microvasculature.

Results: Approximately 60% of participants approached agreed to participate, and OCT-A was successfully acquired in approximately 50% of participants, consistent with the literature. Approximately 50% of data acquired fulfilled quality control metrics. Confounding ophthalmological comorbidities, such as macular degeneration, were encountered in 50% of scans that survived quality control. There was a direct relationship between daily light exposure and actigraphy metrics.

Conclusion:

Visual system dysfunction is nearly ubiquitous in dementias. Preliminary data is consistent with the literature, but additional data is needed to understand the relationship between visual dysfunction and dementia.

D220 Student Presentation

Culture Orientation and Emotional Health of Vietnamese-American Family Caregivers of Persons with Dementia

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Background/Objective: Vietnamese-American (VA) family caregivers of persons with dementia (PWD) are less likely to seek help with caring for PWD due to stigmatization of dementia in Vietnamese culture. The objective of the study is to explore the relationship between culture orientation and emotional health of VA family caregivers of PWD.

Methods: The study used a cross-sectional survey design measuring VA family caregiver's culture orientation, burden, depression, caregiving self-efficacy, and quality of life (QOL). Trained, bilingual research assistants conducted face-to-face surveys with VA family caregivers of PWD recruited in Southern California. Descriptive statistics and Pearson correlation analyses were used.

Results: A total of 39 family caregivers of PWD participated in the study (caregiver mean age=63.6 ±14.3 years, 69% females; 49% spouses; PWD mean age: 78.2 ± 7.0 years, 59% females, 64% of PWD with Medicaid). Caregiver's acculturation scores were Mean (home country culture) = 28.1 ± 4.7 of 36; Mean (American culture) = 15.7 ± 7.7 of 36 (higher score indicates orientation toward respective culture). Burden mean score was 25.3 ± 17.5 of 88, depression mean score was 17.6 ± 9.5 of 60, self-efficacy mean score was 65.9 ± 23.6 of 100, QOL mean score was 46.6 ± 16.0 of 100, PWD Memory and Behavioral problems (BP) mean score was 13.9 ± 12.5 of 96. Correlation analyses (all P-values < 0.05) showed significant positive correlation between depressive score and PWD-BP (r = 0.39), negative correlation between depressive score and QOL (r = -0.49), and negative correlation between depressive score and home-culture orientation (r = -0.33). Burden was negatively correlated with self-efficacy (r = -0.42); burden was positively correlated with PWD-BP (r = 0.32). American-culture orientation was positively correlated with PWD-BP (r = 0.38).

Conclusions: The results suggest higher caregiver depression is associated with lower home-culture orientation and poorer QOL. Culturally-sensitive interventions may improve the emotional health of family caregivers of PWD.

D221 Student Presentation

Association of COVID-19 Symptoms with Cognitive Impairment Six Months After Hospitalization Among Older Adults in the VALIANT Study

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Background: COVID-19 has been associated with cognitive deficits following acute illness in older adults. This study aims to determine what, if any, COVID-19 symptoms experienced among a cohort of hospitalized older adults (age ≥60 years) are associated with cognitive impairment (CI) six months post-discharge.

Methods: VALIANT (COVID-19 in Older Adults: A Longitudinal Assessment) participants completed comprehensive assessments of health during or shortly after hospitalization with COVID-19 and at six months post-discharge. A modified version of the Edmonton Symptom Assessment System was used to measure the presence and severity of 14 symptoms associated with COVID-19. Six months later, cognitive health was assessed using the Montreal Cognitive Assessment 5-minute protocol, and participants who scored below 22 (range, 0-30) were classified as cognitively impaired. Classification and regression tree (CART) analyses were conducted using the rpart package in R to identify symptoms and covariates (Figure 1) associated with CI at six months.

Results: 233 participants (70.5±8.1 years, 55.6% women, 26.8% Black or Hispanic) were included. 22% had CI at six months. CART identified age, dizziness, and severe insomnia as risk factors for CI. Diagnostic testing on 1000 boot-strapped samples revealed a positive predictive value of 51% and negative predictive value of 87%.

Conclusions: Combinations of age and symptoms predicted CI at six months following COVID hospitalization with fair discrimination.

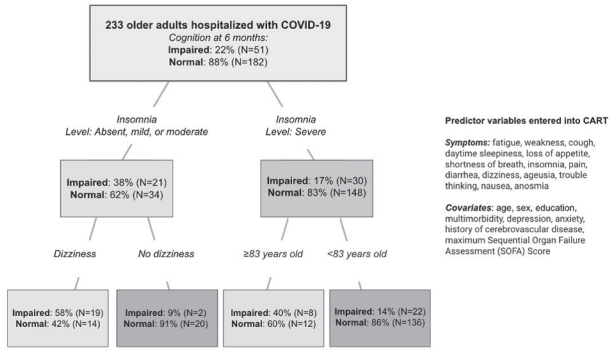

Figure 1. The CART model identified risk factors for CI six months after hospital discharge among older COVID-19 survivors.

D222 Student Presentation

Plasma Inflammatory Biomarkers May Indicate AD Risk in People with HIV

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Background: Aging with HIV presents new complications like risk of Alzheimer's disease (AD). Inflammation is a critical pathogenic mechanism in AD and raises the question of how low-grade chronic inflammation characteristic among people with HIV (PWH) may influence AD-related pathogenesis. We assessed whether plasma-based pro-inflammatory markers relate to cerebrospinal fluid (CSF) markers of AD pathology in people with HIV (PWH).

Methods: Participants included 78 PWH aged 25−70 years (mean age=46.48 [SD=9.71]; 81% male, 62% White; 35.6% virally undetectable) from the National NeuroAIDS Tissue Consortium (NNTC) who had data on plasma-based inflammatory markers and the CSF-based AD pathology markers of $A\beta_{42}$, p-Tau_{181} and neurofilament light (NfL; marker of axonal integrity). All biomarkers were measured by commercial immunoassay. A series of linear regressions examined the relationships between each plasma inflammatory biomarker and each CSF AD-associated marker. Analyses were adjusted for age, HIV viral load, CD4 count, and substance use diagnoses due to their significant relationships with AD biomarkers.

Results: Inflammatory markers most consistently related to $A\beta_{42}$ levels. Specifically, higher MCP-1, TNFα, IL-6 and sCD163 levels showed small/moderate and significant (β= -0.24 to -0.31; *ps*<.05) relationships with more advanced Aβ pathology (lower $A\beta_{42}$ levels). However, the strongest relationships were between higher MCP-1 and higher NfL levels (β= 0.38; p< .005). Unexpectedly, IL-6 inversely related to p-Tau181 (β= -0.26, p=0.022).

Conclusions: Our results suggest that higher pro-inflammatory blood biomarkers relate to more advanced CSF-derived Aβ and NfL pathology among PWH and point to the possibility that the higher levels of inflammation in PWH may put them at higher risk for AD pathology. Longitudinal studies with PWH and HIV-negative controls are needed to further probe these preliminary findings. The correlations give promise to the use of blood-based inflammatory markers as an alternative to invasive lumbar punctures to indicate AD risk among PWH.

D223 Student Presentation

Describing White Matter Diffusion MRI Biomarkers in Cognitively Normal Subjects with Increasing Amyloid Beta Burden

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Background

The pathological cascade of Alzheimer's disease (AD) is thought to start long before any cognitive deficits are observed. While amyloid beta (Aβ) plaques in the brain have been implicated, Aβ burden alone is not sufficient to characterize clinical trajectory (Jack et al, 2010). We aim to describe changes in white matter diffusion MRI (dMRI) metrics in cognitively normal (CN) subjects with increasing Aβ burden to elucidate the nature of brain changes in preclinical AD.

Methods

86 CN individuals with Aβ PET MRI and Diffusion Kurtosis Imaging data were included. Subjects were grouped by Aβ status (negative, intermediate, positive) using the global standardized uptake value ratio (SUVR) (Flanigan et al, 2021): cutoffs were generated using established global SUVR positivity thresholds and their standard deviation (Bullich et al, 2017; Royse et al, 2021). 10 Aβ positive (Aβ+), 9 Aβ intermediate (Aβi), and 67 Aβ negative (Aβ-) subjects were identified. 19 Aβ- controls, age and sex matched to the Aβi/Aβ+ group, were selected. Fractional anisotropy (FA), radial diffusivity (RD), and radial kurtosis (RK) were analyzed in the fornix and genu of the corpus callosum (GCC) (Dong et al, 2020).

Results

Of the 38 subjects, 22 (58%) were female. The mean age was 68.2 ± 4.6 years. Across groups, there was no significant difference in terms of sex ($\chi 2 = 0.926$) or age ($p = 0.8838$). In the fornix and the GCC, trends indicative of increased diffusion restriction (increased FA, decreased RD, and increased RK) were observed in the Aβi group, as compared to the Aβ- (FA and RD of GCC, $p < 0.05$; FA of fornix, $p < 0.1$) and Aβ+ (RD of GCC, $p < 0.05$) groups. There was no difference in diffusion metrics between the Aβ- and Aβ+ groups.

Conclusions

We present initial results concerning changes of white matter dMRI metrics within the brains of CN subjects with varied Aβ burden. These findings indicate a possible increase in diffusion restriction in individuals with intermediate Aβ burden, as hypothesized and suggested by previous research (Dong et al, 2020). This work may help outline potential imaging biomarkers for future AD detection and monitoring of disease progression.

D224 Resident Presentation

Using a 2-minute cognitive screener to predict delirium incidence in hospitalized older adults.

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Background: Numerous delirium prediction tools have been developed to support providers in identifying high-risk patients. However, they are often challenging to implement or have limited discrimination properties. We aimed to examine the accuracy of a brief and easy-to-apply cognitive screener to predict delirium incidence in hospitalized older adults. We also investigated the correlation between baseline cognitive performance and delirium severity.

Methods: Prospective cohort study including older adults aged ≥60 years admitted to a geriatric unit in Brazil. We excluded candidates diagnosed with delirium within the first 24 hours of hospital stay. On admission, participants underwent comprehensive geriatric assessments, including the 10-Point Cognitive Screener (10-CS) (range 0-10, 10=best), a validated 2-minute cognitive battery combining temporal orientation, verbal fluency, and word recall tests. Delirium was assessed daily using the CAM, and delirium severity using the CAM Severity (CAM-S) (range 0-7, 7=worst). We analyzed the 10-CS accuracy in predicting delirium using area under the receiver operating characteristic curves (AUC) and other discrimination measures.

Results: We included 208 participants (mean age, 80 years; 67% female). Overall, 59 participants (28%) had baseline cognitive impairment and stayed a median 13 days in the hospital. Delirium occurred in 72 (35%) hospitalizations, and we observed that the median 10-CS score was 8 (interquartile range [IQR]=3, 8) in participants who did not experience delirium and 3 (IQR=0, 7) in participants who experienced delirium (p<0.001). The 10-CS had an AUC of 0.77 (95%CI=0.70, 0.84) to predict delirium incidence. Specificity and sensitivity were respectively 78% and 67%, for a 10-CS=5. Finally, we found a 20% increase in the relative risk of delirium for each subtracted point in the 10-CS and a moderate inverse correlation between 10-CS and maximum CAM-S scores (Pearson coefficient= -0.53 (95%CI=-0.58, -0.37).

Conclusions: The 10-CS is a brief and validated bedside tool with moderate to good performance to predict delirium incidence and severity in hospitalized older adults. Participants with a 10-CS score of 5 have twice the risk of developing delirium compared to those with a score of 10.

D225 Student Presentation
Reduced Glucose Response of ApoE4 Carriers Following High Fat Feeding

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Background:

High fat diets are a risk factor for Alzheimer Dementia (AD) but this link is more tenuous in individuals with the AD risk gene ApoE4 (E4). E4 carriers previously performed better on cognitive testing after a high fat meal (HFM) and unlike non-carriers, high glucose did not correlate with blood levels of amyloid breakdown products Aβ42. The objective of this project is to describe the glucose-insulin response to HFM by E4 status.

Methods:

As part of the ongoing Meal and Memory study (CT# NCT03070535), 70 cognitively healthy older adults ingested high- and low-fat breakfasts 3-5 weeks apart after overnight fast. Age ranged from 55 to 84. APOE genotype and meal intake data were collected, and blood samples taken at baseline and 6 time points after meal provision.

Results:

Participants included 37 E4 carriers (22 women) and 33 non-carriers (20 women). E4 carriers had a lower HgbA1C (5.2 ± 0.2 vs non-carriers 5.4 ± 0.3, p=0.015) but similar levels of insulin resistance (HOMA-IR). Glucose levels were lower for E4 carriers after HFM particularly at early time points (Repeated measures ANOVA F statistic 3.23, p= 0.004, Table). No differences in insulin, or insulin/glucose ratio at 30 minutes were found by E4 status. E4 groups did not differ by food intake, and glucose difference were not as robust following high carbohydrate meal (Time*E4 F 1.96, p=0.07). Age correlated with HgbA1C (Spearman CC +0.26, p=0.03); when stratified by E4 and sex this correlation was mainly noted in E4 non-carrier men (CC +0.53, p=0.06). Age did not correlate with HOMA-IR or meal-driven insulin/glucose measures.

Conclusions:

E4 carriers demonstrated a lower blood glucose which was magnified following HFM and largely independent of insulin. The concurrently lower HgbA1C suggests this variation occurs outside of the study environment. Understanding mechanisms behind HFM-induced differences in glucose changes is important not only for diet advice but also several diabetes medications are being studied as potential AD treatments. These interventions may work differently in E4 carriers who appear to have a different glucose response that might be further modulated by sex.

Glucose (BMI-adjusted) after High Fat Feeding

Time (min)	0	15	30	60	120	180	240
E4 Non-Carrier	94.7 (1.2)	95.1 (1.3)	118.7 (3.0)	117.4 (3.8)	92.6 (2.6)	88.2 (1.7)	88.8 (1.4)
E4 Carrier	91.2 (1.2)	91.0 (1.2)	109.3 (2.8)	108.5 (3.6)	93.9 (2.4)	92.0 (1.6)	92.1 (1.3)
p value	0.042	0.024	0.025	0.097	0.73	0.12	0.09

D226 Student Presentation
Development of Loneliness and Social Isolation following Spousal Loss: A Systematic Review of Longitudinal Studies on Widowhood

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Spousal loss is a stressful life event that is associated with loneliness and social isolation, both of which affect physical functioning, psychological well-being, and risk of mortality in older age. The primary objective of this paper was to synthesize longitudinal and intervention studies that investigated loneliness and social isolation in widowed persons. A systematic review of the literature was conducted in June 2022 using three electronic databases (PubMED, PsycINFO, Web of Science). 18 longitudinal and five intervention studies were included for further analysis. Participant characteristics, study design, and key findings were extracted. Most studies were from the United States or Europe, included more widows than widowers, and assessed older adults aged 60+. Loneliness peaked directly following spousal death and decreased over time in longitudinal studies, and some studies suggested that feelings of loneliness persisted for years. Widow(er)s also varied in their trajectories of loneliness, with protective factors including volunteering 2+ hours/week, military experience with exposure to death, and if the widowed individual was the spouse of a veteran. Intervention studies consisted of group therapy focusing on the emotional needs of the widowed adults or various models of bereavement coping. Participants showed a decrease in loneliness post-intervention, but most studies showed no significant difference between intervention and control groups. Thus, there remains a need for effective interventions targeting loneliness in the widowed. Moreover, there was limited information on caregiver status and circumstances surrounding spousal death, which may be necessary to understand the factors that exacerbate or alleviate loneliness. Too few studies directly measured social isolation, despite its strong correlation with loneliness and bereavement. In conclusion, widowhood is associated with the development of prolonged and severe loneliness in older age. Work is needed to identify protective factors, particularly those that could be examined in randomized controlled trials.

D227 Student Presentation
Topographic 3R/4R and 4R tau seeding activity in Progressive Supranuclear Palsy and Alzheimer's Disease

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Background: Alzheimer's Disease (AD) and Progressive Supranuclear Palsy (PSP) are two neurodegenerative tauopathies that typically present in isolation but can also occur together. Pathologically, AD is characterized by neurofibrillary tangles composed of 3R/4R tau isoforms and PSP is characterized by neuronal and glial 4R tau accumulations. Whether these two pathologies influence each other when they co-occur is unknown. Here we study the distribution of AD and PSP tau pathology through immunohistochemistry and real-time quaking-induced conversion (RT-QuIC) in brain tissue from cases of PSP, AD, and combined AD/PSP.

Methods: Fixed and frozen brain tissue from basal ganglia (BG), hippocampus (HP), and mid frontal cortex (MF) from 29 subjects with AD, PSP, and AD/PSP were selected from the UCSD brain bank. Sections were immunostained using PHF-1 (phospho-tau), GT38 (AD-specific tau) and RD4 (4R-specific tau) and examined

using traditional and digital histological methods to quantify regional pathology and 3R/4R and 4R-selective RT-QuIC to quantify 3R/4R and 4R tau seeding doses.

Results: 11 patients with pure AD, 13 patients with pure PSP, and 5 patients with combined AD/PSP were selected. Age and sex distribution were similar (Age: AD 80.2 PSP 73.7 AD/PSP 80.2 F=1.6 P=0.2, Sex $\chi 2$=1.1 p=0.6). Preliminary data from 5 AD/PSP cases show that GT38 staining was highest in HP ($p<0.003$) and RD4 staining was higher than GT38 staining in BG ($p<0.005$) with MF showing mixed AD and PSP pathology. RT-QuIC recapitulated these findings in a quantitative manner. Ongoing studies perform similar analyses in the entire cohort.

Conclusions: Preliminary data show increased 3R/4R seeding activity and AD-related tau pathology in the HP and increased 4R seeding activity and PSP-related tau pathology in the BG in patients with mixed AD/PSP pathology. These data suggest that AD and PSP tauopathies proceed along largely independent pathways. Importantly, they also show for the first time that RT-QuIC can quantitatively map the neuroanatomic distribution of tau isoforms.

D228 Student Presentation

EIF2 Signaling and _MAPT_ regulate single-nuclei gene expression changes in PSP

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Neurodegenerative diseases represent a monumental public health crisis, with misfolded accumulation of tau protein as a prominent pathological disturbance. Tauopathies comprise many neurodegenerative diseases including Alzheimer's disease (AD) and progressive supranuclear palsy (PSP). PSP is distinct from other tauopathies in that it is characterized by essentially pathognomonic tufted astrocytes, which occur distinctively in certain subcortical brain regions, especially the subthalamic nucleus (STN) among others. Understanding the molecular changes in astrocytes in PSP has the potential to elucidate the pathogenesis and show how it overlaps and differs from other tauopathies.

To understand the unique astrocytic changes in patients with PSP, we employed single-nuclei RNA sequencing (snRNA-seq) on human post-mortem brain tissue in a cohort of autopsy-confirmed PSP cases and sex and age-matched controls (n=3 each). All subjects were male with a median age of death of 70 years (range 64-73) and median post-mortem interval of 18.1 hours (range 11.7-43.8). Single-nuclei RNA sequencing was performed on fresh frozen tissue from the STN region and analyzed using Seurat in R, and normalized using SCTransform. Data was validated using publicly available bulk RNA-sequencing.

7 clusters were identified using 40 principal components. Within the astrocyte cluster, 691 genes were differentially expressed, with 130 genes upregulated and 561 genes downregulated in cases compared to controls. From our subclustering analysis, 7 major astrocytic subpopulations emerged. 3 were expressed preferentially in the diseased samples.

Subcluster analysis of the astrocytic cluster revealed 3 astrocyte subpopulations highly enriched in PSP. Many markers of these 3 subclusters were differentially expressed between cases and controls, and top gene candidates were examined in a replication cohort. Ingenuity Pathway Analysis identifies *EIF2* signaling as the top enriched pathway of all cells, and finds *MAPT* to be the top upstream regulator of gene expression. Pending further validation, these results may provide important mechanistic insight into the cellular changes underlying tau aggregation in PSP, and may one day be a target for future therapeutics.

D229 Student Presentation

Validation of Methods for Converting Scores on the Montreal Cognitive Assessment to Scores on the Mini-Mental State Examination in Patients with Alzheimer's Disease and Frontotemporal Dementia

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Background and Objective: Formulae for translating the Mini-Mental State Examination (MMSE) to Montreal Cognitive Assessment (MoCA) have been developed to facilitate comparing the patient's cognitive status during longitudinal follow-up and meta-analyses. These conversions were demonstrated mainly in heterogenous population of Alzheimer's disease (AD) and Parkinson's disease (PD), but not in the patients with Frontotemporal dementia (FTD). Thus, the relative performance of the MMSE and MoCA in FTD is not clear, nor is it in young-onset AD. The aims of this study are to examine the validity of published conversions methods and generate performance data in subjects with Alzheimer's disease (AD) and frontotemporal dementia (FTD).

Methods: We conducted a retrospective data analysis using patients who had a first visit in the Johns Hopkins Young-Onset Dementias Clinic between June 2006 to June 2017. Patients had a primary diagnosis of AD or FTD and have Mini-Mental State Examination (MMSE) and Montreal Cognitive Assessment (MoCA) scores at one or more visits. Accuracy analyses included calculating the mean, median, root-mean-squared error (RMSE), and percentage of subjects falling within 2 point difference between observed and predicted MMSE scores. Reliability analyses included calculating intraclass correlation coefficients (ICCs).

Results: Data included 56 subjects with 22 subjects categorized as AD and 34 subjects categorized as FTD with the mean age of 60.6 years (SD 1.07). The 9 conversion methods (Roalf's, Van Steenoven's, Saczynski's, Trzepacz's, Helmi's, Lawton's, Monsell's, Roheger's, and Yang's) had a mean difference of -0.70 to 1.45, a median difference of -0.5 to 1, RMSE of 2.32 to 3.16 for all subjects. All conversion methods had an ICC value between 0.75 to 1.00. Accuracy of the conversion methods within 2 points of the observed MMSE scores varied from 57.1% to 79.2%.

Conclusion: These results suggest that most methods analyzed in the study may be suitable for converting MoCA to MMSE scores in AD and FTD patients.

D230 Student Presentation

Characteristics, indications, and adjunct psychotropics for persons with dementia who are newly-prescribed antipsychotics

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Background: About 90% of patients with dementia exhibit neuropsychiatric symptoms. While antipsychotic medications (APMs) are often prescribed for these symptoms, their efficacy is modest, and they carry the risk of serious adverse effects. This study aimed to understand the characteristics of patients with dementia who were newly prescribed APMs, indications for prescription, and prescription of additional psychotropic medications.

Methods: This retrospective cohort study compared patients enrolled in the UCLA Alzheimer's and Dementia Care Program between 2012 and 2014 with complete APM data who were newly prescribed or were not prescribed APMs in the first two years of enrollment. Medical record reviews were conducted for the 67 patients who started on an APM. Patient Neuropsychiatric Inventory Questionnaire (NPI-Q), Functional Activities Questionnaire (FAQ), and mini-mental state examination (MMSE) at enrollment were compared. Other outcomes included indications for APMs and prescription of other psychotropic medications.

Results: Among the 165 patients analyzed, 67 (41%) were started on an APM (most commonly quetiapine [63%], risperidone [22%], or olanzapine [12%]) and 98 (59%) were not. Patients prescribed APMs scored (all mean scores) higher on NPI-Q severity (12.8 vs 8.4, p<0.001) and distress (17.0 vs 10.3, p<0.001), higher (worse functioning) on FAQ (22.8 vs 17.7, p<0.001), and lower on MMSE (16.8 vs 19.5, p=0.006). The most frequent indication for first APM prescription was agitation (55%), followed by psychotic symptoms (37%). Patients started on an APM received one (51%), two (39%), or three (10%) APMs from time of enrollment to last contact. Most also received one or more antidepressants (73%), benzo-hypnotics (63%), or anti-convulsant (39%) after enrollment. At the time of death or last contact, 72% were on an APM.

Conclusions: Even in a comprehensive dementia care program that emphasizes behavioral management, APMs are widely prescribed for agitation and psychosis. Compared to patients not prescribed an APM, patients prescribed an APM had more severe neuropsychiatric symptoms and worse cognitive and functional scores. Most patients received other psychotropic mediations and remained on an APM at the time of death or last contact.

D231 Student Presentation

Examining the Effectiveness of a Telephone Smoking Cessation Program in Mental Health Clinic Patients by Age

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Background: Few smoking cessation studies have examined abstinence outcomes in older adults with mental illness. Using data from a multi-site study of telephone counseling for smoking cessation in people with mental health disorders, we examined whether long-term abstinence rates varied by age.

Methods: The parent study (N=577) recruited people who currently smoke referred from mental health providers at six Veterans Health Administration (VA) facilities. Participants were randomized to a) multi-session, specialized telephone counseling or b) warm transfer to their state quitline. Participants completed assessments at baseline, 2 months, and 6 months. The primary outcome measured was reported 30-day abstinence at 6 months. Secondary outcomes included reported uses of cessation treatments at 6 months. Logistic regression was used to compare groups on outcomes. An interaction effect analysis was performed between treatment assignment and age (18-64 yo vs. >= 65 yo).

Results: There were no statistically significant differences in racial identities between older and younger adults in the study. 53% of participants were White, 34% Black, 5% multiracial, and 2% American Indian/Alaska Native/Asian (the remainder was missing data). At baseline, older adults were significantly more likely to report lower behavioral health symptoms and higher functioning compared to younger adults (p<0.05 across each subscale except self-harm).

At 6 months, older adults who received the specialized telephone intervention were significantly more likely to report 30-day abstinence (32% vs 13%, OR=3.4, 95% CI=1.6, 6.9) and to have made a quit attempt (70% vs. 45%, OR=3.0, 95% CI=1.6, 5.7) compared to older adults who received state quitline counseling. For participants under the age of 65, there was no significant difference in 30-day abstinence between the intervention and control groups at 6 months (16% vs. 12%, OR=1.4, 95% CI=0.9, 2.0).

Conclusions: In this population of people seen in mental health clinics, older adults had significantly higher abstinence rates in a specialized telephone intervention compared to the state quitline. Different interventions may be needed to help younger adults quit smoking.

D232 Resident Presentation

Montefiore-Einstein Center for the Aging Brain (CAB): Communication barriers in individuals with cognitive concerns

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Background: Barriers to communication in healthcare, including sensory and cognitive impairments, are common among older adults. Individuals with non-English language preference (NELP) are uniquely vulnerable to limitations in communication, exacerbated by, but also independent of, health literacy status and interpreter use. Sensory and cognitive impairments as well as time constraints may hinder use of interpreter technology. The prevalence of communication barriers among individuals with cognitive concerns has not been well described.

Methods: The CAB provides multidisciplinary (geriatrics, neuropsychology, neurology) evaluations for patients with cognitive concerns. Since 2022, geriatricians and trainees at CAB complete Comprehensive Geriatric Assessment (CGA) using our novel electronic medical record (EMR)-based template. Charts of all new patients seen between January and June 2022 were reviewed for language preference and documentation of sensory impairment and cognitive diagnosis (subjective cognitive concern (SCC), mild cognitive impairment (MCI), or major neurocognitive disorder (MND)). Excel and SPSS 27 were used for analysis.

Results: Among 271 individuals (74% female, average age 76 years), 41% (n=111) had non-English language preference. 29% (n=32) individuals used a formal interpreter. Vision and hearing impairments were present in 45% (n=123) and 28% (n=77), respectively; overall, 58% had one or more sensory impairment[RM1] s. Among those with NELP, 83% (n=92) had cognitive impairment (MCI or MND). Among individuals with NELP and cognitive impairment, 62% (n=57) also had a sensory impairment[RM2]. 21% of the full cohort had 3 or more communication barriers.

Conclusion: Communication barriers are prevalent among individuals referred for cognitive assessment. A significant proportion of patients have multiple communication barriers; interventions are needed to ensure person-centered care for this vulnerable population. We suspect low interpreter use in our study was related to our having multiple bilingual CAB providers, but plan further study to confirm this as well as assess providers' and patients' satisfaction with communication.

D233 Resident Presentation

Medical Resident Engagement in Advanced Care Planning in the Outpatient Setting

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Background: Advanced care planning (ACP) involves clear communication between adults and their care team, regarding one's personal values and treatment preferences currently and at the end-of-life. ACP should ideally be conducted in the outpatient setting with an established patient-provider relationship. However, most ACP occur in emergent situations when patients are incapacitated to engage in their goals of care plan. Residency training is an ideal and critical time to learn and utilize ACP skills.

Methods: A quality improvement multi-modal design comprising: 1) an online survey to assess Internal Medicine resident's willingness, preparedness, and perceived barriers to ACP; 2) retrospective chart review of outpatient records to ascertain the proportion of older adults engaged in ACP; and 3) resident educational training sessions on ACP.

Results: Of the 56 survey respondents, 36% were PGY1, 30% were PGY2, and 34% were PGY3 residents. Overall, 91% of residents agreed that ACP be conducted in the outpatient setting. Approximately 45% reported that ACP be held during an annual visit, 38% opined that ACP be performed at any time, and 11% indicated an initial visit as the ideal time for ACP. Two-thirds of residents were very or extremely willing to initiate the goals of care discussion. About 40% reported being well prepared in eliciting a patient's goals of care, choosing a healthcare proxy, and discussing illness prognosis, but specified the need for additional training experience. Regarding barriers to ACP, a lack of decision making capacity was the most important patient barrier, inadequate training was the most important provider barrier, and time constraints was the most important system related barrier. From retrospective chart review, among 146 adults aged 65 years and older who visited the outpatient clinic between October and December 2021, only 15% had ACP and two-thirds of these discussions occurred during an annual Medicare visit.

Conclusions: Our findings suggest that an outpatient clinic visit is the ideal setting to engage in ACP. Although medical residents were willing and prepared to conduct ACP, there was low engagement with older adults. Overcoming barriers such as training inadequacy, time constraints, and engaging patients while they still have medical capacity may improve ACP.

D234 Resident Presentation
Implementation of an Acute Care Clinic to Reduce Low Acuity Emergency Department Use
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Background: Overutilization of the emergency department (ED) for low acuity needs is common among older adults and contributes to an increased cost of care for these patients. The ability to address these acute concerns in the primary care setting is often limited by clinic availability. This study aims to describe the implementation of an acute care clinic (ACC) within a geriatric primary care setting and examine resultant ED utilization.

Methods: An ACC was implemented within a geriatric primary care clinic in 3/2022. Process measures, patient demographics, and ED visits were evaluated retrospectively for all patients seen in ACC between 3/2022 and 9/2022. Descriptive statistics were reported for ACC process measures, patient characteristics, and ED visits. A retrospective analysis of low acuity ED visits (Emergency Severity Index of 4 or 5) in established Seniors Clinic patients before and after ACC implementation was performed. Patients were included in the ED utilization analysis if they were established in Seniors Clinic for primary care and seen within the last 3 years. ED visits were tracked from 3/2021 through 9/2022 and compared to pre and post ACC implementation using a two-sample t-test.

Results: There were 401 ACC visits (334 distinct patients, 333 office visits, 68 telehealth visits) conducted over 134 clinic half-days (avg 3 visits/half-day) during the initial 7-month implementation phase with onboarding of new providers. Median patient age was 83 years, 67% were female, 25% were non-white, and 6% were Hispanic, Latino/a, or Spanish Origin. Median end-of-life index, an EMR-derived logistics regression that predicts one-year mortality risk, was 18%. Average HCC score was 2.37. Nine patients (2.2%) were sent to the ED from ACC. There were 682 total ED visits, 100 low acuity visits, and 61 low acuity visits during clinic hours among Seniors Clinic patients between 3/2022 and 9/2022. There were 616 total ED visits, 85 low acuity visits, and 46 low acuity visits during clinic hours among Seniors Clinic patients between the same timeframe of the previous year (3/2021 to 9/2021). There was no statistically significant difference in low acuity ED visits pre and post-ACC implementation.

Conclusions: An ACC was successfully implemented within a geriatric primary care clinic. Although no significant difference in low acuity ED utilization was found after the first 7 months of implementation, ongoing review as the ACC expands may demonstrate further impact.

D235 Resident Presentation
Evaluating Internal Medicine Residents' Knowledge in Incorporating Advance Care Planning Discussions in Clinic Visits
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Background:
Advance Care Planning (ACP) is a dynamic, formalized process that enables patients to express their wishes and to identify trusted decision makers. Primary care is an important setting for ACP discussions given the trusted, longitudinal relationships that many patients have with their PCPs. Residents in our internal medicine residency program receive training and frequently discuss ACP with hospitalized patients, but less frequently engage in ACP conversations with their primary care patients.

Methods:
Residents in an internal medicine residency program were surveyed to establish baseline knowledge of ACP, comfort addressing ACP, and barriers and facilitating factors to discussing ACP in primary care clinic.

Results:
We received 15 survey responses (47% PGY1, 13% PGY2, 40% PGY3) with 53% of respondents enrolled in the primary care track. When asked to describe ACP, residents used descriptors including: preemptive goals setting (40%), sharing logistics of patients' goals (code status, health care agent, documentation) (40%), and end-of-life planning (20%). 40% of residents said they address ACP depending on a patient's age or change in health status, 40% during Medicare Wellness Visits (MWV), and 20% never address ACP in their clinic. 56% of residents re-address ACP in their clinics, with the most common reason being change in health status (78%). The 3 most commonly reported barriers were lack of time in their clinic appointments (93%), patient reluctance (53%), and residents' perceived emotional burden of initiating ACP conversations (47%). The 3 most common facilitators were having longitudinal relationships with patients (20%), having materials in clinic (20%), and MWV (13%). The most common sources of prior training in ACP conversations were from inpatient experience (47%) and from clinic preceptors (40%) with 33% respondents reporting no prior training.

Conclusions:
Documenting patient wishes through ACP occurs more frequently in the inpatient setting with fewer barriers. There is room to improve residents' understanding of the range of ACP conversations and the dynamic nature of documenting patients' wishes. Residents have identified barriers to completion that will inform educational interventions in their outpatient practice.

D236 Student Presentation
Prevent Worsening Hand Contractures Among Veterans in the Community Living Center (CLC)
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Background: Previously known as joint contracture, acquired deforming hypertonia (ADH) is defined as "any joint deformity with decreased range of movement and increased resistance to passive movements, regardless of the cause, that leads to functional impairments and discomfort. The risk of ADH increases with age. Other risk factors include strokes or degenerative cerebral lesions, hypertonia, and prolonged immobility and inactivity associated with dementia.

In the SFVAMC CLC, 75% of Veterans have significant cognitive impairment and thus are at risk of developing ADH or have ADH. Currently, there is no well-defined standard of care for ADH. Botox injection therapy and tendon release surgeries have been implemented with some improvement in pain but little to no improvement in function. The goal of this QI project was to prevent a 10% increase in hand contractures in all Veterans receiving care at the SFVA CLC regardless of race, ethnicity, religion, sexual orientation, or any other protected status by August 31st, 2022.

Methods: After interviewing interprofessional providers and performing a gap analysis, we decided to conduct educational program for nurses aimed towards prevention of ADH. In April of 2022, two in-person training by the medical students on how to assess contracture status and perform range of motion exercises and a quick-reference sheet reinforcing key point of ADH prevention was made. Assessment of contracture before and after the education sessions were collected. Monthly assessments consisted of two components: whether the Veterans have a change in ability to pick up the carrot splint and if there are any changes in their ADL dependency. Paired t-test will be performed to compare contracture status before and after the intervention.

Results: Due to COVID-19 outbreak and prolong closure of the CLC, our educational sessions were performed remotely. Quick reference sheet was given to the nurses. We were unable to assess Veterans ability to pick up the carrot splint but we collected data on ADL dependency through the electronic medical record. As of August 9, 2022, there was no change in contracture status in veterans residing in the CLC.

Conclusion: Education and quick-reference sheet to assess and conduct range of motion exercises for the Veterans prevented worsening ADH at the CLC.

D237 Resident Presentation
Outcomes after Colorectal Surgery: an Age-stratified Comparison using Risk-Adjusted Cumulative Sum

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Background: Risk-adjusted cumulative sum (RA-CUSUM) is a longitudinal approach to performance monitoring ideally suited for quality control and root-cause analysis. This study employed RA-CUSUM to evaluate postsurgical colorectal outcomes at a single institution in an age-stratified approach.

Methods: Using the National Surgical Quality Improvement Program (NSQIP) database, consecutive colorectal surgeries at the University of Maryland Medical Center from 2011-2021 were analyzed for the following 5 outcomes: morbidity, mortality, length of stay, readmission, and reoperation. Data were stratified by age: <65 (n=1141) and ≥65 (n=459) and RA-CUSUM curves were used to depict performance over time. Expected risks were assigned by the NSQIP risk calculator and control limits were derived from observed-to-expected odds ratios (OR) of 0.5 (excellent performance) or 1.5 (poor performance) with a false positive rate of 5%.

Results: Surgical morbidity was superior to expectations for both age groups (OR<0.5). However, the <65 age group was characterized by a higher-than-expected reoperation rate beginning in 2020, coinciding with the COVID-19 pandemic. Trends in readmission rates differed across age groups, with a higher-than-expected rate in the <65 age group over 2013-2016 and lower-than-expected rate in the ≥65 age group over years 2019-2020. There were no differences in mortality and length of stay across age groups.

Conclusions: RA-CUSUM identified meaningful differences in perioperative outcomes across age groups. These longitudinal data facilitate responsive root-cause analysis and hypothesis generation. For example, case selection during the COVID-19 era may have shifted toward more urgent, high-acuity surgical indications, reflected by the higher reoperation rate in the younger cohort. These risk-adjusted performance trends also indicate superior perioperative care of elderly patients at this tertiary care facility.

D238 Resident Presentation
Documenting and Discussing Code Status with Elderly Patients During Initial Patient Encounter for Hospitalization

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Background:

Discussing code status is an important aspect of patient care and management. Often times there is little importance given to discussing and documenting code status during the initial patient encounter. Studies in the past have shown that patients and families appreciate the autonomy of making decisions on goals of care in a timely manner. The objective of this study is to improve goals of care documentation for patients who are ≥65 during initial encounter by family medicine resident physicians.

Methods:

This study analyzed documentation of code status discussion for the patients who were ≥65 by family medicine residents during the initial patient encounter. Family medicine residents were educated on the importance of adequate documentation and were provided with a template including key components for the initial History and Physical (H&P) note in September 2022. Patients' H&Ps were reviewed from October 1st 2022 to October 31st 2022 to assess if initial documentation for patients who were ≥65 included code status discussion. During a didactics lecture in November, residents were educated on the findings from this initial chart review. Residents were also given the opportunity to discuss their personal take on discussing goals of care with patients and family members, including non-English speaking patients. The didactic lecture concluded with findings from previous studies highlighting the importance of autonomy for the elderly patients and utilizing inpatient resources to improve quality of life during hospital course.

Results:

The initial chart review from October 1st 2022 to October 31st 2022 indicated that out of 43 inpatient admissions, 21 H&Ps had no documentation of code status. Two charts documented "unsure" next to code status. After the didactics lecture in November, 31 out of 46 H&Ps included code status from November 1st 2022 to November 29th 2022. 4 out of the 46 patients' charts indicated why the code status was not confirmed at the time of initial encounter. Seventy-four percent of the patients were non-English speaking who required more time to explain goals of care.

Conclusion:

Code status discussion is an important part of initial documentation, especially for patients ≥65 during hospitalization. There needs to be more education on adequate documentation by residents during initial patient encounter to improve goals of care discussions.

D239 Student Presentation
Methocarbamol Use in Older Patients

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Background: Methocarbamol is a muscle relaxant used for skeletal muscle spasm or pain. The 2019 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults includes a strong recommendation to avoid methocarbamol use with moderate quality of evidence.[1] However, methocarbamol may be an opioid-sparing drug and decrease length of stay in older patients with rib fractures.[2]

The objective of this quality improvement (QI) analysis was to determine benefits and risks of methocarbamol use in older patients at our institution.

Methods: Adults 65 years and older prescribed methocarbamol, without prior to admission methocarbamol, were included in this institutional review board approved retrospective QI analysis. Patient records were reviewed in reverse chronological order of date of admission. The primary outcome was change in oral morphine equivalents used 24 hours before and after the first methocarbamol dose. Secondary outcomes included changes in pain, delirium, and falls before and after methocarbamol use. Data was analyzed using McNemar's test for categorical data and a paired sample t-test for continuous data.

Results: Fifty-seven patients were included. Mean opioid intake in oral morphine equivalents prior to methocarbamol was 29.6 mg (SD 22.22) and post-methocarbamol was 34.4 mg (SD 39.57); $p = 0.349$. Pain scores (0-10 scale) were 6.98 (SD 2.68) pre-methocarbamol and 5.06 (SD 2.88) post-methocarbamol; $p < 0.001$. There were 0 falls pre and post methocarbamol. There were 0 patients with delirium prior to use and 1 patient after use; $p = 1.000$.

Conclusion: Methocarbamol showed no significant effect on opioid use, falls, or delirium. When added to current opioid therapy, methocarbamol was shown to have a statistically significant decrease in pain scores. The small sample size and retrospective nature of this analysis are limitations.

References

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D240 Student Presentation

Dementia Care Training for Nursing Assistants in the Hospital Setting

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Background. Persons living with dementia (PLWD) are twice as likely to be admitted to the hospital and the quality of their care is a national concern. Although nursing assistants (NAs) are vital in the care of hospitalized PLWD, they are currently ill-prepared to care for this vulnerable population. Our study aimed to evaluate an innovative dementia care training program for NAs in the hospital setting.

Methods. A "Dementia Care Training for Nursing Assistants" program, consisting of 7 20-minute evidence-based modules was implemented in a 10-bed dementia care unit, staffed with NAs with mental health backgrounds, and a 40-bed geriatrics-focused unit (non-dementia unit), staffed with NAs. The training was designed to support standard care training to improve NAs experience and attitudes in caring for hospitalized PLWD. Survey methodology in a repeated measures design was used to evaluate within and between-group differences in attitudes (Approaches to Dementia Questionnaire, ADQ) and satisfaction (Staff Experience of Working with Demented Residents Scale, SEWDR) toward managing hospitalized PLWD. Measures were completed at baseline (T1), immediately following training (T2), and 1-year post training (T3).

Results. There were 55 NAs total, n=22 on the dementia unit and n=32 on the non-dementia unit. When compared to the non-dementia unit, dementia unit NAs were older (68.1% vs. 46.9% >35 years old); less likely to be female (72.7% vs. 81.3%); more diverse (9.1% vs. 15.6% white); and had some prior dementia training (63.6% vs. 15.6%). Although both units had similar pre-training satisfaction measures (T1, 51.6, SD=10.5 vs. 51.4, SD=10.6) that increased at T2 (56.1, SD=9.6 vs. 54.8, SD=7.1), satisfaction on the dementia unit increased slightly at T3 but decreased on the non-dementia unit (57.0, SD=11.3 vs. 51.8, SD=9.3). Regarding attitudes, both units had similar pre-training measures (T1, 70.1, SD=6.6 vs. 69.3, SD=7.0). Yet, while attitudes on the dementia unit decreased slightly at T2 (68.4, SD=7.1) then increased slightly at T3 (69.5, SD=6.5), attitudes on the non-dementia unit decreased at both T2 (67.1, SD=6.8) and T3 (64.6, SD=7.7).

Conclusions. There is urgent need to improve the provision of care for hospitalized PLWD. Future studies must continue to evaluate dementia care training for NAs, a critical but understudied personnel in the care of this vulnerable population.

D241 Student Presentation

Reasons for Return to Acute Care in Recently Hospitalized Older Adults with Dementia

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Background: Alzheimer's disease and related dementias (ADRD) affect 5.6 million Americans at an annual cost of $157 billion. Transitions to acute care are stressful, disorienting, and costly. Our objective was to describe medical and social causes of repeated acute care transitions in late-stage ADRD.

Methods: Participants were people with late-stage ADRD who were enrolled in a multi-site clinical trial of dementia-specific palliative care (ADRD-PC study). We used a structured medical record review to identify medical and social reasons for return to acute care within 60 days of index hospital discharge, defined as an ED encounter or hospital admission. Trained research staff identified up to 3 specific reasons for return to acute care and grouped them into categories: 1) Feeding Problem, 2) Fall or Injury, 3) Infection, 4) Ambulatory Sensitive Condition (ASC), 5) General Sign or Symptom, or 6) Social reason.

Results: Out of 112 people with late-stage ADRD enrolled across 4 geographically diverse sites, 33 (29.2%) experienced an acute care transition within 60 days of index hospital discharge. Participants' mean age was 82.8 years, 57.6% identified as female, and 30.3% identified as Black. The 33 people experienced a total of 42 acute care transitions, with a total of 87 reasons identified for returning to acute care. The most cited categories for returns to acute care included: 1) General Sign or Symptom (52 citations), 2) Infection (12 citations), 3) Fall or Injury (9 citations), 4) Social (6 citations), 5) Feeding Problem (4 citations), and 6) ASC (3 citations). Within categories, the most common specific reasons included altered mental status, non-injurious falls, hypoxia, shortness of breath, and pain. The most common social reason was due to care partners feeling overburdened.

Conclusions: Some of the reasons for acute care use identified in this study – symptom distress, infections, and non-injurious falls – may have effective outpatient care options as well as modifiable risk factors with potential to decrease frequency of acute care transitions. Future large-scale studies may further test responsiveness of these factors to interventions to reduce acute care use in older adults with end-stage ADRD.

D242 Resident Presentation

Shifting the POLST Paradigm at a Community Based Family Medicine Residency Health System

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Background

The Physician Orders for Life-Sustaining Treatment (POLST) is a tool set to allow pre-determination of standardized medical orders to help guide patient treatment in emergencies. This project seeks to evaluate areas for quality improvement and standardize the process from POLST creation to Electronic Medical Record (EMR) execution, patient document acquisition, and provider access to POLST forms to allow timely and accurate delivery of desired treatment.

Methods

Tracked patients admitted by the Family Medicine resident inpatient service at Pomona Valley Hospital Medical Center had POLST forms completed with resident physicians and POLST placed in physical charts. After patient discharge, chart review evaluated if POLST was scanned to EMR, what form (copy vs original) of POLST was uploaded to the EMR, and if prior POLSTs scanned in EMR existed.

Results

30 of 33 (90.9%) completed POLST forms were scanned into the chart following discharge. Of the 3 forms which did not reach the EMR, 1 patient had no prior POLST in their chart and 2 had prior POLST forms recorded. Six POLSTs (20%) of those scanned were copies of the form and 24 POLSTs (80%) were the original POLST form. Five POLSTs scanned to the EMR had previous POLSTs uploaded as well.

Conclusion

The majority of POLSTs completed ended up in the EMR. Of these, 80% were original POLST forms suggesting these POLSTs did not go home with the patient. We aim to implement a new POLST paradigm at our health system with the ultimate goal of moving toward measures in line with the National POLST Paradigm Program.

Future plans involve 3 key points of intervention:

1: Implement a systems process to ensure a copy is scanned into the EMR whilst the original is sent home with the patient.

2: Develop a culture where the provider reviews existing POLST forms with the patient rather than forms being completed anew if there are not updates.

3: Enact a process when multiple POLSTs exist to ensure clarity of the proper orders.

D243 Resident Presentation

Reliability of delirium documentation during hospitalization: a single-center analysis

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Background: Delirium is common in elderly patients with an incidence 3-29% of hospitalizations (1,2). It is an acute medical emergency requiring prompt recognition and treatment of underlying causes and is associated with mortality across care settings (1,3). Delirium documentation is recommended as quality standard, and it is important to evaluate compliance with its practice.

Methods: A retrospective chart review on patients with a Geriatrics consult and admitted to Internal Medicine (IM) or Short stay units (SSU) at the Montreal General Hospital between 2020/01 and 2021/01 was performed as part of a quality improvement project to improve accuracy of cognitive diagnoses. A total of 101 charts were identified for analysis for documentation of delirium in the initial Emergency Room (ER) note, IM/SSU consult, Geriatrics consult, admission note, and discharge summary.

Results: Delirium was documented in 5.9% of ER notes, 20.7% of initial SSU/IM consults, 49.5% of Geriatrics consults, 18.8% of admission notes, and 40.6% of discharge summaries. Of all the patients found to have delirium diagnoses by the Geriatric Medicine team, 12%, 40%, 38%, and 74% were documented by ER, SSU/IM consult, admission, and discharge notes, respectively.

Conclusions: The data suggests a geriatrics consult may help improve the recognition and communication of delirium by the time of admission and especially discharge, but further measures will need to be evaluated in another iteration of quality improvement to improve recognition and communication to a higher standard.

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D244 Resident Presentation

Implementing a Standardized Geriatric Medication Review Process

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Background: The Beer's Criteria lists medications potentially harmful to older adults. Common medication classes on the Beer's list include narcotics, antidepressants, antipsychotics, benzodiazepines, anti-arrhythmics, and anticholinergics. In an effort to sustain deprescribing of potentially harmful medications during hospitalizations, we initiated a quality improvement project for older adults admitted to a safety-net hospital who were on medications on the Beer's list.

Methods: Patients 65 and older who were admitted with any medication on the Beers List were pre-checked on our Epic© Geriatric Order Set for a consult by the inpatient pharmacist for a Geriatric Medication Review (GMR). The primary outcome measure was whether pharmacist recommendations were enacted by discharge and/or 30 days post-discharge. In our first PDSA cycle in August 2021, pharmacists completed a standardized note template, highlighting inpatient and outpatient medications on the Beer's List and providing recommendations for discontinuation, adjustment, or alternative therapy in a chart note. To further improve adoption of recommendations, in our second PDSA cycle in January 2022, the pharmacist paged recommendations to the primary team in addition to writing a chart note. Authors abstracted 158 patient charts in Aug 2021 to assess for uptake of GMR recommendations, in Jan 2022 58 charts were abstracted as a convenience sample.

Results: During August 2021, 28% (45/158) of GMR recommendations were implemented by the primary team at discharge and 44% (64/146) 30 days post-discharge. After encouraging clinical pharmacists to page the primary team, in January 2022 adoption of GMR recommendations increased to 36% (21/58) at discharge and were similar at 43% (20/47) 30 days post-discharge. The most commonly prescribed medications on the Beers List for this admitted patient population were opioids (20% Aug 2021 and 16% Jan 2022), proton pump inhibitors (14% and 14%), and anti-depressants (11% and 16%) - of which opioids were most often discontinued at discharge (33% and 56%) and 30 days post-discharge (50% and 67%).

Conclusions: Implementing a standardized note template for pharmacist GMRs and encouraging pharmacists to page the primary team with medication recommendations led to de-prescribing of potentially inappropriate medications for older adults on hospital discharge.

D245 Student Presentation

Evaluation of Communication with Patients with Hearing and Visual Impairments: A Quality Improvement Study

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Background: Sensory impairment is common and is associated with a loss of social participation, feelings of depression, and accelerated cognitive decline, especially in older adults. Hearing and visual impairments specifically can disrupt communication, environmental orientation, and mobility. Hospital staffs play a key role in supporting such patients with an emphasis on early identification that allows for optimal communication and functional opportunities. Our study aimed to investigate current measures taken to identify and care for patients with vision and hearing impairments.

Methods: 24 hospital staffs (nurses, physicians, secretaries, physical therapists, social workers, transporters) and 45 patients were surveyed on a medical unit of Mount Sinai Morningside Hospital. Outcomes were collected and analyzed in Microsoft Excel.

Results: In total, 25 patients reported having sensory impairments: 20 with vision, 1 with hearing, 4 with both impairments. Of these, five patients answered having felt frustrated when communicating with staffs. Most patients answered that staffs did not take measures to evaluate/identify their hearing and vision abilities since admission (n=24). Only six patients wished for better entertainment sources that take their impairments into consideration. 20 staff members reported good familiarity with the process of identifying patients with hearing and visual impairments. 54% of staffs (n=13) reported routinely asking patients about hearing and visual impairments, whilst others (n=11) answered sometimes or never asking. Most staffs (n=21, 88%) also reported being aware of specific measures to be taken upon identification of impairments. However, the majority (n=13) were unsure if there were ways to highlight the impairments on electronic charts. Upon chart review, no patients had such modifications on their charts.

Conclusions: Although healthcare staffs reported familiarity with steps of identification and improving communication with patients with hearing and visual impairments, no specific measures were taken and many patients answered feeling inadequately evaluated and frustrated. Improved protocols need to be developed to allow early identification and effective communication with hearing and visually impaired patients.

D246 Resident Presentation

Deprescribing Aspirin for Primary Prevention of Cardiovascular Disease in Geriatric Patients

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Background: The US Preventative Services Task Force (USPSTF) updated recommendations on aspirin utilization for primary prevention of cardiovascular disease (CVD) in older adults in 2022.[1] Previously, USPSTF recommended shared-decision making on the use of low-dose aspirin for patients between 60-69 years old given previous trials showed increased risk of mortality, bleeding and nonsignificant reduction in atherosclerotic cardiovascular disease associated with use in older adults.[2-4] The 2022 updates recommend against initiation of aspirin for primary prevention of CVD in adults 60 years or older. Given the recent guidelines update, the aim of this project is to identify and assess aspirin use and implement the USPSTF updates to two geriatric care centers.

Methods: This is a multi-site, retrospective chart review to identify and assess the use of aspirin for primary prevention of CVD in older adults presenting to two geriatric outpatient clinics. All patients seen via office or telehealth visit between August 2021 to July 2022 will be screened for aspirin use. Patients taking aspirin will be assessed for deprescribing eligibility based on bleeding risk (history of hospitalization due to bleed, age, chronic kidney disease, and concurrent use of medications that increase risk of bleeding.)[5] Providers will be notified of potential deprescribing opportunities, and their responses will be collected for review. The primary outcome of this project is to determine the percentage of patients eligible for deprescribing aspirin for primary prevention. The secondary outcome is to determine percentage of provider acceptance of pharmacy-led recommendations on deprescribing. Descriptive statistics were utilized to evaluate the data.

Results: Of the patients on aspirin, we anticipate a large number of patients on it for secondary prevention. There is an opportunity for deprescribing for those who remain on it for primary prevention. Major barriers may include patient preference and prescriber hesitancy.

Conclusions: This project will aid in the implementation of evidence-based medicine for older adults by ensuring guideline directed use of aspirin.

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D247 Resident Presentation

Evaluation of the Hypertension Management Quality Incentive Measures at Two Ambulatory Geriatric Clinics

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Background: Hypertension (HTN) is a common chronic disease that increases in prevalence and severity with age. Given that the prevalence of high blood pressure (BP) is the highest in patients older than 65 years-old and one in five Americans are projected to be 65 and older by 2030, it is crucial to effectively manage HTN within the outpatient setting to reduce the risk of morbidity and mortality.[2-3] Additional motivation for improvement stems from quality performance metrics and the National Committee for Quality Assurance (NCQA). Therefore, the purpose of this project is to identify patients with uncontrolled HTN within two interprofessional geriatric clinics and evaluate for improvements in clinic workflow and mediation therapy management.

Methods: This is a multi-site, retrospective chart review of geriatric patients between 60-85 years old presenting to two geriatric outpatient clinics. Patients were identified through inclusion on a performance measure report. From that list, patients with a diagnosis of HTN, at least two clinic visits via in-person, telephone, or telehealth and with elevated BP of $\geq$ 140/90 mmHg were included. For those with elevated BP, the pharmacy team reached out to the providers, medical assistants, and registered nurses to coordinate collection of BPs during the next visit. The primary outcome was the changes in the health plan star rating measure from the 3rd to 4th quarter of 2022. Descriptive statistics were utilized to evaluate the data.

Results: Twenty patients were identified with elevated BP. Two patients within the report were assigned to physicians not within the two geriatric clinics. Out of the remaining patients, 12 were reported to have a most recent BP reading that was $\geq$ 140/90 mmHg.

Conclusion: The anticipated improvement in clinic workflow due to pharmacy led intervention will ultimately aid in medication therapy management in patients with uncontrolled HTN.

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D248 Student Presentation

Critical Care Patients Without Family, Decisional Capacity and Advance Directives May Face Barriers at Discharge

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Introduction: Patients in critical care settings who are incapacitated with no evident advance directives or surrogates (INEADS) represent a growing and vulnerable patient population for whom it is often difficult to ensure ethical care concordant with their goals and preferences.

Objective: To better characterize the care of INEADS patients, this mixed-methods study investigated metrics of interest as described in the clinical notes of INEADS patients in critical care versus matched controls.

Methods: In a previous study, our research group utilized natural language processing (NLP) to identify patients at high risk of being INEADS (n = 80) from MIMIC-III, a publicly-available dataset of de-identified health-related data from patients hospitalized in intensive care units of Beth Israel Deaconess Medical Center from 2001 - 2012. A control cohort of patients were matched to the high risk INEADS cohort for age, sex and ICD codes (n = 79). All clinical notes were individually reviewed for quantitative metrics of interest. We utilized Dedoose qualitative analysis software to annotate all clinical notes for text relating patients' backgrounds, decision-making processes, goals of care conversations, and more.

Results: Among the 80 NLP-identified high risk INEADS cases, 13 (16%) met full criteria for being INEADS, 34 (43%) met criteria for very likely INEADS, and 33 (41%) were not INEADS. The NLP demonstrated 81% sensitivity and 67% specificity in identifying true or very likely INEADS patients. The mean age of true INEADS patients was 63 (95% CI: 56-70) with a range of 27 to >90, and they were 54% male. INEADS patients stayed an average of 3.3 days longer in the ICU than controls, although this was not statistically significant. Only 23% of INEADS patients were discharged home compared with 54% of controls. Qualitative analysis indicate that barriers facing INEADS patients at discharge include delays in finding a rehab bed, patients leaving AMA, and patients not fully participating in care. Social work was consulted in only 2/13 true INEADS cases.

Conclusion: The care of INEADS patients requires healthcare workers to face an ethical dilemma of blind substituted medical decision-making, which may lead to delays or suboptimal discharge planning. Future guidelines should be developed detailing best practices for discharge of INEADS patients, likely involving social workers, to eliminate disparities.

D249 Resident Presentation

Using a Standardized CHF Admission Protocol to Reduce Skilled Nursing Facility to Hospital Readmission Rates

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Background: Patients discharged to skilled nursing facilities (SNF) with a history of congestive heart failure (CHF) are at increased risk for hospital readmission. The 2013 national average for 30-day rehospitalization from SNF due to CHF exacerbation was 23.5%, costing Medicare $2.7 billion annually.[1] Varying nursing skill levels in CHF care, inconsistent monitoring, and lack of routine management can increase readmission rates. Based on prior evidence, we propose creating a standardized CHF protocol to improve clinical quality and reduce hospital readmissions. We selected a 10% reduction in readmissions as a marker for success.

Methods: This is a quality improvement project to implement a standardized admission protocol within two Kaiser Permanente Southern California network SNFs for patients with a history of CHF regardless of primary hospitalization diagnosis. Thirty-day readmission rates (RAR) were compared to historical rates gathered from chart review of patients readmitted to KP Los Angeles Medical Center between 2019-2021 for CHF exacerbation prior to implementation.

Results: Between 1/2019-10/2021, there were 25 admissions to Garden Crest (GC) with comorbid CHF with RAR 16%. In 2019, there were three admissions to Alexandria Care Center (ACC) with RAR of 33%. The SNF CHF admission protocol was implemented at GC in 12/2021 and at ACC in 4/2022. Since implementation, there have been 69 patients with comorbid CHF admitted to GC and 51 at ACC with RARs of 10% and 2%, respectively.

Conclusions: The application of a standardized SNF admission protocol specific to patients with CHF shows a trend toward reducing readmission rates.

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Time Period	SNF Admissions w/ Comorbid CHF	30-Day Readmissions (%)
ACC 2019	3	1 (33%)
ACC 4/2022-10/2022	51	1 (2%)
GC 2019-2021	25	4 (16%)
GC 12/2021-10/2022	69	7 (10%)

Thirty-day RARs for CHF exacerbation from GC and ACC SNFs before and after protocol implementation

D250 Resident Presentation

Evaluation of the impact of the Hospital-in-Home interdisciplinary program at South Texas Veterans Health Care System

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Background: The purpose of the Hospital-in-Home (HIH) program is to provide hospital services utilizing a patient-centered, interdisciplinary care model in the home. Goals of the program are to reduce hospital readmission and decrease inpatient days for enrolled patients. The objective of this review was to evaluate the impact of the HIH team.

Methods: This retrospective chart review evaluated patients with a provisional diagnosis of heart failure (HF) on enrollment into the HIH program from June 2021 to February 2022. Medication interventions performed by the HIH team, guideline-directed medical therapy (GDMT) tolerability, and sustainability of HF regimens approximately 90-days post-HIH discharge were evaluated. Emergency department (ED) visits and hospital admissions post-HIH enrollment and 90 days after HIH discharge were also evaluated. Results were analyzed using descriptive statistics.

Results: Out of 36 predominately male subjects (median age 69 years), a median of nine medication interventions were made per patient by the HIH team with dose adjustment being most frequent. Approximately 47% of patients had an ejection fraction less than 40%. The median Care Assessment Need (CAN) score was 98.5% (high risk for hospitalization or death). GDMT was not tolerated in 47% of patients with hypotension being the most common reason. HF regimens were sustained in 22% of patients 90 days post-HIH discharge. Approximately 19% of patients were seen in the ED and 19% were admitted to the hospital while enrolled. Within 90 days post-HIH discharge, 50% of patients visited the ED and 39% were admitted to the hospital. Patients that were sustained on their HF medication regimens compared to those that did not have sustained regimens post-HIH discharge had fewer ED visits (25% vs 54%) and hospital admissions (0% vs 41%), respectively.

Conclusions: The HIH team made several interventions to stabilize HF patients and optimize medical therapy following acute exacerbation. Causes of readmission post-HIH discharge and the role of the HIH team in management of other disease states warrant further exploration.

D251 Resident Presentation

Care Team Perspectives on Social Prescribing in a Community-Based Family Medicine Teaching Clinic

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Background: Social Prescribing is a referral to sources of community support to combat social isolation and loneliness and improve mental and physical health. Adults over age 65 years are at increased risk for social isolation and loneliness, which are associated with higher rates of dementia, stroke, and other chronic illnesses. Myriad studies demonstrate the benefits of Social Prescribing to mitigate the negative impact of various social determinants of health. This project aims to 1) assess the care team's knowledge and attitudes about Social Prescribing, 2) educate the care team about Social Prescribing, and 3) identify resources and tools for the care team to implement Social Prescribing in our Family Medicine Clinic, which predominantly serves low income, publicly insured and historically marginalized patients.

Methods: Voluntary, anonymous pre-survey of clinic care team staff (attending and resident physicians, physician assistant, nursing, clerical and social work) to assess knowledge and attitudes about Social Prescribing. The project intervention is a resident-led didactic presentation about Social Prescribing during an all-team clinic operations meeting, followed by an anonymous participant matched post-survey. Survey data will be quantitatively and qualitatively analyzed to assess for potential changes to staff's understanding and perspectives about Social Prescribing. Survey responses and collective discussion during team meetings will inform Social Prescribing interventions.

Results: We hypothesize that the educational intervention and group discussion will increase care team's knowledge and attitudes about Social Prescribing, which has potential benefits to holistic health. The care team may improve their engagement in and ability to address social factors, such as isolation and loneliness, as important factors in older adult patients' health.

Conclusion: Education about Social Prescribing can enhance care team knowledge and attitudes, leading to increased engagement in developing a comprehensive Social Prescribing screening and referral workflow. A project goal is to compile relevant, accessible and local age-specific resources to combat social isolation and loneliness. The overarching vision for this project is improved quality of care for vulnerable older adult patients experiencing social isolation and loneliness.

D252 Resident Presentation

Retiming of medications to prevent delirium in older adults

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Background: Delirium is an acute confusional state that is common among hospitalized older adults and is strongly associated with poor patient outcomes. For most hospitalized patients, sleep quality is generally poor due to sleep disorders, pain, anxiety, acute illness, in addition to hospital- and care-related disruptions. Many of these disruptions may be prevented by minimizing non-critical vitals and medication administration between 10 pm-6 am. As a result, the purpose of this study is to assess whether retiming medications between the times of 6am-10pm, will have an effect on incidence of delirium in older adults.

Methods: This institutional review board approved, pre- and post-interventional study included patients age 65 and older admitted to two pilot units at our institution. During the interventional phase, medications were retimed between the times of 6am to 10pm based on a joint clinical decision between the Geriatrics resident pharmacist and overseeing geriatrician.

The pharmacist identified patients eligible for retiming of medications daily through an online clinical surveillance tool. The primary outcome of this study was incidence of delirium (as documented by the CAM tool) pre and post intervention. Secondary endpoints included number of sitter hours required, % of patients who received a medication between 10pm and 6am, rescue agents used for agitation, pharmacist interventions, length of stay, and discharge disposition in older adult patients. Data was evaluated with descriptive analysis, t-test and chi-square test.

Results: Fifty patients were evaluated in the pre-implementation group and three were included. The mean age was 82.7 years old, and 100% were male. Eighty three patients were evaluated in the post-implementation group and seven were included. The mean age was 81.7 years old, and 29% were male. No patients had documented incidence of delirium and no sitter hours were recorded in either group. No patients in the pre-implementation group received rescue agents for agitation compared to 14% of patients post-implementation. Seven medications were retimed in implementation group. Average time of review was 30 minutes per patient.

Conclusion: Based on our findings, no conclusion can be made on the effects of retiming medications to prevent incidence of delirium. One limitation is that this study was not powered to answer the research question studied.

D253 Student Presentation

Hospital-induced Functional Mobility Loss Assessed Daily using the AM-PAC Tool is Associated with Worse Clinical Outcomes

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Background Hospitalized adult patients remain in bed approximately 95% of the time, increasing the risk for functional decline and associated adverse events. Some hospitals track patients' functional mobility trends using Activity Measure for Post-Acute Care 6-Clicks Inpatient Short Form (AM-PAC). We aim to understand associations between functional mobility loss from hospital admission to discharge on delirium, fall risk, length of stay, discharge to a facility, and 30-day readmissions.

Methods This is a retrospective cohort study with adults admitted from 07/01/2021 to 06/06/2022 at an academic medical center in California. Patients were sorted into three clinically significant categories based on AM-PAC scores differences between admission and discharge: gain in mobility function (gain ≥3 AM-PAC points); no change (loss or gain of 0-2 AM-PAC points); and loss in mobility function (loss ≥3 AM-PAC points). Multivariate logistic regression was used to assess the association between age and mobility on outcomes.

Results There were 15,897 patients with 20,950 encounters included in this study. Loss of mobility function *was significantly associated with higher rates of delirium, higher fall risk, increased length of stay, and discharges to a facility but was not associated with reduced 30-day readmissions (see Table 1).*

Conclusions Daily AM-PAC assessment may enable care teams to better prevent functional mobility loss and poor clinical and quality outcomes, but the applicability of this approach requires further research.

Table 1: Associations between loss in mobility function on clinical and quality outcomes

	Adjusted Odds Ratio or Adjusted Proportion Change	95% Confidence Interval	p-value
Delirium Loss in mobility function	1.95	(1.73, 2.21)	<0.01
Falls risk Loss in mobility function	1.38	(1.21, 1.52)	<0.01
Discharge to a facility (i.e., SNF) Loss in mobility function	3.02	(2.61, 3.51)	<0.01
30-day readmissions Loss in mobility function	0.99	(0.85, 1.15)	<0.01
Length of stay Loss in mobility function	29.9%	(24.8%, 35.3%)	<0.01

***Models adjusted for patient and clinical characteristics (age, gender, race/ethnicity, severity of illness, mortality score, body mass index, admission source, language, insurance/payor type). The reference level for loss in mobility function is gain in mobility function. Data from 15,897 patients, and 20,950 encounters.**

D254 Student Presentation

Racial and Ethnic Disparities in Utilization of Physical and Occupational Therapy among People Living with Dementia in Home Health Care

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Background: People living with Dementia (PLWD) are likely to utilize Home Health Care (HHC) services such as Physical Therapy (PT) and Occupational Therapy (OT) which are integral to the clinical management of dementia. Despite their impact, little is known about PT and OT utilization patterns among PLWD from different racial and ethnic backgrounds. We aimed to identify differences in PT and OT utilization among PLWD from different racial and ethnic groups in a HHC setting.

Methods: This secondary analysis utilized data collected February 2017–May 2022 in a dementia symptom management clinical trial at a large, urban, Medicare certified nonprofit HHC agency in New Jersey. Pre and post survey data from 153 dyads of PLWD and their caregivers was collected with demographic and resource utilization information. PT and OT utilization was compared across racial and ethnic groups using a Poisson regression controlling for participants' education to better understand differences and disparities in care. The number of PT and OT visits during the first 30 days of the study were compared between caregiver reports and agency administrative data using the Wilcoxon signed rank test to determine whether caregivers of PLWD can effectively recall home therapy visits.

Results: Participants were 29.4% non-Hispanic Black, 13.7% Hispanic, 50.3% non-Hispanic white, and 6.54% from other racial and ethnic groups. Hispanic identification was associated with a 31.6% decrease in PT visits (IRR=.694, 95% CI =.489-.984), and that Black identification is associated with a 41.1% decrease in OT visits (IRR=.599, 95% CI =.409-.876) relative to white identification. Variance between administrative data and caregiver recall were significant for PT (Z =2.47, p=0.0134) but not for OT (Z=0.984, p=0.325) resource utilization.

Conclusions: Hispanic PLWD in our study had fewer PT visits, and Black PLWD had fewer OT visits, relative to white PLWD. This indicates a need for further investigation into disparities in access to HHC services among PLWD, given the disproportionate burden of the disease on minoritized populations. Discrepancy between caregiver and administrative reports suggests the former are not an accurate measure of resource utilization in home healthcare for PLWD.

D255 Student Presentation

Utility of Serial PROMIS Physical Function Assessment to Monitor Functional Changes in a Geriatrics Outpatient Clinic

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Background: A deficit accumulation frailty index (FI) may not be sensitive to short-term changes in functional status. In this quality improvement project, we utilized the Patient-Reported Outcomes Measurement Information System (PROMIS) to assess its feasibility and utility in capturing functional change in medically complex older patients.

Methods: From 8/2021 to 10/2022, patients 65 years or older with serious chronic illness were identified at the Beth Israel Deaconess Medical Center geriatrics outpatient clinic. The PROMIS Physical Function (PF) computer adaptive test (CAT) v1.2 was then completed with patients or their caregivers as appropriate whose FI was >0.25 at baseline and repeated over 6 months via telephone or e-mail. The outcome was the feasibility and utility of PROMIS PF to monitor physical functional changes.

Results: Among 83 patients identified, 27 had an FI>0.25 and were agreeable to telephone follow-up. Nine patients were lost to follow-up. Eighteen patients (67%) had a change in PROMIS PF score ≥5 points, while only 2 demonstrated a change in their FI score during the same period. Positive changes in PROMIS PF score (9 patients) were attributed to increased exercise activity and improved nutrition. Negative changes (9 patients) were attributed to worsening cognition, hospitalizations, emergency department visits, falls, or poorly controlled pain. Through PF monitoring, 5 patients received prompt interventions from their Geriatrician after an acute decline, and early detection of an overall health decline in 2 patients was possible.

Conclusion: PROMIS PF is useful to monitor functional status changes in medically complex older patients with frailty in a geriatrics outpatient clinic.

D256 Student Presentation

Qualitative Evaluation of the Implementation of a Geriatric Burn Bundle for Older Adults

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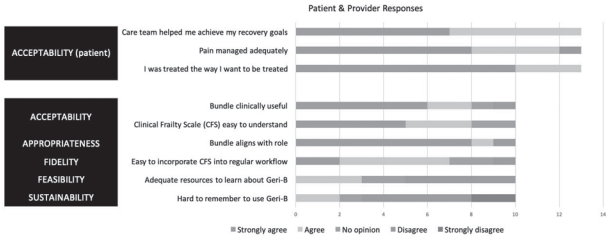
Frailty and comorbidities are important outcome determinants in older patients (age ≥65) with burns. A Geriatric Burn Bundle (Geri-B) was implemented in 2019 at a regional burn center to standardize care for older adults. Components included frailty screening and protocolized geriatric medicine consultation, malnutrition screening with nutritional support, and geriatric-centered pain regimens. This study aimed to qualitatively evaluate Geri-B implementation from patients and providers. The Proctor Framework was used to evaluate acceptability, appropriateness, fidelity, feasibility, and sustainability of Geri-B. From June-August 2022, hospitalized burn patients, their attending physicians, advanced practice providers, and nurses were surveyed and interviewed. Transcribed interviews were coded and thematically analyzed. The study included 23 participants (10 providers, 13 patients). Participants highly rated Geri-B in all implementation domains (Figure). Most providers rated geriatric care effectiveness as 'good' or 'excellent' after Geri-B implementation. Providers viewed it as a reminder to tailor geriatric care and a safeguard against care deviations. Staffing shortages, insufficient protocol training, and learning

resources were reported as implementation barriers. In addition, many providers advocated for better bundle integration into the hospital electronic health record (EHR) (e.g., frailty screening tool, automatic admission ordersets). Most patients felt comfortable being asked about their functional status. With respect to Geri-B interventions, there was strong patient support for goals of care discussions and therapy services. Providers perceived implementation of Geri-B as valuable for the care of older burn patients and requested more pre-implementation education and EHR integration. Patients perceived patient-centered burn care with room for improvement in pain management.



D257 Resident Presentation
Implementation of a Deprescribing Initiative to Reduce Potentially Inappropriate Medications (PIMs) at the VA Eastern Colorado Health Care System

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BACKGROUND: Despite known risks in the elderly, many older adults are prescribed a potentially inappropriate medication (PIM). While deprescribing is a common practice for geriatric practitioners, it is essential for all providers to prioritize reducing PIMs for older adults, regardless of specialty. Therefore, this project aimed to integrate the VIONE PIM deprescribing dashboard into routine clinical practice for pharmacists engaged in interdisciplinary primary care Patient-Aligned Care Teams (PACT).

METHODS: A prospective quality improvement (QI) project was conducted at the VA Eastern Colorado Health Care System (VA ECHCS). The VIONE PIMs deprescribing dashboard and related deprescribing opportunities were presented to PACT pharmacists in August 2022. Educational material and note templates were created for two specific PIM drug classes selected based on survey results: (1) aspirin for primary prevention, (2) anticholinergic medications. Data collection included baseline characteristics, PIM drug class, pharmacist recommendations, and time requirements. Chart review was conducted to confirm PIM discontinuation rates. Ongoing interest in the deprescribing initiative and areas for improvement were determined via a post-project survey.

RESULTS: Over a 100-day period, 275 veterans received reviews with 292 identified PIMs. The QI project population was predominately male (96%), with an average age of 77 years, and 24% identified as belonging to a minority race or ethnicity. Targeted assessments were completed for nine different PIM drug classes, with aspirin for primary prevention representing 90% of reviews. Of 292 PIMs identified by the VIONE dashboard, 55% were deemed 'Eligible to Deprescribe' after pharmacist review, with 80% of eligible prescriptions discontinued. The average PIM evaluation required 13.5 minutes of chart review, with 7.9 minutes of patient-contact time for medications directly discontinued by pharmacists.

CONCLUSION: The VIONE PIM deprescribing dashboard provides an opportunity for targeted interventions to reduce potentially inappropriate medications in older adults and was successfully piloted by PACT pharmacists at the VA ECHCS. This QI project presents a feasible program to support clinical pharmacists utilizing a deprescribing tool with the potential to be implemented in other healthcare systems.

D258 Student Presentation
Implementations of Hospital in Home Programs in Veteran Affairs Health System

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Background:

Hospital In Home (HIH) is a model of care that provides care to patients at home who would otherwise be taken care of in the hospital. Multiple hospitals and medical centers in the Veterans Administration healthcare system (VHA) have developed HIH programs to meet the needs of their patients and facilities. Differences in settings and contexts may contribute to differences in program structure. We examine characteristics of HIH programs across VHA to identify variations in their set up and practices and inform effective program implementation strategies.

Methods:

A total of 11 VA HIH programs were provided with standardized templates to report on program characteristics, staffing, services provided, and program outcomes tracked. Programs were also asked to report on their adaptations during COVID pandemic. Each site reported on these characteristics through a monthly conference. The reports were collected, transcribed, and abstracted by two independent reviewers. Program elements were organized into themes based on a previously reported framework of Hospital in Home care.

Results:

A total of 6 programs (55%), spanning the Northeast, South, and Pacific Northwest, reported on their program characteristics. All offered replacement hospitalization and early discharge. Patient referral sources varied with programs receiving patients from emergency departments, outpatient clinics, home based primary care and inpatient settings. Programs reported differences in mix of use of virtual visits vs. in person visits. During the pandemic, 50% of sites reported substantial adaptations to their programs which included virtual visits for follow up of COVID patients from ED. A number of clinical outcome metrics were tracked with substantial site to site variations including 30-day readmission rates, cost avoidance, bed days, or ER visit rates.

Conclusions:

We observed site to site variations in the implementation of HIH programs. These variations may reflect differences in contexts and needs of the population and the facility, but additional work is needed to examine whether these variations are associated with differences in program outcomes. Additional standardization of programs and their metrics may be needed for direct comparison across sites.

D259 Student Presentation
The Association Between Insomnia and 30-Day Returns to the Hospital in Patients 75 and Older

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Background: Over 30% of older adults report symptoms of insomnia and studies have shown a negative effect of insomnia on multiple comorbid conditions. Hospital returns are also common among older patients. The aim of this study is to determine the association between insomnia and increased risk of 30-day hospital returns among hospitalized older adults.

Methods: This is a secondary analysis of a quality improvement database comprised of patients ≥ 75 years old admitted to a community hospital from 2017 to 2020. Patients were excluded if they expired in the hospital or were discharged to hospice. Insomnia and comorbidities were identified using ICD-10 codes and prescription of drugs for insomnia. Chi-square tests were conducted to compare the

characteristics and outcomes of patients with and without insomnia. Returns to the hospital included visits to the emergency department without admission and any admission within 30 days of discharge. We additionally explored the reasons why these patients were returning to the hospital.

Results: Among 61,190 eligible admissions, 7,121 (12%) met the criteria for insomnia. 30-day hospital return rates were similar between patients who did and did not meet the criteria for insomnia, at 22% (1575) vs. 21% (11,464), respectively (p = 0.076). Among those who returned to the hospital (13,039), patients who met insomnia criteria were significantly more likely to have rheumatic disease, atrial fibrillation, stroke/transient ischemic attack, acute confusion/delirium, major depressive disorder, anxiety, and chronic obstructive pulmonary disease. Patients who met insomnia criteria had significantly higher 30-day hospital return rates for admissions due to cardiovascular, pulmonary, and infectious causes than those without insomnia.

Conclusions: Older hospitalized adults who met our criteria for insomnia in this cohort were not at a higher risk of returning to the hospital within 30-days of discharge. However, those with insomnia were more likely to have specific comorbidities. Future research should examine the role that insomnia may play in contributing to the development of morbidity.

D260 Student Presentation

Have Nursing Assistant Stressors Changed Following COVID-19?

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There are currently 527,000 nursing assistants (NAs) serving 15,600 nursing homes and 1.4 million residents in the nation. They assist residents with daily activities and they play a similarly essential role in assisted living and home health care. Unfortunately, NAs face multiple stressors in their job due to low wages, lack of support, lack of equipment and lack of recognition for the valuable role they play. Ample literature supports the existence of these stressors before the COVID-19 pandemic. However, data are sparse regarding stressors and coping mechanisms post-COVID. This study sought to identify the stressors experienced by NAs and personal care aides in four long-term care settings during July-September of 2022 through a self-administered questionnaire.

A semi-structured questionnaire was developed to assess stressors in several domains of well-being, and distributed to staff in three nursing homes and one assisted living community. Several items asked about the main sources of stress. Qualitative responses to stressors were grouped into themes and analyzed.

A total of 84 participants completed the questionnaire. Thematic analysis identified the three most commonly identified stressors to be as follows: 25% reported being short on staff, 14% reported inadequate pay, and 9% reported lack of materials and supplies. Other stressors included co-worker attitudes, lack of supervisor support, and poor communication with team members.

The work demands put upon NAs have changed considerably since the 1980s, and COVID-19 added to those demands. However, the stressors identified in 2022 are similar to those reported previously. To help address these stresses and the severe shortage of workers, a variety of solutions have been proposed, such as increasing wages, reducing workloads, providing benefits, and professionalizing the workforce. One step to professionalize the workforce and address stress related to attitudes and lack of support is to address terminology. Given that by definition a professional provides services and receives financial compensation, it seems fitting to refer to NAs and personal care aides as "professional caregivers." This change in terminology, coupled with substantive change in the role and its compensation, may help raise their status within long-term care settings and society.

D261 Student Presentation

Association of Age and Functional Status with 30-day Returns to the Hospital Among Older Patients Receiving Chemotherapy

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Background: Chemotherapy for cancer is often associated with toxic side effects in older adults. Age and functional status are important but may be given too much weight when assessing tolerance of chemotherapy. The aim of this study is to compare the association of functional status and age with 30-day returns to the hospital among older patients who received a dose of chemotherapy in the hospital.

Methods: This is a secondary analysis of a database created for a geriatric care transitions program that includes patients 75 and older who were admitted to a non-ICU bed in a 400-bed community teaching hospital over a one-year period, and who had an ICD-10 code indicating they had chemotherapy in the hospital. Hospital returns were defined as ED visits and inpatient admissions within 30 days of discharge. Functional status was defined using ADL Assistance Guidelines with independent and minimal assistance grouped as independent and moderate and complete assistance as dependent. Age was grouped 75-84 and 85+. Patients were excluded if they were put on hospice or they expired in the initial hospitalization. Groups and comorbidities were compared using chi-square analysis.

Results: Of close to 25,000 admissions 586 had an ICD-10 discharge diagnosis code for chemotherapy. 122 returned to the hospital in 30 days (21%). Of those who returned to the hospital, 58 (48%) were independent, 46 (38%) dependent, and 15% had missing data, compared to the 459 who did not return to the hospital (52% independent and 31% dependent). 45 (37%) of those 85+ were among the 122 patients who returned to the hospital, compared to 186 (41%) of those who did not return to the hospital. None of these differences were statistically significant. None of the comorbidities evaluated were significantly associated with return to the hospital.

Conclusion: In this selected sample of older admissions to a community teaching hospital who received chemotherapy, neither age nor functional status was significantly associated with 30-day returns to the hospital. Comorbidities did not appear to affect these results. These data highlight the importance of factors beyond age and functional status during a comprehensive geriatric assessment of older adults receiving chemotherapy in the hospital.

D262 Student Presentation

Decreasing Fall Risk in Older Adult Patients by Deprescribing Medications Included in 2019 American Geriatrics Society (AGS) Beers Criteria

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Background: Falls in adults over the age of 65 are associated with high morbidity and mortality and cost the US healthcare system over 50 billion dollars each year[1]. About 1 in 3 individuals over the age of 65 will fall each year, with history of falls and medication side effects among top risk factors[1]. AGS published the 2019 Beers Criteria of Potentially Inappropriate Medications (PIMs) to avoid use in older adults to lower health risks, including falls[2]. The objective of this study was to decrease fall risk in older adult patients by deprescribing PIMs included in Beers Criteria.

Methods: A quality improvement project was performed in an outpatient Internal Medicine resident clinic among 40 patients, ages 65-75, with history of falls in the past year and PIM prescriptions. A third-year medical student performed chart review and implemented 3 sequential strategies to deprescribe PIMs. The interventions included letters to providers for patients seen in the past 3 months (retrospective), staff messages to providers via electronic medical record for patients scheduled that week (prospective), and patient counseling at

appointments (real-time). Number of PIMs deprescribed were tracked during the interventions to determine the most effective strategy.

Results: The retrospective, prospective, and real-time interventions yielded 9.5%, 21%, and 25% decreases in PIM prescriptions, respectively. Real-time intervention was most effective in deprescribing PIMs.

Conclusions: An intervention including patient education on Beers Criteria medications' side effects during appointments can be effective in outpatient clinical settings to decrease PIM prescriptions, which could reduce fall risk in older adult patients. The current project serves as a pilot study for best practices of deprescribing PIMs in older adult patients, with a study of greater magnitude and duration necessary to draw more significant conclusions.

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D263 Student Presentation

Staff's Perspective on Youth Volunteering

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Background:

Multiple studies have shown that interaction between the elderly and the youth greatly benefits both. In this study, we investigate the perspective of long-term care (LTC) staff regarding youth volunteers.

There is strong evidence that intergenerational relationships promote mutual welfare among the elderly and the youth. One method to create these relationships is to facilitate volunteering in the settings in which elders reside. Currently, youth volunteering in the LTC setting is limited due to barriers from staff as well as the youth volunteers. To overcome staff impediments, a survey was conducted to understand their perspective regarding the qualities and skills in youth that would be most beneficial to this interaction.

Methods:

We designed a yes-no-question survey with a comments section for additional input. This was developed based on the volunteering experience of one high school student in an LTC setting. Participants from two LTC facilities in metro Atlanta were selected for the survey. A total of 26 staff members from different disciplines participated. We used quantitative and qualitative analysis to understand their viewpoint regarding youth volunteering.

Results:

Quantitative analysis showed that there was unanimous agreement from the staff on youth participation involving fun activities like music, art, playing board games, having one-on-one conversations, etc. There was less support for youth conducting activities of daily living due to the complexity of such tasks. They also identified areas that youth should become familiar with before volunteering, like knowledge of the LTC settings, common health issues in the elderly, etc. But staff members were concerned that youth volunteers would not be able to participate consistently due to other obligations.

Conclusions:

This survey demonstrates that the staff is willing to have youth volunteers help at geriatric facilities because they believe that this will energize the residents as well as benefit the youth. Colleges and high schools could promote volunteering by creating programs that will allow youth to dedicate more time to such activities. Furthermore, there will be an increasing number of jobs in geriatric care as the population ages. Early exposure will encourage youth to choose career paths serving the elderly.

D264 Student Presentation

Exploring perspectives of undocumented older adults navigating public insurance changes

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Background:

Legislation in California enabled undocumented low-income older adults to transition from uninsured status to full-scope Medi-Cal. These patients have been historically marginalized and experience poor access to care, exacerbated by their immigration and socioeconomic status. We partnered with a Federally Qualified Health Center (FQHC) in Los Angeles County to explore perspectives of patients impacted by the Medi-Cal older adult expansion.

Methods:

We conducted voluntary, telephonic surveys of 11 Spanish-speaking older adult patients (mean age 71; 91% female). Qualitative data included awareness and understanding of the Medi-Cal expansion, likelihood to enroll, and concerns with navigating the enrollment process. Six-month follow-up telephonic surveys were conducted to verify enrollment in Medi-Cal and explore patient perspectives and barriers.

Results:

Of 11 respondents to the initial survey, 8 were aware of the upcoming Medi-Cal transition. The majority (n=9) stated they would enroll in Medi-Cal. Key concerns included immigration (n=4), income eligibility (n=2), unstable housing (n=2), limitation of benefits (n=2) and literacy (n=1). To obtain information about their health coverage, most patients (n=8) preferred phone communication over written methods. All stated dependence on their adult children to manage their health needs. Patients had questions about continuity of care, rent assistance and specialty care.

The follow-up survey included 6 respondents from the initial sample. All had successfully enrolled in Medi-Cal with the help of family or their FQHC clinic. Two-thirds (66%) felt the enrollment process was confusing due to unclear timelines and communication. Patients still had questions regarding specialty care access, as well as resources for food insecurity and transportation.

Conclusion:

In this sample of undocumented, underinsured older adults, there was a general awareness of and positive attitude toward the Medi-Cal expansion. However, most were unsure of how to navigate the enrollment process given their immigration status. Providing insurance access to vulnerable populations is only part of the solution to health disparities. Insurance enrollment outreach to marginalized populations should provide navigation support to address socioeconomic, cultural, and utilization barriers to ensure patients are able to engage in their healthcare.

D265 Resident Presentation

Implementation of a standard screening process for pneumococcal vaccine eligibility in a geriatric primary care practice

L. Sittard, E. Mohan, H. Sakely. *UPMC, Pittsburgh, PA.*

Background: Most recently, the CDC has provided guidance on two new pneumococcal vaccines, PCV15 and PCV20. The guidance of who should receive these vaccines includes more patient specific factors than previous guidelines, leading to a complex decision tree for identifying immunization gaps in care. Patients who are not up to date on their immunizations, may be at increased risk of severe illness from pneumococcal disease which could lead to hospitalizations or even death. The aim of this project was to help close healthcare gaps in order to provide evidenced based patient care, naturally leading to improvement in quality metrics.

Methods: The intervention included a prospective pharmacy-driven chart review of patients being seen at two geriatric primary care offices to identify opportunities for pneumococcal vaccination. Recommendations following the most recent CDC guidance, at the time of intervention, were sent to the providers and office staff via

EPIC. This was a practice based educational intervention. After the initial 2-weeks of this intervention and staff education, the tasks of screening and pending vaccine orders for co-signature were gradually delegated to the office staff following a step-wise approach. At the end of the 8-week intervention, the office staff integrated the pneumococcal vaccine screening into the patient rooming process following a standardized developed as a result of this project. Staff self-efficacy and knowledge of the pneumococcal vaccines and screening process were assessed using a pre- and post-survey.

Results: In a sample of patients (n= 41) scheduled at either clinic during a randomly selected one week time frame it was found that approximately 24% (10 patients) were not up to date on their pneumococcal vaccines. A standardized protocol will help identify additional vaccination opportunities and help contribute further to vaccination efforts.

Conclusions: Pharmacists had a positive impact on pneumococcal vaccination efforts through the implementation of a standard screening process in light of updated CDC guidance. Standardized protocol development helped contribute to improving office workflow by providing education and a streamlined approach to identifying vaccine opportunities. By developing a standardized protocol, this helped broaden the scope of practice for medical assistants and nurses and help promote a timely rooming process for patients.

D266 Resident Presentation

Evaluating the impact of a pharmacist-driven diabetes population health initiative in a geriatric primary care setting

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Background: Older adults have a higher prevalence of diabetes (24.4%) compared to other age groups (3% in ages 18-44 and 14.5% in ages 45-64).[1] Within this age group, approximately 17% had an A1c ≥ 8%.[2] The involvement of a pharmacist in the management of patients with diabetes has been associated with significant A1c lowering.[3] Research has also demonstrated the positive impact that pharmacists can have managing concurrent diagnoses such as chronic kidney disease and hypertension in patients with diabetes.[4] Therefore, including a pharmacist in the care of older adult patients with diabetes has the potential to help improve diabetes care.

Methods: Patients with diabetes who have a primary care provider at one of two outpatient geriatric offices were included in the study. A pharmacist screened a report generated by the electronic health system to identify opportunities to improve the following diabetes medication-focused measures: updated A1c in the last 6 months, A1c < 8%, most recent office blood pressure < 140/90 mmHg, on statin therapy, updated uACR within the last 12 months, and if microalbuminuria (uACR ≥ 30), were patients on an ACE inhibitor or ARB. Recommendations following the most up to date American Diabetes Association Standard of Care Guidelines, at the time of the intervention, were communicated to patient's primary care providers for consideration.

Results: Of a sample of 117 patients, approximately 16% of patients were found to have an A1c of ≥ 8%. Additional findings included approximately 19.7 % of patients with blood pressures ≥ 140/90 and 18.8 % who were not on statin therapy. Furthermore 35 % of patients had microalbuminuria and of these patients, about 41.5% were on neither ACE-I or ARB therapy.

Conclusions: This study found that pharmacists help identify areas to improve diabetes care, contribute to the identification of at-risk patients, and have a positive impact on helping patients work towards their diabetes disease state goals.

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D267 Student Presentation

What is the physician role in hospital fall prevention? A quality improvement initiative

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Hospital falls are associated with longer length of stay, injuries such as hip fracture or intracranial bleed, and the need for rehabilitation following hospitalization. The UNC cardiology service cares for many patients ages 65 and older, who comprise the majority of patients affected by hospital falls. In recent years, the fall rate on the cardiology unit has risen from 16 falls in FY2019 to 21 falls per year in FY2022, climbing to 11 falls in three months of FY2023. The increased rate of falls is likely associated with nursing shortages in the COVID-19 pandemic, but it also calls into question the role of physicians in inpatient fall prevention. In primary care, geriatricians screen patients for fall risk and implement measures for fall prevention. In the hospital, however, fall prevention has long been a nursing-led initiative with limited investment from physicians. An interprofessional approach may reduce hospital falls because physicians can identify medical conditions known to predict to falls and order targeted interventions that complement nursing measures for fall prevention.[1,2] As part of a QI initiative, we created a dotphrase that allows physicians to assess and manage conditions that contribute to falls, including altered mental status, urinary frequency, polypharmacy, and gait instability. We aim to increase dotphrase usage from 0 to 50% adherence during admissions to the cardiology service within four months with the goal of reducing falls. Chart abstraction will be used to measure the unit fall rate, dotphrase usage, and readmission rate as a balancing measure. Data will be presented in run charts, and falls data will be stratified by patient age, sex, and race. In early PDSA cycles, physicians reported that the dotphrase increased their awareness of fall risk as a hospital problem and provided an objective means of assessing fall risk during admission. Although hospital falls remain a challenging outcome to prevent and a persistent cause of morbidity in older patients, our findings will shed light on the potential role of physicians in preventing hospital falls.

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D268 Student Presentation

Use of geriatric assessment during cancer survivorship - identifying opportunities to tailor survivorship care

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Background: Older cancer survivors are an understudied cohort of patients often placed into the general category of cancer survivors when their needs are geriatric in nature. Comprehensive geriatric assessment (GA) can identify these complex needs and can help tailor survivorship care. A quality improvement initiative was proposed to assess the use of GA during cancer survivorship and to determine which GA driven interventions older cancer survivors most need. Methods: We retrospectively reviewed the electronic health records (EHR) of 25 older patients with cancer post-active cancer treatment (post-surgery, chemotherapy or radiation) and were seen at the University of Texas Physicians Center for Healthy Aging in 2022. Patient information gathered from EHR included: age, cancer type, cancer treatment(s), number of comorbidities, presence of polypharmacy, cognitive impairment, depression, need for assistance with instrumental activities of daily living (IADLs) and type of GA driven intervention recommended. The prevalence of these factors

was calculated using descriptive statistics. Results: The mean age of the participants was 84.4 ± 6.6 years. The most common diagnosis was breast cancer (44%). Seventy six percent of patients underwent previous surgical cancer treatment. There was an average of 4.5 comorbidities per patient. Seventy two percent of patients had polypharmacy, 16% had depression and 20% had cognitive impairment. Twenty percent of patients needed assistance with IADLs. A standard care health routine including appropriate diet and exercise was recommended for all patients. Fifty six percent of patients needed at least one GA driven intervention. The types of geriatric interventions varied across patients including medication management (28%), referrals to physical therapy (20%), nutrition (16%), occupational therapy (12%), and referrals to other medical specialties (24%). Conclusions: Our data shows that older cancer survivors have multiple geriatric syndromes that require GA driven interventions. Rather than a one-size-fits-all approach, personalized survivorship care plans based on GA is recommended for older cancer survivors.

D269 Resident Presentation

Characteristics of Drug Therapy Problems among Inpatients in a Safety Net Hospital

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Background:

The incidence of polypharmacy continues to rise and is a growing concern for Drug Therapy Problems (DTPs). DTPs occur when adverse or undesired consequences take place in response to pharmacotherapy. This initiative was created to evaluate the prevalence of polypharmacy, characterize DTPs, and identify opportunities and barriers to deprescribing among inpatients in a safety net hospital. Results from this initiative were analyzed to address DTPs and improve the medication review process by a multidisciplinary team.

Methods:

A multidisciplinary team at a safety net hospital conducted this prospective observational initiative. Inpatients admitted to a geriatric medicine teaching service between July 2021 and June 2022 were screened for polypharmacy on admission. Screening criteria included age greater than 65, medication list greater than five, and inclusion of two or more medications on the 2019 AGS Beers Criteria®. A total of 162 patients were included. 142 medications were flagged as problematic and then classified based on eight DTP categories: adverse drug reactions, dose too high, dose too low, drug interactions, duplication of therapy, indication without medication, medication without indication, and potential adverse drug reaction. This yielded 290 DTPs.

Results:

Of the documented medications flagged as problematic 40.8% (n=58) had opiates as a contributor, followed by benzodiazepines (13%, n=19), and skeletal muscle relaxants (9%, n=13). 26.2% (n=76) of documented DTPs were attributable to medications without indication, followed by indication without medication (17.6%, n=51), and potential adverse drug reaction (25.5%, n=45).

Conclusions:

The most prevalent cause of DTPs in our safety net hospital was medications prescribed without an indication. Moreover, the most prescribed medication contributing to polypharmacy was opioids. Overall, this report highlights the importance of a multidisciplinary team in characterizing DTPs which will be used to identify and implement a targeted approach to reduce the repercussions associated with polypharmacy.

Note: Release on race and gender data pending IRB approval.

D270 Resident Presentation

Achieving Level 2 Age-Friendly Health Systems - Committed to Care Excellence Recognition as a Community-Based, Residency-Affiliated, Primary Care Clinic

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Background: The Pomona Valley Health Center at Pomona (PVHC-Pomona) is recognized as an Age-Friendly Health Systems Level 1 Participant, part of a movement developed by the Institute for Healthcare Improvement and John A. Hartford Foundation. This initiative strives to provide evidence-based practices to older adults and their family caregivers following the 4Ms framework targeting ***What Matters, Mobility, Mentation, and Medication***. PVHC-Pomona is one of less than 100 community-based primary care clinics, which may lack support staff and resources to maintain national care models, out of over 2,000 organizations recognized as Age-Friendly. However, we have unique opportunities as a residency-affiliated clinic with a dedicated geriatric clinic. Utilizing an interdisciplinary effort, we aim to implement a quality improvement process to increase reliable practice of the 4Ms and obtain Level 2 recognition: Committed to Care Excellence.

Methods: We analyzed the current practice of the 4Ms within the general PVHC-Pomona clinic population of patients 65+ since obtaining Level 1 recognition and compared this to practice of the 4Ms for geriatric clinic patients. We then implemented PDSA cycles including screening questions as part of routine clinic patient intake, then evaluated for subsequent age-friendly practices. We also identified existing barriers and facilitators via field notes for improving 4Ms framework practices.

Results: PVHC-Pomona continues to practice the 4Ms framework, with greater frequency in geriatric clinic. Increase in 4Ms framework practices within the greater clinic population can be obtained with implementation of EHR screening on intake.

Conclusions: Level 2 Age-Friendly Health Systems - Committed to Care Excellence recognition is feasible and can be improved within a community-based, family medicine primary care clinic by incorporating readily accessible screening tools. Key facilitators for Age-Friendly practices include consistent utilization of the electronic health record system, trained clinic staff and involvement of all members of the care team. Barriers include staffing, allocation of time to train the care team on how to utilize and apply the 4Ms, and consistent emphasis on how to provide Age-Friendly, high-quality care to our patients.

D271 Resident Presentation

Evaluation of appropriateness of hospitalizations from the nursing home setting

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Background: It is not always necessary for nursing home residents to be transferred to the hospital for further evaluation when there are in-house testing options available. Unnecessary transfers to the Emergency Department (ED) can lead to increased spending, exposure to radiation, and antibiotics that could have potentially been avoided. In our study, an interdisciplinary team evaluated the cases that were transferred to the ED and deemed if the transfers were appropriate or could have been handled with the resources provided within the facility.

Methods: A performance improvement plan (PIP) team composed of geriatricians, resident care managers, and administrators reviewed 193 ED transfers and hospitalizations from the Oregon Veterans' Home (OVH) in Lebanon spanning October 2021 through

October 2022. These were categorized as appropriate (work up could not have been completed in house), inappropriate (work-up done in ED could have been completed at OVH or in the outpatient setting), and resident rights (requested by patient or family).

Results: Among the 193 hospital visits of OVH residents, 146 (75.6%) were appropriate, 32 (16.6%) were inappropriate, and 13 (6.7%) were resident rights. The inappropriate visits were further divided based on who requested the transfer into triage on-call 13 (6.7%), provider (6.2%), facility nurse 6 (3.1%), and offsite facility 2 (0.5%). There were 70 (34.8%) hospital admissions. Common hospital diagnoses given for both inappropriate visits and resident rights were urinary tract infections, vomiting, altered mental status, mechanical falls, and medical screening.

Conclusion: Based on the interdisciplinary team review, most ED transfers and hospitalizations were appropriate, but there are some that can be avoided. An educational intervention involving the patient and their family regarding appropriate use of outpatient medical work-up and care may decrease future unnecessary transfers.

D272 Resident Presentation

Development of a standard H&P template across an internal medicine residency: barriers and benefits

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Electronic medical records (EMRs) provide significant patient-care advantages; however, lack of standardization creates new challenges including retrieval of inaccurate or outdated data. This is particularly dangerous in older patients and can negatively affect patient care and outcomes [1]. The aim of this project is to explore practices and attitudes of internal medicine residents on history and physical (H&P) templates.

Initial data gathering involved an informal convenience sampling of residents, medical students, and interprofessional health care team members. This informed creation of a survey that was emailed to 121 internal medicine residents at a single training program. The survey explored current practices of note use, willingness to use a new template, and barriers to implementation.

Response rate was 46.2% (56/121). When asked to weigh the H&P components on a Likert scale of importance from 0 to 10 (0 - not at all important, 10 - extremely important), the highest scoring component was "Assessment and Plan" with a mean rating of 9.73 and standard deviation of 1.29. Residents reported a standardized template would "definitely" or "probably" be beneficial at rate of 28.6% (n=14) and 42.9% (n=21) respectively. The most cited motivators for using a standard template were easier cross covering (n= 33, 26.8%), helping communication between residents and ancillary staff (n= 26, 21.1%), and making workflow more efficient (n= 25, 20.3%). Barriers to use of a template was preference for the current template (n=7, 43.75%) and worry about an inability to customize (5, 31.2%). Ancillary staff all reported that they used Medicine provider notes in their daily workflow and specifically rely on the Assessment and Plan portion.

There is no standard H&P template for internal medicine residents, but current residents are open to adopting a new template style. Our survey findings indicate the Assessment and Plan is the most valued part of the note. Redesign of an H&P template with Assessment and Plan at the top is in process in collaboration with a multidisciplinary team.

1. Middleton B, Bloomrosen M, Dente MA, et al. Enhancing patient safety and quality of care by improving the usability of electronic health record systems: recommendations from AMIA. J Am Med Inform Assoc.2013;20(e1):e2-8

D273 Student Presentation

Nurses' Perception on the Ease of Use of the UB-2 Delirium Screen

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Background: The ultra-brief 2-item (UB-2) delirium screen is a highly sensitive tool nurses or nursing assistants may use at the bedside to assess patients for delirium, a harmful and costly complication of hospitalization in older adults. This study aims to evaluate the feasibility of using the UB-2 as a nurse-driven routinely administered delirium screening in our hospital as part of our institution's IHI Age-Friendly initiative.

Methods: This was a quality improvement (QI) pilot study. is part of the age-friendly initiative at Hershey Medical Center. Nurses on an acute care medicine floor were trained to administer the UB-2 to patients 65 and older once per shift. Results of each completed UB-2 were documented and collected on paper. Feedback surveys were distributed to nurses to gain perspective on their experience with the use of the UB-2 to help inform the next QI cycle. We used descriptive analyses of the survey data to assess the feasibility of the UB-2, looking at barriers encountered by nursing staff, time spent administering the screen, ease of use, and interruption to nursing workflow.

Results: Over 114 days, 483 UB-2 screens were completed. Of these, 263 were completed on day shift, 213 on night shift; 7 did not indicate time. 229 screens were positive, 228 were negative, 17 were unable to be interpreted, and 9 patients refused to participate.

Thirty feedback surveys were received. Barriers encountered were: dementia diagnosis/does not understand (77%), nonverbal/unresponsive patients (57%), language barrier (50%), hearing or sensory impairment (47%), patient refusal (37%), patient unavailable (7%), and family/visitor interference (3%). Barriers were encountered never by 3%, some of the time by 80%, and most of the time by 17% of nurses. These barriers increased the difficulty of administering the UB-2 not at all (7%), somewhat (77%), and a lot (17%). On average, it took 70% of nurses < 1 minute to administer the UB-2, and 63% stated that it would change their workflow somewhat.

Conclusion: The results of this pilot indicate that, overall, nurses found the UB-2 to be a feasible screening tool for delirium in most older adult patients. The next QI cycle will feature enhanced training on how to address these barriers and reduce perceived difficulty associated with administering the UB-2.

D274 Resident Presentation

Evaluation of Empagliflozin Use in Older Adult Veterans

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Background

Sodium glucose cotransporter-2 inhibitors (SGLT2i) promote renal excretion of glucose and have shown to reduce cardiovascular events, all-cause mortality, and progression of renal decline in select populations. In 2014, SGLT2i were added to clinical practice guidelines for type 2 diabetes, resulting in expanded use of the medication class. Although, SGLT2i may have a beneficial role in the geriatric population, the side effect profile may be concerning. Therefore, we evaluated prescribing practices and adherence to SGLT2i in older adults at a Veterans Affairs (VA) hospital.

Methods

We conducted a retrospective chart review of 100 patients ≥ 65 years old with diabetes and prescribed empagliflozin at one VA hospital from January 2016 to December 2021. Baseline characteristics such as renal function, hemoglobin A1c, urinary conditions, concurrent diabetes medications, and dose of empagliflozin were collected at the time of therapy initiation. Descriptive analysis was used to assess

prescribing practices (e.g., medication appropriateness per manufacturer prescribing information, counseling, follow-up visit within 30 days), medication adherence (refill history), and reported adverse drug events in the subsequent year.

Results

Eighty-three percent of older adults were prescribed empagliflozin appropriately and documented medication counseling was found in 85% of patient records at initiation. Only 36% of patients had a follow up visit within 30 days. Adverse events by age group included 65-70 years old (42%), 71-75 years old (32%), and ≥ 76 years old (35%). Overall, the most common adverse event was polyuria (15%), hypoglycemia (13%), lightheadedness/dizziness (10%), dehydration (8%), and urinary infection (8%). Discontinuation rates of empagliflozin due to adverse events were 22% for age groups 65-70 and 71-75 years old, and 13% for ages ≥ 76 years old. Medication adherence was not affected by dose or age, with 80% of all patients having a medication adherence rate of ≥ 0.80.

Conclusion

When evaluating appropriate use and counseling, providers utilized high quality prescribing measures. This is likely aided by the use of an established SGLT2i order set. However, older patients appeared to have a high incidence of adverse drug events. As the role of SGLT2i is evolving in clinical practice, incorporating measures to facilitate follow up, deprescribing, and adequate patient counseling may help to minimize adverse drug events.

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