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.

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

JOURNAL OF THE AMERICAN GERIATRICS SOCIETY

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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 2021 Virtual 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 2021 Virtual 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,

Joseph Shega, MD
2021 Annual Meeting Program Chair

Annette M. Medina-Walpole, MD, AGSF
AGS President

AMERICAN GERIATRICS SOCIETY 2021 VIRTUAL ANNUAL SCIENTIFIC MEETING

May 12 - 15, 2021

RESEARCH PRESENTATIONS
SCHEDULE AT A GLANCE

WEDNESDAY, MAY 12, 2021

7:00 PM – 8:00 PM EASTERN
POSTER SESSION A

THURSDAY, MAY 13, 2021

10:00 AM – 11:00 AM EASTERN
EPIDEMIOLOGY PAPER SESSION
Moderators: Shelly L.Gray, PharmD, MS & Susan Hardy, MD

P1-Glycemic Treatment Deintensification Practices in VA Nursing Home Residents with Type 2 Diabetes
Lauren Ijsel Lederle, MD

P2-Association of Sustained Blood Pressure Control with Nursing Home Admission
Barrett Bowling, MD

P3-Patterns of Informal Caregiving Among Older Adults with and without Dementia
Talha Ali, PhD, MS

P4-Time to Benefit of Antihypertensive Medication for the Primary Prevention of Cardiovascular Events in Older Adults: A Survival Meta-analysis of Randomized Clinical Trials
Ling Xie

11:15 AM – 12:00 PM EASTERN
PLENARY PAPER SESSION
Moderator: Peter A. Hollmann, MD

P5-Higher Angiotensin II type 1 Receptor (AT1R) Levels and Activity in the Postmortem Brains of Older Persons with Alzheimer's Disease
Caglar Cosarderelioglu, MD

P6-Life Expectancy Estimates Using Comorbidities and Frailty To Inform Preventive Care of Older Adults
Nancy L.Schoenborn, MD, MHS

P7-Firearm Injury and Suicide Prevention in Older Adults: Stakeholder Perspectives on "Firearm Retirement"
Laura C. Prater, PhD, MPH, MHA

1:15 PM – 2:15 PM EASTERN
GERIATRIC EDUCATION PAPER SESSION
Moderator: Reena Karani, MD, MHPE

P8-Advancing the Future Geriatrics Workforce During the Pandemic: A Virtual Interprofessional Clinical Experience
Cristina C. Murdock, MD & Rachel Jantea, MD

P9-A Novel Student-Led Telephone-Based Clinical Learning Program to Support Geriatric Patients
Pooja Lalchandani

P10-Shifting from In-Person to Virtual Programming to Provide Intergenerational Social Support for Patients with Dementia: The Virtual TimeOut@UCLA Program
Daphna Gans, PhD

P11-Innovative Educational Approaches to House Calls in the Time of COVID-19
Mariah L. Robertson, MD, MPH

3:45 PM – 4:45 PM EASTERN
OPTIMIZING GERIATRIC CARE IN THE EMERGENCY DEPARTMENT PAPER SESSION
Moderator: Heidi D. Klepin, MD, MS

P12-The HEAR-VA Pilot Study: Hearing Assistance Provided to Older Adults in the Emergency Department
Joshua Chodosh, MD, MSHS

P13-ED-to-Home Care Transitions for Community-Dwelling Older Adults: Results of a Randomized Controlled Trial
Gwen Costa Jacobsohn, PhD

P14-Right Care, Right Place, Right Time, Right Team – Embedding Comprehensive Geriatric Assessment in the Emergency Department
Evelyn B. Hannon, MB BCh BAO

P15-Emergency Department Visits among Older Adults during the COVID-19 Pandemic
Snigdha Jain, MD

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

FRIDAY, MAY 14, 2021

10:00 AM – 11:00 AM EASTERN
HEALTH SERVICES & POLICY RESEARCH PAPER SESSION
Moderators: Joshua Chodosh, MD, MSHS, FACP & Daniel R. Berlowitz, MD

P16-Association between Cancer Screening and All-Cause Mortality in Older Adults
Nancy L. Schoenborn, MD, MHS

P17-Most Common Advance Care Planning Barriers Reported by Older Adults Experiencing Systemic Patterns of Disadvantage
Linda H. Phung

P18-Preferred Clinician Communication About Deprescribing Among Older U.S. Adults
Ariel R. Green, MD, MPH, PhD

P19-Using the Electronic Health Record for Assessing Deficit Accumulation, to Pragmatically Identify Candidates for De-Prescribing in Type 2 Diabetes Mellitus
Kathryn E. Callahan, MD, MS

12:15 PM – 1:15 PM
THE PANDEMIC THROUGH A GERIATRIC LENS PAPER SESSION
Moderator: Elizabeth K. Vig, MD, MPH

P20-Long-term Services and Support Staff Covid-19 Vaccine Hesitancy
Linda S. Edelman, PhD, RN

P21-"It isn't the same": Experiences of Informal Caregivers of Homebound Older Adults during COVID-19
Marika B. Humber, PhD

P22-Older Adults' Access to Primary Care During the 1st Wave of the COVID-19 Pandemic: Gender and Ethnic Disparities in Telemedicine
Yi Zhou, BA, MD Candidate

P23-Geriatric Antibody Response to COVID-19
Joshua J. Moore, BS

2:45 PM – 3:45 PM EASTERN
CLIN-STAR PAPER SESSION
Moderator: Lona Mody, MD, MSc

P24-Prolonged Use of Gabapentin after Surgery in Older Adults
Tasce Bongiovanni, MD, MPP

P25-High Risk of Complications after a "Low Risk" Procedure: Nursing Home Residents at Increased Risk of Complications and Mortality after Hemorrhoid Surgery
Alexis Colley, MD, MS

P26-Changes in Older Adults' Life-Space Mobility During Lung Cancer Treatment
Melisa L. Wong, MD, MAS

P27-Decisional Regret Among Older Adults Undergoing Corrective Surgery for Adult Spinal Deformity: A Single Institutional Study
Owoicho Adogwa, MD, MPH

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

SATURDAY, MAY 15, 2021

11:00 AM – 12:00 PM EASTERN
PREVENTING FALLS, FRACTURES, AND OTHER BAD OUTCOMES ACROSS THE HEALTHCARE CONTINUUM PAPER SESSION
Moderator: Caroline S. Blaum, MD, MS

P28-Implementing a Geriatric Fracture Program in a Mixed Practice Environment Reduces Total Cost and Length of Stay
Sonja L. Rosen, MD, FACP, AHSF

P29-Fall Prevention Among Veterans in a Skilled Nursing Facility
Kevin Donohue

P30-Analyzing a QI Expansion of Opioid Administration Practices on Adult Inpatient Medicine Units
Rebecca A. Spear, DO

P31-Initial Results from OPTIMIZE: A Pragmatic Deprescribing Trial in Primary Care for Older Adults with Cognitive Impairment and Multiple Chronic Conditions
Ariel R. Green, MD, MPH, PhD

2:00 PM – 3:00 PM EASTERN
UNDERSTANDING THE HEALTH IMPACT OF GERIATRIC SYNDROMES PAPER SESSION
Moderator: Esther Oh, MD, PhD

P32-Comparison of Frailty Index to CURB-65 and PSI in Predicting Mortality and Functional Outcome after Hospitalization with Pneumonia: A Prospective Cohort Study
Chan Mi Park, MD

P33-Impaired Standing Balance Predicts 29-Year Mortality in Older Japanese-American Men: The Kuakini Honolulu Heart Program
Kohei Hasebe, MD

P34-Depression and Stress Symptoms Accelerate 5-Year Decline in Physical Function in US Community-Dwelling Older Adults
Anabella Pinton, BA

P35-Resistiveness to Care and Pain in Hospitalized Persons with Dementia
Clarissa A. Shaw, MSN, RN

3:15 PM – 4:15 PM EASTERN
INNOVATIVE MODELS IN PRIMARY CARE PAPER SESSION
Moderator: Lorraine C. Mion, PhD, RN, FAAN

P36-Program Evaluation of a Home-Based Primary Care Practice and Patients with Heart Failure
Anne R. Walsh, DNP, ANP-BC

P37-Development and Validation of a Caregiver Screening Tool for Primary Care
Catherine A. Riffin, PhD

P38-Implementation of the VIONE Deprescribing Tool in VA Home Based Primary Care (HBPC)
Michelle L. Vanderhoof, PharmD

P39-A New Tool for Frailty Screening in Primary Care
Abrar-Ahmad Zulfiqar, MD

Paper Session
EPIDEMIOLOGY

Thursday, May 13
10:00 am – 11:00 am

P1

Glycemic Treatment Deintensification practices in VA Nursing Home Residents with Type 2 Diabetes

L. Lederle,[1] B. Jing,[1] B. Nguyen,[1] S. Lee.[1,2] *1. Geriatrics, University of California San Francisco, San Francisco, CA; 2. Geriatrics and Extended Care Services, San Francisco VA Health Care System, San Francisco, CA.*

Background: Multiple guidelines recommend less stringent hemoglobin A1c (HbA1c) goals for nursing home residents (typically between 8-9%) and our previous work has shown that potential overtreatment of diabetes (DM) is common in this population. However little is known about glycemic treatment deintensification practices in nursing homes.

Methods: We conducted a retrospective study of all VA NH residents age >65 admitted from 1/1/2013-12/31/2019 for a NH stay >30 days. NH residents were categorized as overtreated if their HbA1c was <6.5% and they received insulin. NH residents were categorized as potentially overtreated if HbA1c <6.5 and they received any GLM other than metformin or HbA1c <7.5 and they received insulin. We defined deintensification as the discontinuation or dose reduction >25% of a GLM within 14 days of the HbA1c date. We defined intensification in an analogous manner; all NH residents not categorized as intensified or deintensified were categorized as stable.

Results: We identified 7,422 VA NH residents who met inclusion and exclusion criteria. Mean age was 74.6 years (SD 8), and 98.4% were male. In total, 23% of residents met criteria for overtreatment, and an additional 23% met criteria for potential overtreatment. Of residents who were overtreated and potentially overtreated at baseline, 27% and 19% respectively had medication regimens deintensified within 14 days of HbA1c (73% and 81%, respectively, continued to be overtreated). Long acting insulin use and hyperglycemia ≥ 300mg/dL prior to index HbA1C were associated with increased odds of continued overtreatment (OR 1.38, 95% CI 1.15-1.67 and OR 1.27, 95% CI 1.03-1.57 respectively). High level of functional dependence (ADL score ≥ 19) was associated with decreased odds of continued overtreatment (OR 0.72, 95% CI 0.55-0.94). Cognitive function was not associate with treatment changes.

Conclusions: In a national cohort, 73% of NH residents with glycemic overtreatment were not deintensified within 14 days of HbA1c measurement; 81% of NH residents with potential overtreatment were not deintensified. Although high functional dependence was associated with appropriate deintensification other patient level factors such as cognitive impairment were not associated with deintensification.

P2

Association of sustained blood pressure control with nursing home admission

B. Bowling,[3] R. Sloane,[1] A. Luciano,[1] C. Pieper,[1] S. Oparil,[4] B. Davis,[5] L. Simpson,[2] P. Muntner.[4] *1. Duke University, Durham, NC; 2. The University of Texas Health Science Center at Houston, Houston, TX; 3. Durham VAMC, Durham, NC; 4. UAB, Birmingham, AL; 5. UTHSC, Houston, TX.*

Background: Uncontrolled blood pressure (BP) among individuals with hypertension is a risk factor for several conditions that lead to functional impairment. Having sustained BP control could avert nursing home admission by preventing these conditions. We determined the association between sustained systolic BP (SBP) control and nursing home admission.

Methods: We conducted an analysis of the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT) linked to Center for Medicare and Medicaid Services (CMS) claims. After excluding participants with <8 study visits with SBP measurements during a 48-month assessment period and those in a nursing home, the analytic cohort included 6,557 participants. Sustained SBP control was defined as <140 mm Hg at <50%, 50% to <75%, 75% to <100%, and 100% of study visits. Nursing home admission, defined as > 90 cumulative days in a facility without a break in care of more than 30 days, was determined using data from the Minimum Data Set. Multivariable adjusted hazard ratios (HR) were calculated for the association of sustained SBP control and nursing home admission.

Results: The mean age of participants at the start of follow-up was 73.8 (6.6) years and 44% were men. Nursing home admission occurred in 844 (13%) participants. Nursing home admission occurred in 16%, 14%, 8%, and 5% of participants with SBP control at <50%, 50 to <75%, 75% to <100% and 100% of visits, respectively. A graded association between greater SBP control and lower risk for nursing home admission was found (Table).

Conclusions: Sustained BP control at a greater percentage of visits was associated with a lower risk of nursing home admission. These findings suggest that sustaining SBP over time may be a strategy to prevent nursing home admission.

Incidence rates and multivariable adjusted hazard ratios (95% CI) for association between systolic blood pressure control and nursing home admission.

	Percentage of visits with SBP < 140 mm Hg			
	< 50% (n=1990)	≥50% to < 75% (n=1915)	≥75% to <100% (n=1788)	100% (n=864)
Incidence rate, per 100 PY (95% CI)	16.3 (14.3, 18.4)	14.1 (12.0, 16.0)	7.8 (5.5, 9.9)	5.3 (4.0, 7.7)
HR (95% CI)	1 (ref)	0.79 (0.66, 0.93)	0.70 (0.58, 0.84)	0.57 (0.44, 0.74)

HR adjusted for sex, race, education, smoking status, BMI, diabetes, hyperlipidemia, stroke, heart failure, dementia, and coronary heart disease

P3

Patterns of Informal Caregiving Among Older Adults with and without Dementia

T. Ali,[2] G. McAvay,[2] J. Monin,[1] T. Gill.[2] *1. School of Public Health, Yale University, New Haven, CT; 2. Geriatrics, Internal Medicine, Yale University School of Medicine, New Haven, CT.*

Background: The focus of most dementia caregiving has been on primary caregivers, while broader caregiving networks have been understudied. We evaluate *care network types* that simultaneously examine multiple informal caregivers with the aim to 1) identify common patterns of caregiving activities, intensity, and duration in caregiving networks for older Americans; and 2) examine differences in care network types by dementia status of the care recipient.

Methods: Care recipient (N=1458) data from the 2015 National Health and Aging Trends Study and corresponding informal caregiver (N=2146) data from the 2015 National Study of Caregiving were linked. We characterized caregiving along multiple dimensions with items including hours of care, regularity of care (regular versus irregular schedule), and ten specific caregiving activities (e.g., activities of daily living (ADLs), instrumental activities of daily living (IADLs), medical care, and personal care). These items were used to construct care network types in a latent class analysis framework. We used multinomial regression to examine whether the prevalence of care network types differed by dementia status of the care recipient.

Results: Five distinguishable care types were identified that varied in the hours of care provided, regularity of care, and specific types of care activities. The most prevalent care network type was (1) *low, irregular help with transportation* (29%), followed by (2) *irregular help with ADLs and IADLs* (23%), (3) *help with ADLs, IADLs, and medical care* (18%), and (4) *high, regular help with all activities* (16%). The least prevalent care network type was (5) *help*

with IADLs and medical care (13%). Informal caregivers of older adults with dementia had higher odds of being in care network types 3 (OR=2.4, 95% CI= 2.0, 2.8), 4 (OR=4.7, 95% CI=4.3, 5.1), and 5 (OR=3.2, 95% CI= 2.8, 4.9) that reflected more hours of regular care and a broader variety of activities compared to the reference care network type 1.

Conclusion: We identified five distinct care network types that varied by dementia status of the care recipient. Care network types can help identify dementia care recipients with unmet needs and caregivers who are overburdened by their caregiving responsibilities, and thus most in need of targeted interventions and support services.

P4 Student Presentation

Time to Benefit of Antihypertensive Medication for the Primary Prevention of Cardiovascular Events in Older Adults: A Survival Meta-analysis of Randomized Clinical Trials

L. Xie,[1] I. Stijacic Cenzer,[2] B. Nguyen,[2] S. Bauer,[2] S. Lee.[2]
1. The University of Arizona College of Medicine Tucson, Tucson, AZ; 2. University of California San Francisco, San Francisco, CA.

Background: Current guidelines recommend targeting interventions to those patients whose life expectancy is greater than the intervention's time to benefit (TTB). Our objective was to conduct a survival meta-analysis of randomized clinical trials of antihypertensive medications to determine the TTB for the prevention of a first major adverse cardiovascular event (MACE) in older adults.

Methods: Studies were identified from previously published Cochrane systematic reviews (2017 and 2019) and from www.clinicaltrials.gov (Jan 1, 2019 - Jun 1, 2020). We focused on large randomized trials (more than 500 patients) of antihypertensive medications for primary prevention focusing on older adults (mean age >65). Our primary outcome was time to absolute risk reduction thresholds (ARR= 0.005, 0.01 and 0.02) for first MACE.

Published Kaplan-Meier curves for the control and intervention groups in each study were used to fit Weibull curves. Markov Chain Monte Carlo methods were then applied to determine time to ARR thresholds in each study. Lastly, we used a random-effects model to estimate pooled times to ARR thresholds.

Results: Seven trials randomizing 16,550 older adults were identified. The mean age was 72.3 years old and the length of follow-up ranged from 2.5 years to 7 years. Our meta-analysis suggested that it would take 4.6 months (95%CI: 2.6,6.5) to avoid one MACE for 200 patients (ARR = 0.005) treated with any antihypertensive treatment. To prevent one MACE for 100 patients treated (ARR = 0.01), the time to benefit was 7.7 months (95%CI: 4.9,10.5), while the time to benefit to avoid one MACE for 50 patients treated (ARR = 0.02) was 13.8 months (95%CI: 9.5,18.1).

Conclusions: For older adults aged 65 and above without known cardiovascular disease, antihypertensive medications for 7.7 months prevented one MACE for 100 persons treated. Since antihypertensive medications can cause immediate orthostatic hypotension and falls, our results suggest that older adults with a life expectancy <7.7 months would be exposed to the immediate harms of antihypertensive treatment but less likely to benefit. Thus, antihypertensive treatment is most likely to benefit older adults with >7.7 month life expectancy.

Paper Session
PLENARY

Thursday, May 13
11:15 am – 12:00 pm

P5

Higher Angiotensin II type 1 receptor (AT_1R) levels and activity in the postmortem brains of older persons with Alzheimer's disease

C. Cosarderelioglu,[1,5] C. George,[2] R. Marx-Rattner,[1] Q. Xue,[1] J. Tian,[1] E. Oh,[1] L. Ferrucci,[3] D. Bennett,[4] J. Walston,[1] P. Abadir.[1]
1. Johns Hopkins University, Baltimore, MD; 2. Montefiore Medical Center, Bronx, NY; 3. National Institute on Aging, Baltimore, MD; 4. Rush University, Chicago, IL; 5. Ankara University, Ankara, Turkey.

Background: Alzheimer's disease (AD) is the most common cause of dementia. Although multiple potential etiologies have been proposed, no clear aging-related etiological mechanisms have been identified. Renin-angiotensin system (RAS) is a hormonal system that is implicated in blood pressure control and has been suggested as a potential contributor to the development of AD. Here, using postmortem frontal cortex brain samples of age- and sex-matched cognitively normal individuals (n=30) and AD patients (n=30), we sought to examine the brain-specific RAS (b-RAS) differences with AD and how these findings correlate with brain AD pathologies.

Methods: Samples were obtained from the Rush Memory and Aging Project. We measured angiotensinogen, renin, and ACE gene expression by qPCR and both gene expression and protein levels of Angiotensin II receptor subtype 1, 2, and 4 and their downstream signaling pathway (pERK, eNOS, and nNOS) by qPCR and Western blot. Brain cytokines and oxidative stress (OS) markers as well as average paired helical filaments-tau and β-amyloid load were used as specific markers of AD pathology.

Results: Our results demonstrate an increase in both gene and protein expression (2.47 folds p=.01, median 0.59 (range1.99) vs. 0.47 (1.95) p=.029, respectively) and signaling activity (0.35 (11.41) vs. 0.04 (1.84), p=.004) of AT_1R in AD. We have not observed any significant changes in other RAS components. Our data show that higher AT_1R levels correlate with OS (r=.301 p=.01) and β-amyloid load (r=.245 p=.040), while higher pERK levels negatively correlate with mitochondrial numbers (r=-239 p=.033) and positively correlate with total tangle (r=.413 p=.001) and amyloid (r=.208 p=.018) scores. Finally, mRNA, protein, and pERK levels of AT_1R were negatively correlated with global cognitive function (GCF) scores (r=-0.216 p=.05, r=-.258 p=.023, r=-.376 p=.002, respectively) and were associated with greater decline in GCF (r=.265 p=.022, r=.223 p=.045, respectively) in all subjects.

Conclusions: This study highlights molecular changes in b-RAS and offers insight into the association of these changes with brain pathology in AD.

P6

Life expectancy estimates using comorbidities and frailty to inform preventive care of older adults

N. Schoenborn, A. Blackford, C. Joshu, C. Boyd, R. Varadhan. *Johns Hopkins University, Baltimore, MD.*

Background: Long-term prognostication is important to inform preventive care in older adults. Age alone is an insufficient marker of prognosis and prediction indices incorporate comorbidities in addition to age. Frailty is another important factor in prognostication. We aimed to build on existing life expectancy predictions by incorporating both comorbidities and frailty.

Methods: Using the SEER-Medicare data, we identified a non-cancer cohort from a random 5% sample of Medicare beneficiaries. We included adults aged 66-95 who were continuously enrolled in fee-for-service Medicare from 1998-2014. Participants were followed for survival until December 31, 2015, death, or disenrollment. Comorbidity (none, low/medium, high comorbidity) and frailty categories (low and high frailty) were defined using established methods for claims. We estimated 5-and 10-year survival probabilities and median life expectancies by age, sex, comorbidity and frailty.

Results: Study cohort included 404,466 people (3,462,743 person-years), was mostly women (60.3%) and white (81.7%). Frailty scores in participants varied widely in the same comorbidity group. In Cox models, both comorbidity and frailty were independent predictors of mortality. Individuals with high comorbidity (HR 3.12, 95% CI 3.07-3.17) and low/medium comorbidity (HR 1.36, 95% CI 1.34-1.38) had higher risk of death than those with no comorbidities. Compared to low frailty, high frailty was associated with a higher risk of death (HR 1.83, 95% CI 1.79-1.87). Frailty changed prediction in ways relevant to preventive care (i.e. distinguishing <10 year versus >10 year life expectancy) in multiple subgroups (Table).

Conclusions: Comorbidities and frailty are significant and independent predictors of mortality over 10 years – an important threshold in clinical decision-making for older adults. Our prediction tables can aid clinicians' prognostication and discussion with patients, inform simulation models and population health management and research.

Table. Median life expectancies (years) and 95% CIs for select subgroups.

	No comorbidities, Low frailty	No comorbidities, High frailty	Low/med comorbidities, Low frailty	Low/med comorbidities, High frailty	High comorbidities, Low frailty	High comorbidities, High frailty
Male Age 70	Not reached (NR)	12.1 [10.0, NA]	14.6 [14.2, 15.1]	11.3 [9.9, NA]	10.6 [10.3, 11.0]	5.2 [4.9, 5.6]
Age 75	13.7 [13.5, 13.8]	9.0 [8.4, 11.0]	11.8 [11.6, 12.1]	9.5 [9.0, 10.6]	8.2 [8.0, 8.5]	5.6 [5.4, 6.0]
Age 80	10.2 [10.1, 10.4]	8.3 [7.9, 8.9]	8.9 [8.6, 9.2]	8.3 [7.9, 8.6]	6.8 [6.5, 7.0]	5.1 [5.0, 5.2]
Female Age 70	NR	15.8 [12.6, NA]	16.1 [15.7, NA]	13.8 [12.6, 15.9]	13.2 [12.8, 13.6]	7.8 [7.4, 8.3]
Age 75	15.5 [15.4, 15.6]	13.2 [12.7, 13.7]	13.1 [12.8, 13.3]	11.6 [11.1, 12.2]	10.4 [10.1, 10.7]	7.2 [7.0, 7.5]
Age 80	11.8 [11.7, 11.9]	10.5 [10.3, 10.7]	10.0 [9.1, 10.3]	9.1 [8.9, 9.3]	8.1 [7.8, 8.5]	6.0 [5.8, 6.1]

P7

Firearm injury and suicide prevention in older adults: Stakeholder perspectives on "firearm retirement"

L. C. Prater,[1] J. Simonetti,[5] C. Knoepke,[3] E. Polzer,[2] K. Nearing,[4] M. Betz.[2] *1. Firearm Injury and Policy Research Program, Harborview Injury Prevention & Research Center, Seattle, WA; 2. Department of Emergency Medicine, University of Colorado, Anschutz Medical Campus, Aurora, CO; 3. Cardiology, University of Colorado Anschutz Medical Campus, Aurora, CO; 4. Geriatrics, VA Eastern Colorado Health Care System, Aurora, CO; 5. MIRECC for Suicide Prevention, VA Rocky Mountain Network, Denver, CO.*

Background: Nearly 40% of older adults in the United States live in a home with a firearm. Older adults have a high prevalence of risk factors for unintentional firearm injury and suicide, such as cognitive decline and depression. This study sought to explore perspectives on whether, when, and how older adults plan to reduce firearm access as they age or experience physical or cognitive impairments.

Methods: We conducted focus groups with older adult firearms owners and semi-structured interviews with healthcare providers caring for older adults. Audio-recorded discussions were transcribed. Using a team-based, inductive and deductive approach, we used a codebook to identify preliminary themes and insights emerging within and across groups.

Results: From October 2020-January 2021, 16 older adults (63% male) participated in 3 virtual focus groups and 13 healthcare providers completed individual semi-structured interviews. Older adults responded positively to the concept of firearm retirement. While many had considered limiting their firearm access, most had not made concrete plans to do so. Participants identified specific tools that might help facilitate planning (e.g., firearm inventories). Healthcare providers compared firearm retirement to processes for initiating driving retirement or advance directives, stressed the importance of planning "early and often" as part of a longitudinal relationship with patients. Providers also acknowledged the value of involving care partners, particularly when a patient has cognitive impairment or when other household members may benefit from securing firearms.

Conclusion: The concept of firearm retirement is acceptable among older adults and their health care providers. The development of decision aids and other resources could draw from evidence-based models for driving retirement or advance directives.

Paper Session
GERIATRIC EDUCATION

Thursday, May 13
1:15 pm – 2:15 pm

P8

Advancing the future geriatrics workforce during the pandemic: a virtual interprofessional clinical experience

C. Murdock, M. Ross, T. Yu, J. C. Findley, F. Revere, J. Swails, C. Dyer, R. Jantea. *The University of Texas Health Science Center at Houston, Houston, TX.*

Background: The ability to train an interprofessional (IP) geriatrics workforce to provide team-based care was challenged during the COVID-19 pandemic. We created an innovative virtual IP clinical geriatrics experience for health profession students and evaluated its impact on learner self-rated competence at IP practice and geriatrics evaluation and management skills (GEMS).

Methods: 274 health profession students participated in fall 2020. Students completed pre-work including a Geriatrics 5Ms video and readings on IP teamwork, IP roles, and 5Ms-based IP blueprint for GEMS. In IP teams of 6-8, students reviewed a case of an older adult with geriatric syndromes undergoing a transition of care. They completed an IP team meeting virtually to develop a collaborative IP care plan using a worksheet guide. Then, they participated in a faculty-led debriefing. Pre- and post-activity, students self-rated ability in four IP practice GEMS (Likert 1=poor, 5=excellent). Post activity, they completed retrospective pre-post Interprofessional Collaborative Competency Attainment Scale-Revised (ICCAS-R; 20 items; Likert 1=poor, 5=excellent, 1 transitional item). We analyzed pre vs. post student ratings using unpaired t-tests.

Results: 257 students completed surveys (135 nursing, 92 medical, 30 social work). Confidence in ability increased for all IP geriatric skills (Table 1). Across all ICCAS items, mean rating of ability for IP skills improved post-intervention (3.2 vs. 4.0, p<.001). For the transitional item, 84% of students rated their ability to collaborate interprofessionally as somewhat or much better after the activity.

Conclusions: A virtual clinical IP geriatrics experience improved learner confidence in IP geriatrics skills and IP collaboration skills. This activity is a promising strategy for advancing interprofessional geriatrics workforce training during the pandemic.

Table 1. Students' self-rated ability at IP geriatric skills

Student self-rating of ability to:	Mean pre-activity rating (SD) n=257	Mean post-activity rating (SD) n=235	p-value
Participate in an IP team meeting about a patient	3.0 (1.0)	4.0 (0.9)	<0.001
Care of older adults with complex medical issues	2.6 (1.0)	3.7 (0.9)	<0.001
Identify geriatric issues	2.7 (1.0)	3.9 (0.8)	<0.001
Identify IP team members with geriatrics expertise	2.6 (1.0)	4.0 (0.8)	<0.001

P9 Student Presentation

A Novel Student-Led Telephone-Based Clinical Learning Program to Support Geriatric Patients

P. Lalchandani, A. Gulati, I. Auchus, J. Grandi, E. Clelland, P. Chen.
Geriatrics, University of California San Francisco, San Francisco, CA.

Background: Early clinical experiences help students develop patient-centered perspectives on healthcare and health inequities. Although telephone-based outreach is particularly beneficial when connecting with older adults who often have challenges accessing online platforms, early incorporation of telehealth communication skills in undergraduate medication education remains limited. We created a telephone-based clinical learning program to promote development of healthcare students' communication and health-coaching skills, and to address disparities faced by geriatric patients during the COVID-19 pandemic.

Methods: We utilized principles from workplace learning to design this program for patients of an academic geriatric primary care clinic. Students conducted three types of patient phone calls: screening calls to assess for unmet geriatric patient needs (e.g. lack of access to food, medication, or caregiving), social calls to address social isolation, and telehealth-training calls to help patients connect to video medical visits. To evaluate program outreach, we tracked call completion and outcomes with weekly student reports and EHR documentation. Students completed an anonymous post-program survey to capture progress towards educational objectives and their understanding of geriatric patient needs.

Results: Five medical student liaisons led 23 students in conducting screening calls for 335 patients over 13 weeks. Students engaged 30 patients in weekly social calls and assisted 25 patients in setting up video telehealth software, allowing 22 patients (88%) to access a video telehealth appointment with a physician within 2 months of teaching. Of 21 students (91%) who completed a post-program survey, most (n=18, 86%) felt this program provided meaningful clinical exposure, all felt comfortable interacting with patients by telephone, and 20 (95%) felt confident in their relationship-centered communication skills. Students reported improved knowledge about vulnerabilities in the geriatric population.

Conclusion: This telephone-based program effectively allowed students to support patients of a geriatric clinic and gain patient-centered communication skills. This program could be implemented broadly as a telemedicine learning experience for healthcare students to support community-dwelling geriatric patients.

P10

Shifting from In-Person to Virtual Programming to Provide Intergenerational Social Support for Patients with Dementia: The Virtual TimeOut@UCLA Program

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1. University of California Los Angeles David Geffen School of Medicine, Los Angeles, CA; 2. University of California Los Angeles, Los Angeles, CA; 3. Neurology and Medicine, Cedars-Sinai Medical Center, Los Angeles, CA.

Background: TimeOut@UCLA is an intergenerational program that recruits and mobilizes college student volunteers to provide weekly one-on-one social interaction sessions with older adults with Alzheimer's disease and related dementias (ADRD). We previously demonstrated that our in-person program alleviates loneliness among seniors, offers caregivers respite, and strengthens student interest and knowledge in aging. In response to the COVID-19 pandemic, we modified the delivery of our program to an innovative virtual format. The aim of this preliminary study was to evaluate the success of this transition.

Methods: Following focused training on aging and dementia, college students volunteered 1-2 times week for 10 week sessions. Each student was paired with a cognitively-impaired older adult based on shared interests and/or cultural/language backgrounds. Using Zoom as the virtual platform, students led seniors through online activities and engaged in conversation over about 60 minutes each session. The program was evaluated through virtual session auditing, qualitative outcome data in the form of student and caregiver interviews, and quantitative data in the form of student and caregiver surveys.

Results: Between March and December 2020, 41 students and 38 seniors participated in the program. Preliminary caregiver surveys indicated improved mood, focus, and quality of life for 100% of participants with dementia (N=10). Moreover, 100% of caretakers reported the most important benefit to be observing their loved ones enjoying conversation and the opportunity to relax and gain relief from the monotonous routine. The students (N=17) experienced a significant ($P < 0.001$) increase (31 points on a 170-point scale) on the Dementia Attitude Scale. More data will be presented from ongoing data collection.

Conclusion: Innovative interventions may address the unintended consequences of the Covid-19 mitigation measures. Virtual TimeOut@UCLA provides an innovative way to alleviate loneliness in older adults with ADRD through intergenerational interactions. Additionally, it provides a rewarding way for young adults to develop interest, knowledge, and skills to interact with cognitively-impaired older adults.

P11

Innovative educational approaches to house calls in the time of COVID-19

M. Robertson, M. Schuchman, J. Colburn. *Geriatric Medicine and Gerontology, Johns Hopkins Medicine, Baltimore, MD.*

Background

House calls are integral to teaching resident physicians about care of the homebound older adult. While the COVID-19 pandemic has shifted medical education to online forums it remains important to provide opportunities to build longitudinal primary care relationships and learn geriatric care in the home environment. In response to this challenge, the Johns Hopkins Home-based Medicine (JHOME) program adapted home visits to preserve safety and foster learning. Following 9 months of attempting different approaches to visits, we surveyed residents about these approaches.

Methods

A voluntary, anonymous survey was sent to 15 GIM residents. We aimed to understand the facilitators and barriers to learning in the home environment through the varied visit types including: preceptor in the home with the resident on video, resident in the home with the preceptor on video, resident observing a colleague lead a visit on video.

Results

All 15 residents responded to the survey. All residents reported that they had the opportunity to try out the 3 hybrid approaches to home visits. The majority of residents embraced the various hybrid approaches to home visits. The least popular approach was observing colleagues lead visits, with 5 residents finding this approach to be less useful. When asked to choose the favorite approach, more residents (58%) preferred being in-person while the preceptor was on video. That said, residents noted positives and negatives to all of the hybrid approaches (table 1).

Discussion

The COVID-19 pandemic has forced innovation in medical education. For house calls this created opportunities for direct observation and building autonomy for residents in the home setting. While we plan to increase the number of in-person visits with the easing of the pandemic, we hope that the benefits of the hybrid approaches may lead to innovations to care delivery that stick long-term. In particular, we plan to continue educational opportunities to allow residents to perform solo house calls for their longitudinal patients with a preceptor and possibly a colleague observing on video.

Table 1: Positives and negatives of different approaches to hybrid visits

	Positives	Negatives
Preceptor in home, resident on video	-Preceptor handles technology -Can observe new approaches to visit -Can see EMR -No need for personal transportation	-Hard to establish rapport -Difficulty hearing -Lack nuances of the home environment -No hands on physical exam
Resident in home, preceptor on video	-Autonomy, ownership -Direct observation by preceptor -Observing the home environment -Hands on physical exam	-Difficulty managing logistics alone -No one to corroborate assessment -Difficult to ask for feedback or questions in real time -Stressful minimizing COVID risk
Resident observing colleague lead visit on video	-Learning new tricks, styles and approaches to running a visit -Able to scribe for your colleague -Junior residents learning from senior residents	-Technology challenges -Worry too many providers on the video -Diminishing returns from a learning perspective

Paper Session
OPTIMIZING GERIATRIC CARE IN THE EMERGENCY DEPARTMENT

Thursday, May 13
3:45 pm – 4:45 pm

P12

The HEAR-VA Pilot Study: Hearing assistance provided to older adults in the emergency department

J. Chodosh,[1,2] K. S. Goldfeld,[4] B. Weinstein,[5] K. Radcliffe,[1,2] M. Burlingame,[1] V. Dickson,[6] C. R. Grudzen,[3,7] S. Sherman,[1,2] J. Smilowitz,[1,2] J. Blustein.[3,8] *1. VA NY Harbor Healthcare System, New York, NY; 2. Medicine, NYU Grossman School of Medicine, NY, NY; 3. Population Health, NYU Grossman School of Medicine, NY, NY; 4. Division of Biostatistics, Population Health, NYU Grossman School of Medicine, NY, NY; 5. Audiology, CUNY The Graduate Center, New York, NY; 6. Rory Meyers College of Nursing, New York University, NY, NY; 7. Ronald O. Perelman Department of Emergency Medicine, NYU Grossman School of Medicine, NY, NY; 8. Robert F. Wagner Graduate School of Public Service, New York University, NY, NY.*

Background: Poor communication is a barrier to care for people with hearing loss. We tested the benefit of providing a simple hearing assistance device during an emergency department (ED) visit for people who have self-reported difficulty hearing.

Methods: Randomized controlled pilot study in the ED of New York Harbor Manhattan Veterans Administration (VA) Medical Center. Participants were 133 Veterans age ≥ 60 years who either (a) said that they had difficulty hearing, or (b) scored 10 or greater (range 0-40) on the Hearing Handicap Inventory – Survey. Intervention subjects received a Personal Amplifier (PA; Williams Sound Pocketalker 2.0) for use during their ED visit. Subjects responded to 1) 6-item Hearing and Understanding Questionnaire (HUQ); 2) 3-item Care Transitions Measure; and 3) 3-item Patient Understanding of Discharge Information. Post-ED visit phone calls were made to assess ED returns.

Results: Of the 133 subjects, 98.3% were male; mean age was 76.4 years. Hearing handicap was substantial, with the mean HHI-S score = 19.2 (SD: 8.3). Across all HUQ items, intervention subjects reported better in-ED experience than controls. Seventy-six percent of intervention subjects versus 56% of controls agreed or strongly agreed that they were able to understand what was said without effort. Seventy-five percent of intervention subjects versus 36% of controls said clinicians provided them with an explanation about presenting problems. Three percent of intervention subjects had an ED revisit within three days compared to 9.0% controls (95% CI = -15.4 – 3.6).

Conclusion: Veterans reporting hearing difficulties had improved in-ED experiences with use of personal amplifiers, and more often reported understanding of presenting problems. PAs may be an important adjunct to older patient ED care.

P13

ED-to-Home Care Transitions for Community-Dwelling Older Adults: Results of a Randomized Controlled Trial

G. C. Jacobsohn,[1] C. Jones,[2] A. L. Cochran,[1] R. Green,[1] T. V. Caprio,[2] J. Cushman,[2] E. Dugoff,[3] A. Kind,[1] M. Lohmeier,[1] R. Mi,[1] M. Shah.[1] *1. University of Wisconsin-Madison School of Medicine and Public Health, Madison, WI; 2. University of Rochester Medical Center, Rochester, NY; 3. Berkeley Research Group LLC, Washington, DC.*

Background: Improving care transitions following ED visits is suggested to reduce adverse events in older adults (e.g., ED revisits, decreased function). The Care Transitions Intervention (CTI) improves hospital-to-home transitions but its effectiveness at improving post-ED outcomes is unknown. We tested the effectiveness of the CTI at reducing ED revisits in community-dwelling older adults.

Methods: We conducted a randomized controlled trial with ED patients age≥60 discharged home from one of three EDs. Intervention participants received a coach home visit 24-72 hours post-discharge, and 1-3 follow-up calls during the 30-day study period. The control group received usual care. We surveyed demographics, health status, and psychosocial data at baseline. Phone surveys assessed red flag knowledge (reasons to seek immediate care) and medication adherence. Healthcare utilization and comorbidities were abstracted from medical records. We used multivariate linear and logistic regressions for intent-to-treat (ITT) and per-protocol (PP) analyses.

Results: Participant characteristics (N=1756) were similar across control and intervention groups; mean age 72 (σ=8.6), 53% female. Of those randomized to the CTI, 84% completed the home visit. Overall, 12.4% of participants returned to the ED within 30 days. We found no treatment effects for ED revisits in ITT (OR 1.0, 95%CI 0.7-1.3) or PP (OR 0.9, 95%CI 0.7-1.2) analyses. Participants were significantly more likely to revisit if they had cognitive impairment (OR 2.1, 95%CI 1.3-3.6, $p<0.001$) or more comorbidities (OR 1.2, 95%CI 1.1-1.3, $p<0.05$). Those receiving the CTI were more likely to have outpatient follow-up in the week following discharge (OR 1.2, 95%CI 1.0-1.5, $p<0.05$) and recall at least one red flag from discharge instructions (OR 1.3, 95%CI 1.1-1.7, $p<0.05$).

Conclusion: The CTI did not reduce ED revisits within 30 days, but did increase targeted care transition behaviors (outpatient follow-up and red flag identification). Additional research is needed to explore how the CTI might benefit different patient populations (e.g., dementia, depression) following ED discharge, and whether *decreased* ED utilization should always be the desired outcome.

P14

Right Care, Right Place, Right Time, Right Team – Embedding Comprehensive Geriatric Assessment in the Emergency Department.

E. Hannon,[1] L. Martin,[2] M. Lyons,[3] M. Mulvihill,[1] N. O'Sullivan,[4] C. Deasy,[4] E. Ahern,[1] P. Gallagher,[1] K. James.[1] *1. Geriatric Medicine, Cork University Hospital, Cork, Ireland; 2. Physiotherapy, Cork University Hospital, Cork, Ireland; 3. Occupational Therapy, University College Cork, Cork, Ireland; 4. Emergency Medicine, Cork University Hospital, Cork, Ireland.*

Introduction

Increasing numbers of frail patients are presenting to our emergency departments (ED). The Irish National Clinical Program for Older People (NCPOP) recommends early comprehensive geriatric assessment (CGA) for all frail patients. This quality improvement (QI) initiative aimed to establish the Geriatric Emergency Multidisciplinary Service (GEMS) in ED.

Methods

We utilised a 'try-storm' model over a 3 day period to test the feasibility of this service. Patients aged over 75 years, presenting to ED and identified as frail were referred to an inter-professional

geriatric medicine team (physician, physical and occupational therapy) and underwent CGA. Data including patient demographics and outcome measures such as discharge destination, ED patient experience time (PET) and hospital length of stay were collected.

Results

This QI initiative include 117 patients. Hospital admission was avoided in 21% (n=25) and there was a 4% reduction in admission conversion rates (43% to 39%). The mean ED PET was reduced by 1.5 hours. 50% of patients reviewed are discharged on the same day and 68% are at home within 5 days. Based on these initial results, the team was awarded funding to continue this initiative. Over a 3 month period 417 patients were assessed, 50% of patients reviewed were discharged on the same day and 68% were at home within 5 days. Assessments resulted in 411 referrals to community based services for older people.

Conclusion

This QI initiative highlights the importance of inter-professional teams and CGA in the assessment of frail and older adults and has improved the care received by frail older adults within our ED. GEMS has achieved same day discharge in 50% of patients assessed which is in keeping with published literature in this field. Importantly, communication between hospital and community services has strengthened during this QI initiative ensuring safer transitions of care. Future directions for this initiative are to expand the inter-professional membership of our team and to reach a higher proportion of frail, older adults presenting to ED.

P15 Encore Presentation

Emergency Department Visits Among Older Adults during the COVID-19 Pandemic

S. Jain,[1] A. Janke,[2] K. Biese,[4] S. Schneider,[3] M. Rosenber,[3] U. Hwang,[2] A. K. Venkatesh.[2] *1. Geriatrics, Yale University School of Medicine, Fairfield, CT; 2. Emergency Medicine, Yale University School of Medicine, New Haven, CT; 3. American College of Emergency Physicians, Irving, TX; 4. University of North Carolina System, Chapel Hill, NC.*

Background: 2.4 million older adults have died during the COVID-19 pandemic. One-third of these deaths are not attributable to COVID-19 and a disproportionate number have occurred in care facilities. In parallel, a decline in emergency department (ED) visits has been noted. We sought to investigate whether older adults have accessed emergency care differently from their younger counterparts during this time.

Methods: We conducted an observational analysis of ED sites enrolled in the Clinical Emergency Department Registry (CEDR) maintained by the American College of Emergency Physicians (ACEP), from January 1st, 2019 through November 15th, 2020. We plotted daily ED visit counts for acute myocardial infarction (AMI), stroke, and sepsis by age categories. We calculated incident rate ratios (IRR), the ratio of daily incidence rates for ED visits in the early pandemic period (March 29 to April 25,2020) and post-early period (April 26 to November 15,2020) from Poisson regression models with pre-pandemic period as the reference category.

Results: Our sample included 164 EDs across 33 states. Visits declined for AMI (84 to 57 daily), stroke (65 to 49 daily), and sepsis (165 to 130 daily) in the early pandemic period. In the post-early period, those 75-84 and 85+ years had the smallest recovery in visit counts. For AMI, there were 18% fewer visits for those 75-84 years old and 21% fewer visits for those >85 years of age in the post-early period (IRR 0.82, 95% CI 0.76-0.89; IRR 0.79, 95% CI 0.72-0.87 respectively). For stroke, those between 75-84 years of age had 10% fewer visits and those older than 85 had 23% fewer visits compared to baseline (IRR 0.90, 95% CI 0.84-0.97; IRR 0.77, 95% CI 0.71-0.84 respectively). For sepsis, there were 21% and 22% fewer visits for the above age groups (IRR 0.79, 95% CI 0.74-0.84; IRR 0.78, 95% CI 0.72-0.83 respectively).

Conclusion: There has been a more pronounced and persistent decline in ED visits nationwide for emergent conditions among older adults compared to their younger counterparts. This is concerning given the greater prevalence and risk of poor outcomes for acute illness in this age group and may in part explain increased mortality among older adults during the pandemic.

Paper Session
HEALTH SERVICES & POLICY RESEARCH

Friday, May 14
10:00 am – 11:00 am

P16

Association between cancer screening and all-cause mortality in older adults

N. Schoenborn,[1] O. Sheehan,[1] D. Roth,[1] T. Cidav,[1] J. Huang,[1] S. Chung,[1] T. Zhang,[1] S. Lee,[2] C. Boyd.[1] *1. Johns Hopkins University, Baltimore, MD; 2. University of California San Francisco, San Francisco, CA.*

Background: Guidelines recommend against breast and prostate cancer screenings in older adults with <10 year life expectancy. One study using a claims-based algorithm showed that receipt of cancer screening itself was an independent predictor of lower mortality, suggesting that the algorithm may misclassify individuals when used to inform cancer screening. This finding was attributed to residual confounding since the algorithm did not account for functional status. We aimed to examine if cancer screening remains an independent predictor of mortality after accounting for both comorbidities and function.

Methods: Using linked 2004 Health and Retirement Study (HRS)-Medicare data, we constructed cohorts of 65+ years-old women and men eligible for breast/prostate cancer screening, respectively. Cox models estimated association between all-cause mortality over 10 years and receipt of screening mammogram/PSA (assessed using claims), adjusting for variables in a mortality prediction algorithm by Lee et al. that included age, sex, comorbidities, and functional status (assessed using HRS data). We also tested potential confounders of the association between cancer screening and mortality.

Results: Participants included 3257 women, 2085 men. Receipt of screening mammogram was associated with lower hazard of all-cause mortality after accounting for all Lee index variables (adjusted Hazard Ratio [aHR] 0.67, CI 0.60-0.74). A less strong association was found for screening PSA (aHR 0.88, CI 0.78-0.99). Potential confounders that were examined included education, income, self-reported health, marital status, geographic region, cognition, self-care (exercise, regular doctor/dentist visit, flu shot) and self-perceived life expectancy. None attenuated the association between screening and mortality except for cognition, which slightly attenuated aHR for mammogram from 0.67 to 0.73 and aHR for PSA from 0.88 to 0.92.

Conclusions: Existing mortality prediction algorithms may be missing important variables that are associated with cancer screening and long-term mortality. Relying solely on algorithms to determine cancer screening may misclassify individuals as having limited life expectancy and stop screening prematurely. While prediction algorithms may inform cancer screening discussions, it remains critical that screening decisions be individualized.

P17 Student Presentation

Most Common Advance Care Planning Barriers Reported by Older Adults Experiencing Systemic Patterns of Disadvantage

L. H. Phung,[1,2] D. E. Barnes,[5,6] A. M. Volow,[2] B. Li,[2] N. R. Shirsat,[2] R. Sudore.[4,3] *1. Duke University School of Medicine, San Francisco, CA; 2. Division of Geriatrics, Medicine, University of California San Francisco, San Francisco, CA; 3. Research Service, San Francisco VA Medical Center, San Francisco, CA; 4. Innovation and Implementation Center for Aging and Palliative Care (I-CAP), Division of Geriatrics, Medicine, University of California San Francisco, San Francisco, CA; 5. Psychiatry & Behavioral Sciences, University of California San Francisco, San Francisco, CA; 6. Epidemiology & Biostatistics, University of California San Francisco, San Francisco, CA.*

Background: Studies show low advance care planning (ACP) rates among people of color and individuals with limited health literacy. However, little research exists on the specific barriers faced by older adults who are vulnerable to systemic patterns of disadvantage.

Methods: We used baseline data from 1241 patients enrolled in two trials at safety-net San Francisco hospitals. Participants were asked in questionnaires about 18 ACP barriers. We report barrier frequencies among seven vulnerable groups (persons of color, born outside the US, Spanish-speaking, limited health literacy, low decision control preference, poor health, low social support) and used logistic regression, adjusting for all vulnerable variables, to assess the odds of reporting barriers among vulnerable versus non-vulnerable participants.

Results: The mean age of participants was 65 (±7.4), and 74% reported being a person of color. The most common barriers included discomfort thinking about ACP (62%), preference for leaving health to "God" (46%), feeling overwhelmed (43%), belief doctors already knew preferences (43%), and mistrust (38%). These barriers were reported more commonly among vulnerable vs. non-vulnerable groups, $p < 0.05$. After adjustment, odds of reporting these barriers remained significant for these characteristics: person of color (adjusted ratio [AOR] range 1.8-4.1), Spanish-speaking (AOR range 1.4-3.1), and limited health literacy (AOR range 1.3-3.4), $p < 0.05$.

Conclusion: Older adults vulnerable to systemic patterns of disadvantage are more likely to report several unique ACP barriers than non-vulnerable individuals (e.g., leaving health to "God," mistrust). Efforts to improve ACP should address these barriers to decrease health disparities in ACP.

P18

Preferred Clinician Communication About Deprescribing Among Older U.S. Adults

A. Green,[1] H. Aschmann,[2] C. Boyd,[1] N. Schoenborn.[1] *1. Johns Hopkins University, Baltimore, MD; 2. Universitat Zurich, Zurich, Switzerland.*

Background: How clinicians communicate with older adults about reducing or stopping unnecessary or potentially harmful medicines may affect acceptance of deprescribing. We examined older adults' preferences regarding different rationales a clinician may use to explain why a patient should stop such a medication.

Methods: Cross-sectional survey conducted from March-April 2020 using a probability-based online panel representative of US adults. The survey presented 2 hypothetical vignettes: 1) a statin being taken for primary prevention by an older adult with functional impairment and polypharmacy; and 2) a sedative-hypnotic (zolpidem) being taken by an older adult with good functional status. After each vignette, participants were asked to rate their preference for 7 different phrases a clinician may use to explain why they should reduce or stop the medication. The best-worst scaling method was used to quantify respondents' relative preferences.

Results: Of 1193 panel members ≥65 years invited to participate, 835 (70.0%) completed the survey. The mean (SD) age was 73 (6) years; 496 (59%) had ever taken a statin and 124 (15%) had ever taken a sedative-hypnotic. For both medicines, the most preferred phrase to explain deprescribing focused on the risk of side effects. For statins, this phrase was 5.8 times (95% CI, 5.3-6.3) more preferred than the least preferred option, which focused on the effort/burden involved in taking the medicine. Another less preferred phrase was "We should focus on how you feel now rather than thinking about things that might happen years down the road." For zolpidem, the phrase about side effects was 8.6 times (95% CI 7.9-9.5) more preferred over the least preferred option, "This medicine is unlikely to help you function." Another less preferred phrase focused on treating insomnia without medicine.

Conclusions: Among older adults, the most preferred rationale for deprescribing focused on risk of side effects. For statins, this was preferred over phrases referencing treatment burden or prioritizing current symptoms over long-term mortality benefits. For zolpidem, the rationale about side effects was preferred over phrases that mentioned the lack of functional benefits from sedative-hypnotics or treating insomnia without medicine. These results can directly inform clinical practice and improve communication around deprescribing in older adults.

P19

Using the electronic health record for assessing deficit accumulation, to pragmatically identify candidates for de-prescribing in type 2 diabetes mellitus

K. E. Callahan,[1] K. M. Lenoir,[1] C. O. Usoh,[2] J. Williamson,[1] A. Moses,[1] M. Hinely,[1] L. Y. Brown,[1] N. M. Pajewski.[1] *1. Center for Health Care Innovation, Wake Forest University School of Medicine, Winston-Salem, NC; 2. Endocrinology and Metabolism, Wake Forest University School of Medicine, Winston-Salem, NC.*

Background: New guidelines recommend less stringent glycemic goals for frail older adults with type 2 diabetes mellitus (T2DM). However, pragmatic and efficient approaches to identify candidates for de-intensification of T2DM regimens are lacking. Here we describe glycemic control patterns and medication use for older adults with T2DM, exploring variability by frailty, characterized by an automated electronic health record (EHR)-based frailty index.

Methods: Cross-sectional analysis of EHR data for patients 65 years or older with T2DM in an academic medical center-associated accountable care organization (Wake Forest Baptist Health) as of 11/1/2020. Frailty was determined based on a 54-item electronic Frailty Index (eFI). Intensive and very intensive glycemic control were defined as a glycosylated hemoglobin (HbA1c) level <7.5% or <6.5% on the most recent measure within the last 2 years. Higher-risk medication regimens were defined as an active prescription of insulin, sulfonylurea, or combination medications containing these.

Results: The cohort of 16973 patients with T2DM was 53.9% female, 77.8% white, with a mean age of 75.5 (SD=6.9) years. Based on the eFI, 9134 (53.8%) and 6218 (36.6%) were classified as pre-frail ($0.10<eFI\leq0.21$) or frail ($eFI>0.21$) respectively. In the entire cohort, 74.1% had a most recent HbA1c <7.5%, with 38.3% having a HbA1c <6.5%. While frailty status was not specifically associated with glycemic control (p=0.066), a large number of patients classified as frail based on the eFI had intensive or very intensive glycemic control (N=4544, 73.1%). In this population, 1408 (31%) were prescribed no T2DM medication, 1013 (22.3%) were prescribed metformin alone, and 1755 (38.6%) were on a higher-risk T2DM medication (sulfonylurea or insulin).

Conclusions: Despite guideline recommendations, overtreatment of T2DM remains prevalent, with approximately one-third of frail older adults on a higher risk T2DM medication. The eFI is a pragmatic and scalable tool to facilitate population health efforts with respect to de-prescribing in patients with T2DM.

Paper Session
THE PANDEMIC THROUGH A GERIATRIC LENS

Friday, May 14
12:15 pm – 1:15 pm

P20

Long-term Services and Support Staff Covid-19 Vaccine Hesitancy

L. S. Edelman,[2] C. Witt,[2] G. Towsley,[2] S. Woolsey,[3] M. Hansen,[4] A. Spangler,[1] J. Butler.[2] *1. Utah Health Care Association, Salt Lake City, UT; 2. University of Utah, Salt Lake City, UT; 3. Comagine Health, Salt Lake City, UT; 4. Homecare & Hospice Association of Utah, Salt Lake City, UT.*

Background:

The Covid-19 virus has disproportionately impacted long-term services and supports (LTSS) (e.g., nursing home, assisted living, home health, personal care, hospice, memory care) residents and staff, accounting for nearly 40% of Covid-19 deaths. The objectives of two state-wide surveys of LTSS administrators and staff were to: 1) assess vaccine acceptance amongst staff; 2) understand barriers contributing to vaccine hesitancy; and 3) identify opportunities for targeted vaccine education topics.

Methods:

We developed two surveys (one for administrators and one for staff) regarding LTSS Covid-19 vaccine-related attitudes. Questions were worded similarly to facilitate comparisons between surveys. Online survey links were dispersed the week before the vaccine was made available to members of the Utah Health Care Association, Homecare and Hospice Association of Utah, and the Utah Assisted Living Association. Descriptive analyses were performed using SPSS.

Results:

We received 155 administrator and 1,259 staff completed surveys. Administrators estimated 18.9% of staff had been diagnosed with Covid-19; 16.4% of staff reported a diagnosis. Administrators predicted 64.4% of staff would accept the vaccine while 51.5% and 26.2% of staff said they definitely or maybe would. Administrators predicted that nursing assistants/medical technicians (55.5%), dietary staff (27.7%) and licensed nurses (25.8%) would have greatest vaccine hesitancy; the same groups they would prioritize for the vaccine. Administrators and staff identified the same top-3 barriers to staff vaccination: 1) vaccine safety concerns; 2) concerns that vaccine development was rushed; 3) not wanting to feel poorly. Both identified the same priorities for vaccine education: 1) risks; 2) effectiveness and efficacy; 3) vaccines and immunity.

Conclusions:

To reduce morbidity and mortality from Covid-19 in LTSS settings, high COVID-19 vaccine uptake by staff is critical. Our findings indicate that wide-spread vaccine acceptance by staff may be difficult to achieve. Targeted education and monitoring are imperative to address identified barriers to vaccination and minimize COVID-19 spread in LTSS.

P21

"It isn't the same": Experiences of informal caregivers of homebound older adults during COVID-19

M. B. Humber,[1,3] M. Yefimova,[1] A. Lestoquoy,[1] R. B. Trivedi,[2,3] M. Sheffrin,[1] M. Martin.[1] *1. Stanford Medicine, Stanford, CA; 2. Department of Psychiatry and Behavioral Sciences, Stanford University, Stanford, CA; 3. VA Palo Alto Health Care System, Palo Alto, CA.*

Background: The COVID-19 pandemic has impacted caregiving due to shelter-in-place restrictions, economic changes, and service disruptions. Roles and experiences of informal caregivers (CGs) may vary based on CGs' place of residence relative to care recipients (CRs) and availability of services for CRs. We aimed to explore the impact of COVID-19 on caregiving experiences among CGs cohabitating with CRs and non-cohabitating CGs providing care at a distance to CRs in residential care.

Methods: We conducted semi-structured qualitative interviews from March to November 2020 with 6 cohabitating and 11 non-cohabitating CGs providing care to homebound older adults enrolled in a home-based primary care program. Interviews were designed to assess CG experiences with a focus on COVID-related changes. Transcripts were coded in NVivo. A matrix approach was used to identify patterns in CG experiences dependent on place of residence.

Results: Both types of CGs discussed concern for CR well-being while forced to stay inside, taking precautions when outside, and getting provisions safely. Concerns about reduced income and repercussions were frequently endorsed by cohabitating CGs but not non-cohabitating CGs. CGs of individuals with dementia in both groups stated that CRs did not understand the pandemic. Cohabitating CGs noted concerns about CRs' noncompliance with precautions and failing to understand restrictions on recreational outings, while non-cohabitating CGs reported that CRs were unaware of any changes. Non-cohabitating CGs also reported communication challenges with cognitively impaired CRs and perceived greater cognitive decline during the pandemic. While business closures and availability of services were a more prominent issue for cohabiting CGs due to their immediate daily care responsibilities, visitation policies and tech-enabled visit substitutions were more prominent for non-cohabitating CGs.

Conclusions: All CGs shared concerns about the impact of COVID-19 on their caregiving experience. However, sources of concerns varied based on cohabitation. Our pilot suggests that clinical interventions and policies should address and support the unique needs of CGs based on place of residence relative to CR.

P22 Student Presentation

Older Adults' Access to Primary Care During the 1st Wave of the COVID-19 Pandemic: Gender and Ethnic Disparities in Telemedicine

Y. Zhou, K. Schultz, K. Ryskina, R. Brown. *University of Pennsylvania Perelman School of Medicine, Philadelphia, PA.*

Early in the COVID-19 pandemic in the US, primary care practices had to rapidly adopt telemedicine as an alternative to in-person visits. Little is known about whether access to telemedicine versus in-person visits was equitable, especially among historically underserved patients, nor about potential health consequences of differing visit types.

We conducted a retrospective analysis of 42923 patients aged 50 or older treated at 32 primary care clinics affiliated with a large health system in the Mid-Atlantic from 3/1/2020 to 5/31/2020. Patients were classified in two groups – telemedicine vs. in-person – based on the first encounter during the study interval and followed for 14 days. We examined patient age, gender, race, ethnicity, and comorbidities using the Charlson Comorbidity Index. We assessed odds of hospitalization for ambulatory care sensitive conditions (ACSCs) and all-cause hospitalizations during the 14 days after the visit using multivariable logistic regression. The odds of hospitalization was adjusted for age, gender, race, ethnicity, comorbidity, and week of study period (to account for time trends).

Mean age was 67 years (SD=11), 61% were female, 62% white, 29% Black, and 3% Hispanic. Overall, 69% of patients were seen by telemedicine and 2% were hospitalized. Hispanic patients had lower odds of using telemedicine than non-Hispanic patients (OR=0.77; 95% CI=0.64-0.91; p=0.03), and females had higher odds of telemedicine use than males (OR=1.19; 95% CI=1.13-1.26; p<0.01). Age and race were not significantly associated with visit type. Compared to

patients in the in-person visit group, patients in the telemedicine group had lower odds of ACSC (OR=0.81; 95% CI=0.67-0.97; p=0.03) and all-cause hospitalization (OR=0.75; 95% CI=0.63-0.89; p<0.01) in the 14 days after the visit.

Among older patients, individuals who were Hispanic or male had lower odds of accessing primary care via telemedicine. Notably, rates of telemedicine use did not differ between older and younger patients nor between non-white and white patients. Patients seen via telemedicine had lower odds of risk-adjusted hospitalization. This finding may be explained by unobserved differences in case mix between the two groups (e.g., patients and practices may triage higher-risk cases to be seen in-person) and should be explored in future studies.

P23 Student Presentation

Geriatric Antibody Response to COVID-19

J. J. Moore,[2] T. Groves,[2] A. Ashcraft,[1] S. Assadzandi,[1] C. Shrader.[1]
1. Family Medicine, West Virginia University, Morgantown, WV;
2. West Virginia University School of Medicine, Morgantown, WV.

Background: Because SARS-CoV-2 was a novel virus, little was known how the human immune system would respond with respect to antibody production and maintenance to provide protection. This study analyzed IgG antibody response in geriatric residents of a long-term care facility (LTCF) 4 weeks after initial infection, 3 months post infection, and 6 months post infection. We hypothesized the majority of residents would produce and maintain IgG antibodies for 6 months.

Methods: All residents underwent blood collection for antibody serology testing (IgG and IgM) four weeks after testing PCR positive for SARS-CoV-2. If the initial antibody test was positive, the resident had repeat testing 3 and 6 months later. Demographic factors (age, race/ethnicity, and sex), medical conditions, and medications were analyzed. Symptoms were grouped into asymptomatic, mild to moderate, or severe.

Results: Forty residents tested PCR positive for COVID-19. Initially only 1 of the 40 did not have a detectable IgG response. Nine patients also had IgG positivity but were PCR negative. Only chronic kidney disease and use of an ACE inhibitor was significantly associated with non-response in initial antibody testing. Three months later 35 of the remaining 38 participants maintained an antibody response while 3 (8%) lost response. At the 6-month mark, 23 of the remaining 31 maintained an antibody response, while 8 (26%) lost antibodies. No significant associations between any factor and maintenance or loss of antibodies at 3 or 6 months. A total of 18 patients were lost to the study due to either deaths, refusal, or discharge.

Conclusion: Despite an average age of 84 years and 7 co-morbidities, the majority of these residents maintained an antibody response for at least 6 months. These results imply that a vaccine may produce similar results and therefore provide protection to the majority of individuals including the elderly for at least 6 months. Twenty-four percent did lose their antibodies within 6 months, however, and measures to protect these individuals will still need to be in place.

Paper Session
CLIN-STAR

Friday, May 14
2:45 pm – 3:45 pm

P24

Prolonged Use of Gabapentin After Surgery in Older Adults

T. Bongiovanni,[1] S. Gan,[2] E. Finlayson,[1] J. Harrison,[2] J. Boscardin,[2] M. Steinman.[2] *1. Surgery, University of California San Francisco, San Francisco, CA; 2. University of California San Francisco, San Francisco, CA.*

Background

Surgeons have made substantial efforts to decrease postoperative opioid prescribing, in large part because it has been shown to lead to long-term use. These efforts have included a nationwide shift to adopt non-opioid pain medication including gabapentin. Like opioids, gabapentin may be continued long-term, leading to an increased risk of altered mental status, dizziness, drowsiness and renal dysfunction in older adults. Further, prolonged use contributes to polypharmacy, which in itself leads to increased adverse events and hospitalizations. However, little is known about postoperative prescribing of gabapentin, nor how often this prescribing leads to prolonged use.

Methods

We merged Medicare Carrier, MedPAR and Outpatient Files with Medicare Part D for 2017-2018, using a 5% Medicare sample. We included patients >65 years old without prior gabapentin use who underwent 15 of the most common non-cataract surgical procedures performed in older adults. Any fill for gabapentin 7 days before until 7 days after surgery was considered a discharge prescription. We excluded patients whose discharge disposition was hospice or death. The primary outcome was prolonged use of gabapentin in the postoperative period, defined as a prescription being filled >90 days after discharge.

Results

We had 46,497 patients in our cohort. Of these, the mean age was 74 years old and 58% were women. The most common two procedures were total hip (12%) and total knee (41%) replacements. Of this cohort, 12% had prior gabapentin use and were not evaluated for prolonged use. Overall, 4% of patients had a *new* prescription for gabapentin after surgery. Among patients with new prescriptions, 20% were still receiving refills for gabapentin at 90+ days after surgery. Those who had prolonged use were more likely to be older (p<0.01), women (p<0.01), have concurrent opioid use (p<0.01), have a higher Charlson score (p<0.01) and have undergone emergency surgery (p<0.01).

Conclusions

While a small percentage of older adults fill a prescription for gabapentin in the postoperative period, one-fifth of those are still filling a prescription >90 days after surgery. Robust strategies are needed to prevent short-term postoperative use of gabapentin in older adults from leading to indefinite use especially given patients with prolonged use are more likely to be older with more comorbidities.

P25 Resident Presentation

High risk of complications after a "low risk" procedure: Nursing home residents at increased risk of complications and mortality after hemorrhoid surgery

A. Colley,[2] E. Finlayson,[2] S. Zhao,[1] J. Boscardin,[3] K. Covinsky,[4] A. M. Suskind.[1] *1. Urology, UCSF, San Francisco, CA; 2. Surgery, University of California San Francisco, San Francisco, CA; 3. Biostatistics, University of California San Francisco, San Francisco, CA; 4. Geriatrics, University of California San Francisco, San Francisco, CA.*

Background

Symptomatic hemorrhoids are a common problem in older adults that can significantly negatively impact health related quality of life, and is often treated surgically when more conservative measures fail. However, there is a paucity of data on outcomes in older and frail older adults undergoing hemorrhoid surgery.

Methods

This retrospective cohort study evaluates patients ≥ 65 years of age undergoing hemorrhoid surgery between 2014 and 2016 using Medicare claims and the Minimum Data Set for Nursing Home Residents. Long-stay nursing home residents were propensity score matched (1:3) to community dwelling older adults based on age, sex, race, and Charleston Score. Generalized Estimating Equation models were created to determine the relative risk (RR) of 30-day complications and 1-year mortality. Changes in fecal continence status post operatively were evaluated in a subset of nursing home residents.

Results

There were a total of 3664 subjects (916 nursing home residents and 2748 matched community-dwelling older adults) who underwent hemorrhoid surgery and were included in our analyses. Nursing home residents were at a significantly increased risk for 30-day complications [53% v. 33%, RR 1.59 (95% CI 1.46 – 1.72), $p < 0.001$] and 1-year mortality [25% v. 16%, RR 1.54 (95% CI 1.34 – 1.78), $p < 0.001$]. Among 460 nursing home residents, 87% demonstrated the same or worsening of their fecal incontinence in the year following hemorrhoid surgery.

Discussion

Despite hemorrhoid surgery being a relatively "minor" procedure, this study demonstrates high rates of 30-day complications and 1-year mortality among all older adults (yet significantly worse among nursing home residents), and high rates of worsening fecal incontinence post-operatively among a subset of nursing home residents. Ultimately, primary care providers and surgeons should strongly consider the potential harms of surgery among older and frail older adults considering hemorrhoid surgery.

P26

Changes in older adults' life-space mobility during lung cancer treatment

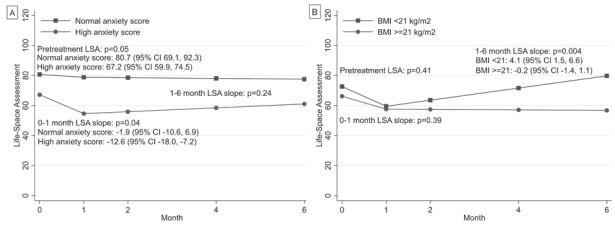
M. L. Wong,[1] Y. Shi,[4] C. Miaskowski,[1] J. Boscardin,[4] H. J. Cohen,[2] A. K. Smith,[4] V. Lam,[1] C. J. Presley,[3] G. Williams,[5] L. C. Walter.[4] *1. UCSF, San Francisco, CA; 2. Duke University, Durham, NC; 3. The Ohio State University, Columbus, OH; 4. UCSF & SFVAMC, San Francisco, CA; 5. University of Alabama at Birmingham, Birmingham, AL.*

Background. Maintenance of function during cancer treatment is important to older adults. Characteristics associated with pretreatment life-space mobility (which captures both physical ability and participation in society) and changes during lung cancer treatment remain unknown.

Methods. This multisite cohort study enrolled adults age ≥65 with advanced non-small cell lung cancer starting palliative chemo-, immuno-, and/or targeted therapy. Patients completed geriatric assessments including Life-Space Assessment (LSA) pretreatment and at 1, 2, 4, and 6 months. LSA scores range from 0-120 (greater mobility); LSA <60 is homebound and a 5-point change is clinically meaningful. We conducted mixed effects models to identify characteristics associated with pretreatment LSA score and change from 0-1 and 1-6 months.

Results. Among 93 patients, median age was 73 (range 65-94). Participants were diverse (65% White, 25% Asian, 5% Black, 5% other). Mean pretreatment LSA score was 67; LSA declined 10 points (95% CI -14, -5.8) from 0-1 month and remained stable from 1-6 months (slope 0.6, 95% CI -0.5, 1.8). Lower pretreatment LSA score was associated with Asian race, lower education, prior smoking, non-adenocarcinoma histology, anemia, poor performance status, ADL and IADL dependence, abnormal Timed Up and Go and Short Physical Performance Battery, ≥3 comorbidities, depression, high morning fatigue, and pain. LSA decline from 0-1 month was greater among patients with high anxiety (Fig A). LSA improvement from 1-6 months was associated with pretreatment BMI <21 kg/m2 (Fig B).

Conclusions. Older adults with lung cancer have low pretreatment life-space with many becoming homebound during treatment. LSA decline is particularly steep among patients with high anxiety. LSA improvement among patients with low pretreatment BMI was unexpected and warrants further study.



P27

Decisional Regret Among Older Adults Undergoing Corrective Surgery for Adult Spinal Deformity: A Single Institutional Study

O. ADOGWA,[1] J. Caruso,[1] C. Eldridge,[1] R. Singh,[1] S. Chilakapati,[1] P. Deme,[1] S. Stutzman,[1] S. Aoun,[1] A. Naik,[2] C. Bagley,[1] U. Makris.[3] *1. Neurological Surgery, The University of Texas Southwestern Medical Center, Dallas, TX; 2. Internal medicine, Baylor College of Medicine, Houston, TX; 3. Internal medicine, The University of Texas Southwestern Medical Center Medical School, Dallas, TX.*

BACKGROUND: Among older adults (≥ 65 years old), adult spinal deformity(ASD) is a leading cause of disability, with a prevalence of 60%-70%. Referral for deformity correction is common despite the high postoperative complication rates. The aim of this study is to investigate the prevalence of decisional regret and factors associated with medium/high decisional regret among older adults undergoing surgery for ASD.

METHODS: Older adults with ASD who underwent complex spinal surgery at a quaternary medical center from January 2016 to March 2019, were enrolled in this study. Patients were categorized into medium/high or low-decisional regret groups based on their responses to the Ottawa decision regret questionnaire. Factors (demographic, surgical and patient reported outcomes) potentially associated with high decisional regret were analyzed by multivariate logistic regression model.

RESULTS: A total of 155 patients (mean [SD] age, 69.5[3.20] years; 33.3% men) met the study inclusion criteria. Of the 155 patients, 91 consented to participate (response rate, 59%) and there were no significant differences between groups. Overall, 80% agreed that having surgery was the right decision for them, and 77% would make the same choice in future. A total of 21% regretted the choice that they made, and 21% responded that surgery caused them harm. There were no differences between medium/high and low decisional regret groups

in baseline demographics, comorbidities, or invasiveness of surgery. In a multivariate regression model that includes gender, depression, ASA score, invasiveness of surgery, and presence of a postoperative complication, older adults with pre-operative depression had a 4.0 fold increased odds of medium/high-decisional regret (p=0.04).

CONCLUSION AND RELEVANCE: While the majority of older adults were satisfied with their decision, one-in-five older adults regret their decision to undergo surgery. Preoperative depression was associated with medium/high decisional regret. Understanding patient-level attributes associated with regret may aid identify patients who may benefit from more nuanced communication about goal setting.

Paper Session
PREVENTING FALLS, FRACTURES, AND OTHER BAD OUTCOMES ACROSS THE HEALTHCARE CONTINUUM

Saturday, May 15
11:00 am – 12:00 pm

P28 Encore Presentation

Implementing a Geriatric Fracture Program in a Mixed Practice Environment Reduces Total Cost and Length of Stay

S. L. Rosen,[1,3] C. Lin,[2] K. Breda,[2] J. Black,[1] a. chiang,[2] J. Lee,[2] B. Rosen.[2] *1. Department of Medicine, Cedars-Sinai Medical Center, Los Angeles, CA; 2. Cedars-Sinai Medical Center, Los Angeles, CA; 3. University of California Los Angeles, Los Angeles, CA.*

Background: We introduced the Geriatric Fracture Program (GFP) in July 2018, seeking to establish a protocol-driven model to provide evidence-based treatment for geriatric fracture patients. This analysis evaluated one-year outcomes of the impact of the GFP on time-to-surgery (TTS), length of stay (LOS) and direct costs. **Methods:** GFP uses an original combination of multidisciplinary education, evidence-based clinical protocols, documentation tools and geriatric-centered goals of care. A multidisciplinary team was created by adding a geriatric Nurse Practitioner (NP) and consulting geriatrician, who provided training for hospitalist physicians and nurses on a dedicated inpatient orthopaedic unit. Patient enrollment began July 1, 2018 and continued through June 30, 2019. Patients fell into one of two cohorts: GFP and non-GFP (non-GFP patients received standard care). **Results:** 564 operative and nonoperative fractures in patients over 65 were prospectively followed with 153 (27%) enrolled in GFP, and 411 (73%) admitted to other hospitalists or their primary care provider (non-GFP). There were no demographic differences between cohorts in terms of age (83 v 83, p = 0.35) and sex (73% female v 73% female, p = 0.91). There was no statistically significant difference in the distribution of ASA scores between the GFP and non-GFP cohorts (ASA 3 or 4, 60% v 65%, p=0.457). There were a total of 285 (51%) hip fractures, 137 (24%) other lower extremity and pelvis fractures, 36 (6%) periprosthetic fractures, and 106 (19%) upper extremity fractures. **Mean total costs were significantly lower in the GFP group ($25,323 v $29085, p = 0.022).** There were no differences in 30-day readmission rates between groups (2.6% v 1.7%, p = 0.5). **Operative GFP patients had a significantly shorter median LOS of 4 days, compared to 5 days in unenrolled patients (P < 0.001).** However, there was no statistical difference in TTS in the GFP group (21.5 hours v 25 hours, p = 0.066). **Conclusion:** The Cedars-Sinai GFP program demonstrates success of multidisciplinary team management with participants trained in best practice for geriatric perioperative care model to decrease length of stay and direct costs, in a complex pluralistic health system.

P29 Student Presentation

Fall Prevention Among Veterans in a Skilled Nursing Facility

K. Donohue,[2] K. Han,[2] J. Gottlieb,[2] B. Nguyen,[2] F. Ojute,[2] D. Yip,[2] M. Yukawa.[1] *1. Geriatric, University of California San Francisco, Corte Madera, CA; 2. University of California San Francisco, San Francisco, CA.*

Background: In skilled nursing facilities (SNF), 50-70% of residents fall per year. SNF residents with dementia are more prone to fall, with an annual incidence of 60%. The Community Living Center (CLC) at the San Francisco Veterans Affairs Medical Center (SFVAMC), reported annual fall rate of 50%, compared to the national VA fall rate of 42%. Our goal was to reduce the rate of fall by 20% compared to fiscal year 2019.

Methods: We conducted process mapping with CLC interdisciplinary team members to identify barriers to fall prevention. The barriers included staff, patient population-specific challenges, environmental obstacles, and documentation, communication, and care protocol. Studies have shown that multi-pronged approaches yield the best results. We implemented 3 interventions: fall education, purposeful huddles, and toilet seat risers. Physical therapists and occupational therapists stated that low toilet seats were fall risk for Veterans.

Results: We partnered with the CLC's nurse educator to adapt the "5 P's Proactive Patient Rounding" education tool as a pocket card for the CLC nursing staff. By end of May 2020, all CLC nurses were educated in these 5 P's and fall prevention. Watch List Huddle was started in January 2020, to discussed care plans for residents who nurses were concerned about. Every resident who fell were discussed during these rounds which met three times a week. Lastly, toilet seat risers were placed in each bathroom in July 2020. Implementation of our interventions lead to 40% decrease in the average number of falls.

Conclusion: Re-training in fall prevention, improving communication and care plan after fall and raising the toilet seats significantly reduce the rate of falls by 40%. This result was much larger than our goal 20% reduction. An increase in nursing staff hiring and a decreased census within the CLC due to COVID-19 quarantine may have contributed to better than expected outcome.

P30

Analyzing a QI Expansion of Opioid Administration Practices on Adult Inpatient Medicine Units

R. Spear,[1] M. Doyle,[2] T. E. Murphy,[2,3] A. Rink,[2] B. wu,[2] R. A. Marottoli.[2,3] *1. Maine-Dartmouth Family Medicine Residency, Augusta, ME; 2. Yale University School of Medicine, New Haven, CT; 3. VA Connecticut Healthcare System, West Haven, CT.*

Background: Ackerman et al. described a quality improvement (QI) pilot to shift the opioid prescribing standard on an inpatient medicine unit from intravenous (IV) opioids to subcutaneous opioids. They observed a decrease in average daily milligram morphine equivalents (MMEs) administered without significant increase in average pain scores. We now describe the expansion of this prescribing standard to all inpatient medicine units. The objective of this study is to examine if a similar decrease in MMEs without a significant increase in average pain scores was observed following the QI expansion

Methods: The QI expansion included electronic education for providers and discussions at huddle that empowered nurses to speak up for the new standard of care for opioid administration. We gathered data on opioids prescribed and average pain scores for admissions with 1 or more days on a qualifying medical unit in 6 months prior to or after QI expansion. Outcomes included the proportion of MMEs administered IV and the average pain score for the visit. These were assessed for the full sample and a subsample with at least one pain score documented. To determine if there were differences in these outcomes before and after QI expansion we ran negative binomial models for each outcome with a dichotomous intervention variable (pre/post) with race, gender and age as predictors. Further analysis by age is planned.

Results: Comparison with pre-intervention data showed a decrease post-intervention in both average daily IV MMEs (1.84 v 0.58 p=<0.0001) and average daily total MMEs (6.71 v 5.78 p=0.0027). We also found a significant decrease for both average daily IV MMEs and daily total MMEs in the subsample of patients with no significant difference in pain scores (2.74 v 2.73 p=0.74). Finally, the proportion of MMEs administered by IV decreased from (0.3 v 0.12 p=<0.0001) in the full sample.

Conclusions: We observed a decrease in IV MMEs administered each day as well as the proportion of MMEs administered that were IV. The decrease in IV MMEs is not explained fully by the transition of dosing routes, as there was an observed decrease in average daily MMEs. This difference was observed without an increase in average daily pain scores.

P31 Encore Presentation

Initial Results from OPTIMIZE: A Pragmatic Deprescribing Trial in Primary Care for Older Adults with Cognitive Impairment and Multiple Chronic Conditions

A. Green,[1] C. Boyd,[1] S. Shetterly,[2] M. L. Drace,[2] J. Norton,[1] E. Bayliss.[2] *1. Johns Hopkins University, Baltimore, MD; 2. Kaiser Permanente Institute for Health Research, Aurora, CO.*

Background: Patients with cognitive impairment or dementia and multiple chronic conditions (MCC) are at increased risk for polypharmacy, use of potentially inappropriate medications (PIM), treatment burden and adverse drug events. Deprescribing may improve outcomes for these patients. However, optimal approaches to deprescribing in primary care are not known.

Methods: Pragmatic, cluster randomized trial at 9 intervention and 9 control primary care clinics in a not-for-profit integrated delivery system. Participants were ≥65 with dementia or mild cognitive impairment (MCI) plus ≥1 other chronic condition taking ≥5 chronic medications, and primary care clinicians. The intervention consisted of a brochure and short survey sent to patients and caregivers before a primary care visit to prepare them for conversations about deprescribing; and monthly tip sheets about deprescribing for clinicians. Primary outcomes were the number of chronic medications and proportion with any PIM at 12 months.

Results: 10,178 patients had a primary care visit during the 11-month study period (4,929 intervention; 5,249 control). Of these, 20% received (or were eligible for) mailings. Results are reported for the 1,409 intervention patients and 1,548 control patients who had ≥180 days of follow-up after mailings. In both groups at baseline, mean age was 80, mean number of chronic conditions was 8, mean number of chronic medications was 7, and approximately 30% took ≥1 PIM. In adjusted linear regression analyses, chronic medication counts declined from 6.6 to 6.5 (Δ=0.12) in the intervention group and remained the same (6.7; Δ=0.01) in the control group (time*group p=0.02). The risk ratio for proportion of patients with ≥1 PIM over time was 0.81 in the intervention group and 0.90 in the control group (time*group p=0.02).

Conclusions: Combining patient and caregiver education and activation with longitudinal clinician education about deprescribing has the potential to decrease chronic medication burden and PIM use in patients with dementia or MCI plus MCC.

Paper Session
UNDERSTANDING THE HEALTH IMPACT OF GERIATRIC SYNDROMES

Saturday, May 15
2:00 pm – 3:00 pm

P32 Encore Presentation

Comparison of Frailty Index to CURB-65 and PSI in Predicting Mortality and Functional Outcome after Hospitalization with Pneumonia: A Prospective Cohort Study

C. Park,[2] W. Kim,[2] E. Lee,[2] J. Kim,[3] D. Kim.[1] *1. Hinda and Arthur Marcus Institute for Aging Research, Boston, MA; 2. Korea University, Seongbuk-gu, Korea (the Republic of); 3. CHA Bundang Medical Center, Seongnam, Korea (the Republic of).*

Background: Pneumonia is a leading cause of death and hospitalization in older adults. Pneumonia severity measures, such as CURB-65 and Pneumonia Severity Index (PSI), are used to identify patients at elevated risk for death who require a higher level of care. However, these measures do not consider frailty, which is a prevalent risk factor for adverse outcomes in older adults. This study aimed to determine whether a frailty index (FI) can improve prediction of poor recovery after hospitalization for pneumonia, compared with pneumonia severity measures.

Methods: A prospective cohort study enrolled 200 patients 65 years or older who were hospitalized with pneumonia in Seoul, Korea, between September 2019 and August 2020. A 50-item deficit accumulation FI (range: 0-1; higher values indicate greater frailty), CURB-65 (range: 0-5), and PSI (range: 0-395) were measured. The primary outcome was death or functional decline within 30 days, defined as worsening abilities to perform 21 daily activities and physical tasks. The predictive ability for the primary outcome was compared in C statistics.

Results: Of 200 patients, we excluded 35 patients who had the maximum level of disability on admission. The study population had a median age of 79 (interquartile range [IQR], 74-85) years, 75 (37.3%) female, and 38 (18.9%) patients admitted from a nursing home. Among 165 patients at risk for functional decline, 22 (13.3%) died and 92 (55.8%) experienced functional decline. Patients who had the primary outcome had higher FI (median, 0.28 vs 0.15; p<0.001), CURB-65 (median, 2 vs 2; p<0.001), and PSI (median, 131 vs 109; p<0.001). C statistics (95% confidence interval) for the primary outcome were 0.69 (0.61-0.78) for FI; 0.55 (0.45-0.65) for CURB-65; and 0.69 (0.61-0.78) for PSI (p=0.001 for comparison). C statistics improved considerably when the FI was added to CURB-65 (0.54 vs 0.73; p<0.001), but modestly when the FI was added to PSI (0.69 vs 0.73; p=0.162).

Conclusion: More than half of older patients hospitalized for pneumonia died or did not recover within 1 month. Adding frailty to an existing pneumonia severity measure improves identification of older patients at high risk for death or functional decline, who require careful post-acute care management.

P33

Impaired Standing Balance Predicts 29-Year Mortality in Older Japanese-American Men: The Kuakini Honolulu Heart Program

K. Hasebe,[1] R. Chen,[2] B. Willcox,[1,2] S. Ahsan,[1] L. Okamoto,[1] C. Takenaka,[1] B. Tamura,[1] A. Wen,[1] K. Masaki.[1,2] *1. Geriatric Medicine, University of Hawai'i at Manoa, Honolulu, HI; 2. Department of Research, Kuakini Medical Center, Honolulu, HI.*

Introduction: Physical performance measures such as gait speed, timed chair stand, handgrip strength and balance have been studied as predictors of mortality. Studies of the association between balance and mortality have had mixed results. We studied whether balance was a predictor of mortality in a population of older Japanese-American men.

Methods: The Kuakini Honolulu Heart Program is a prospective population-based study of cardiovascular diseases in Japanese-American men that started in 1965. At exam 4 (1991-93), physical performance was measured in 3,741 men ages 71-93 years. Balance measures included 10-second side-by-side, semi-tandem and tandem stands. Subjects were divided into three groups of standing balance: normal (able to keep tandem position for 10 seconds, 74.76%), slightly impaired (able to keep tandem position for 1-9 seconds, 17.55%) and very impaired balance group (unable to stand in tandem position, 7.69%). Participants were followed for all-cause mortality for up to 29 years, through December 2019. After excluding men living in care homes or nursing homes, our analytic sample included 3,613 community-dwelling subjects.

Results: Age-adjusted mortality rates per 1,000 person-years follow-up increased significantly by standing balance groups, from 92.58 in the normal, 104.21 in the slightly impaired, to 162.67 in the very impaired balance groups, p<0.0001. Cox regression found an increased risk of mortality in the slightly impaired group (RR=1.37, 95%CI=1.25-1.49, p<0.0001) and very impaired group (RR=2.99, 95%CI=2.99, p<0.0001) respectively, using normal balance group as reference, p for trend <0.0001. This association remained significant only in the very impaired group (RR=1.58, 95%CI=1.30-1.91, p<0.0001) after adjustment for age, cardiovascular risk factors, and prevalent CHD, stroke, cancer, Parkinson's disease, dementia or cognitive impairment.

Conclusions: In older Japanese-American men, standing balance was an independent predictor of all-cause mortality over almost 3 decades of follow-up. Standing balance is a simple test that captures global functioning and frailty, and can be done in a variety of clinical settings. It may be useful for prognostication and decision-making, as well as for identifying a target population for interventions.

P34 Student Presentation

Depression and Stress Symptoms Accelerate 5-Year Decline in Physical Function in US Community-Dwelling Older Adults

A. Pinton,[1] M. Huisingh-Scheetz,[2] K. Wroblewski,[2] L. P. Schumm.[2] *1. The University of Chicago, The Woodlands, TX; 2. University of Chicago Medical Center, Chicago, IL.*

Background: While depression has been associated with physical function decline in older adults, the impact of other mental health symptoms on physical function trajectories is largely unknown. The objective of this study was to determine whether symptoms of depression, perceived stress, loneliness, and anxiety affect 5-year physical function trajectories of older adults.

Methods: The National Social Life, Health, and Aging Project (NSHAP) is a nationally-representative, longitudinal study of community-dwelling adults born between 1920-47. The current analysis included data collected from participants enrolled in 2010-11 and 2015-16 waves (n=1652). Mental health symptoms in 2010-11 were quantified using NSHAP's anxiety symptoms measure (NASM, range:0-14), perceived stress measure (NPSM, range:0-8), depression symptoms measure (NDSM, range:0-20), and felt loneliness measure (NFLM, range:0-6); higher scores indicated worse symptoms. We separately regressed 2015-16 3m usual walk time (continuous) or five repeated chair stand time (continuous) on each of the mental health scales, adjusting for 2010-11 physical function, demographics, and comorbidities.

Results: In linear models, every one-point increase on the NDSM was associated with a 0.06 second slower 2015-16 walk time (β=0.06, p=<0.001), and a one-point increase on the NPSM was associated with a 0.09 second slower 2015-16 walk time (β=0.09, p=0.01). In linear models, every one-point increase on the NDSM was associated with a 0.08 second slower 2015-16 chair stand time (β=0.08, p=0.02), and every one-point increase on the NPSM was associated with a 0.12 second slower 2015-16 chair stand time (β=0.12, p=0.04). NASM and NFLM were not significantly associated with 5-year physical function trajectories. There was a significant positive interaction between NPSM and baseline gait (p=0.04) and baseline chair stands (p=0.01).

Conclusions: The findings suggest that older adults with depression and stress symptoms experience faster physical function decline than those without these symptoms; the effects of stress worsen as baseline function is more impaired. Future work exploring the mechanisms underlying these relationships and the impact of mental health interventions on physical function trajectories are warranted.

P35 Student Presentation

Resistiveness to Care and Pain in Hospitalized Persons with Dementia

C. Shaw,[1] C. Ward,[2] K. Herr.[1] *1. College of Nursing, University of Iowa, Iowa City, IA; 2. College of Public Health, University of Iowa, Iowa City, IA.*

Background: Pain and resistiveness to care (RTC) are often exhibited concurrently in hospitalized persons with dementia (PWD). Distinguishing between pain and RTC is complex making it difficult to determine whether a patient is displaying behavioral symptoms because of pain or because of another underlying need. The purpose of this study is to identify which RTC behaviors are most indicative of pain and pain severity.

Methods: 88 observations of care encounters between nursing staff (n=53) and hospitalized PWD (n=16) were collected at one university hopsital. RTC was measured using The RTC Scale which measures the severity of 13 behaviors by frequency and intensity (0=no RTC, 156=severe RTC). Pain was measured using the PAINAD scale (0=no pain, 10=severe pain) and presence of pain was categorized using the standard PAINAD score of ≥2. Pain severity in observations with pain was modeled as a function of RTC behaviors using a GEE method to account for repeated measurements within PWD. RTC behaviors were included as continuous or dichotomous based on their distribution.

Results: Pain was identified in 43 of the 88 (48.9%) observations. Some form of RTC was present in 79.1% of the encounters with pain. RTC severity and pain severity were highly correlated (ρ=.77, *p*<.001). Pain was always present with the behaviors of adduct (i.e., holding limbs against body), cry, push/pull (i.e., equal back and forth between dyad), and scream/yell. Pain was most severe when hospitalized PWD exhibited crying, grabbing of objects, pushing/pulling, or said no during care encounters with nursing staff (Table 1).

Conclusions: Deciphering between pain and other causes of behavioral and psychological symptoms of dementia is challenging. This analysis reinforces that pain continues to be pervasive in hospitalized PWD and that RTC behaviors are often exhibited by the patient in pain. Care providers need to be especially cognizant of pain when they witness crying, grabbing of objects, pushing/pulling, and/or when PWD say no during care encounters.

Table 1. Model of RTC Behaviors by PWD during Care Encounters with Pain (N=43)

Variable	*Estimate*	*95% Confidence Interval*	*p*
Intercept	*3.35*	*2.77, 3.92*	*<.001*
Cry	*0.93*	*0.69, 1.16*	*<.001*
Grab object (ref=0)	*1.16*	*0.03, 2.29*	*.044*
Push/pull (ref=0)	*1.71*	*0.75, 2.68*	*<.001*
Say no (ref=0)	*1.60*	*0.25, 2.93*	*.020*

Paper Session
INNOVATIVE MODELS IN PRIMARY CARE

Saturday, May 15
3:15 pm – 4:15 pm

P36

Program Evaluation of a Home-Based Primary Care Practice and Patients with Heart Failure

A. R. Walsh. *House Calls, Northwell Health, New Hyde Park, NY.*

Congestive Heart failure (CHF) affects over 5.5 million adults in the United States with a prevalence of 10%–20% in older adults and accounts for 3% of all hospital admissions with a readmission rate as high as 25% within 1 month of discharge. Patients with CHF account for approximately 42% of Northwell Health House Calls Program's patient population. The health system has a 30-day readmission rate of 35% for patients with HF in 2 large hospitals, contributing to almost $13 million per year in Medicare penalties. This study reviewed the effectiveness of care for CHF patients, as measured by quality-adjusted life years (QALY) in a home-based primary care (HBPC) practice over 3 years guided by a health economics framework, using cost-benefit (CBA) and cost-utility (CUA) analyses. Sources of evidence that were used to address the practice-focused question included patient frailty score, years since CHF diagnosis, patient days of hospital admission and readmission, use of the emergency department (ED), and patient satisfaction results. The CBA of patients (N = 119) in this retrospective quality improvement project revealed a 46% decrease in inpatient days after enrollment in HBPC. Hospital admissions decreased by 49% and readmissions decreased 40%. The estimated overall total cost savings was 48% or $434,752 ($N$ = 119, M = $35,897.85). ED encounters decreased 28% (N = 119, M = $557.97). An overall increase in QALY from start of care (N = 119, M = .96) to 2019 (N = 119, M = 3.23) demonstrated the effectiveness of HBPC on increasing quality of life (QOL) for home bound HF patients. By providing HBPC, health systems can demonstrate cost savings and patient satisfaction. Home-based primary care can also assist elder patients in maintaining their self-worth and dignity that is often lost in a long-term care facility and facilitate improvement in QOL.

P37

Development and Validation of a Caregiver Screening Tool for Primary Care

C. Riffin,[1] J. Wolff,[2] K. Cruz,[1] K. Pillemer.[3] *1. Weill Cornell Medicine, New York, NY; 2. Johns Hopkins University Center for Teaching and Learning, Baltimore, MD; 3. Cornell University, Ithaca, NY.*

Background: The National Academies of Science, Engineering, and Medicine and CMS Conditions of Participation recommend systematic assessment and support of family and other unpaid caregivers in healthcare delivery, but practical interventions for assessing caregivers' needs and risks are lacking. The present research takes an initial step toward addressing this gap by developing and establishing proof-of-concept of a brief caregiver screening tool for use in primary care.

Methods: An initial item pool was generated using the Family Caregiver Alliance's caregiver assessment framework, empirical evidence on caregivers' unmet needs, and data from semi-structured interviews with primary care clinicians, older patients (age 65+), and family caregivers (N=70). To assess preliminary feasibility of implementation in routine care, the tool was administered to caregivers who accompanied older patients to their initial visits at a geriatrics practice in NYC (N=10). To establish face and content validity, the tool is being reviewed by 20 subject matter experts (SMEs), including 10 primary care clinicians, 5 caregivers, and 5 health services researchers who were asked to rate the relevance, clarity, and importance of each item, and to evaluate the tool's overall utility, ease of use, and time to complete. Readability was evaluated using the Flesch-Kincaid grade level metric. Content Validity Indices (CVI), Content Validity Ratios (CVR), and Kappa statistics are being calculated.

Results: The screening tool, comprising 6 items, covers domains pertaining to caregivers' understanding of the patient's health conditions and treatments, ability to provide assistance, and types of supports needed. Caregivers completing the tool in clinic most commonly endorsed needing help with arranging services for the patient. The tool has a Flesch-Kincaid level of 7.9 (8th grade); the average time to complete was 2 minutes. SMEs reported that the tool was easy to use and would be effective in identifying caregivers' unmet needs. Data pertaining to CVI, CVR, and Kappa statistics will be presented.

Conclusion: Preliminary results indicate that the screening tool may be a quick and effective way to identify caregivers' unmet needs. Findings lay the groundwork for future pilot testing in primary care to evaluate clinical feasibility and impact on family-centered care quality.

P38 Resident Presentation

Implementation of the VIONE Deprescribing Tool in VA Home Based Primary Care (HBPC)

M. Vanderhoof,[1] C. Byrd,[1] M. Avila,[2] J. Leland.[2] *1. Pharmacy, James A Haley Veterans Hospital, Tampa, FL; 2. Home Based Primary Care, James A Haley Veterans Hospital, Tampa, FL.*

Background: VIONE is a deprescribing methodology that employs 5 categories to help determine which medications should be continued or discontinued: V = vital, life-saving medications, I = important for quality of life, O = optional, N = not indicated/treatment complete, and E = every medication has a diagnosis/indication. Previous literature supports the use of VIONE within the Veterans Affairs (VA) system; however, the benefits within specialized VA clinics are less known. The study objective was to implement the VIONE deprescribing tool within VA HBPC to reduce polypharmacy and healthcare costs and improve patient medication satisfaction.

Methods: This was a retrospective, quality improvement study evaluating the impact of clinical pharmacists utilizing the VIONE methodology within HBPC population. Patients taking at least 15 medications with a VIONE Risk Score of 3 or higher were included in this study. The primary outcome was the average number of medications deprescribed per patient. Secondary outcomes included reasons for deprescribing, common medications deprescribed, projected annualized cost avoidance, patient satisfaction, re-prescribed medications, and incidence of falls and emergency department/hospital visits within 3 and 6 months of VIONE implementation.

Results: One-hundred and four patients with VIONE reviews completed between October 20, 2020 and December 4, 2020 were included in this study. The mean age for the study population was 83 ± 9.5 years with an average of 22 ± 6 medications per patient at baseline. For the primary outcome, 305 total medications were deprescribed with an average of 3 ± 2 medications per patient. For secondary outcomes, the most common reasons for deprescribing were no longer taking (47%), no longer indicated/therapy complete (21%), and optional (18%). The most common medications deprescribed were electrolytes/minerals/vitamins (21%), laxatives (11%), topical analgesics (7%), antihypertensives (6%), and acid suppression therapy (5%). The projected annualized cost avoidance was $45,811. Additional 3 and 6-month follow-up results will be discussed.

Conclusion: Implementation of the VIONE deprescribing tool within HBPC led to a beneficial reduction in patient medications and substantial projected cost savings for the facility, supporting the utilization of the VIONE tool in HBPC clinics nationwide.

P39

A new tool for frailty screening in primary care.

A. ZULFIQAR. *Internal Medicine-Geriatrics, University Hospital of Strasbourg, Strasbourg, France.*

Background: Very few frailty scales are used by general practitioners as they are time consuming and cumbersome. We have designed a new scale for rapid detection of frailty.

Methods: We developed a frailty screening tool for use in primary care referred to as the Zulfiqar Frailty Scale (ZFS). This scale was tested in a general medicine office for 6 months in Plancoët, France. Only patients over 75 years of age with Activities of Daily Living (ADL) >= 4 were included. The objective of this research was 1) to validate the scale and evaluate its performance; and 2) to compare this screening tool with other scales such as the Fried Scale, Gerontopole Frailty Screening Tool (GFST), Short Emergency Geriatric Assessment (SEGA) Grid A, and the Comprehensive geriatric assessment (CGA).

Results: One hundred two patients were included, with a mean age of 82.65 ± 4.79; 55 were women and 47 were men. The proportion of frail subjects was 74.5% for our scale, 69% the SEGA grid A scale, 75.5% for the GFST scale, 60.8% for the FRIED scale. After a comprehensive geriatric assessment, frailty syndrome was found for 57 patients (55.9%). In general, both scales showed good performance and differences between them in the sample is minimal. Because the EGS showed a prevalence of frailty of 55.9%, a similar prevalence threshold for the ZFS, i.e. 64% at the threshold ≥ 3 could be assessed. The completion time of our scale was less than 2 minutes and staff required no training beforehand. Its sensitivity was 83.9% and its specificity was 67.5%. Its positive predictive value was 80%, and its negative predictive value was 73%. The Pearson correlations between the geriatric scores were all strong and roughly equivalent to each other.

Conclusion: Our frailty screening scale is simple, relevant, and rapid (less than 2 minutes).

POSTER SESSION A

Wednesday, May 12
7:00 pm – 8:00 pm

A1

Disordered eating among older adults: a case study of anorexia nervosa in an 86 year old woman

E. Pinto Taylor, T. Graves. *Geriatrics, Emory University School of Medicine, Atlanta, GA.*

Background:

Eating disorders are not commonly diagnosed in older adults, but they have a high rate of morbidity and mortality when they are present in this population and are associated with significant psychiatric comorbidity.

Case Description:

We present the case of an 86 year old woman with a history of Parkinson's Disease with orthostatic hypotension who presented to the outpatient geriatrics clinic with her daughter to discuss weight loss (BMI 15) and poor appetite. During her appointment, it was found that she had been consistently losing weight since diagnosis with PD two years ago, which had worsened as her executive function declined. On individual interview, the patient endorsed feeling happy to have lost weight, disliking the feeling of fullness that resulted from eating, and preferred low-calorie foods and beverages. She also described a disordered body image (which, according to her daughter, had been present for many years), and was not concerned with complications of being underweight, such as increased risk of fracture.

Discussion:

Eating disorders (ED) in elderly patients are often overlooked, but can both recur in old age and also occur de novo later in life. In a recently published review of ED prevalence in older adults, the majority of cases were found to occur in women with average age of 68.6 years.

This case study serves as an example to review common symptoms of anorexia nervosa, the most common ED to occur in this age group, as well as best practices in management. This patient's case is complicated by comorbid Parkinson's Disease, which underscores the difficulty in recognizing and managing these patients in primary care geriatrics clinic, as symptoms of orthostasis, anorexia, hypothermia, and bradycardia can be attributable to other common geriatrics disorders.

Using this patient's encounter as a framework, we will highlight questions that can be used in thorough history-taking if an ED is being considered, review the presentation of common comorbid psychiatric conditions, and identify family-centered treatment options, which include motivational interviewing, nutritional rehab, adjunctive psychiatric medications, and CBT, if the patient is able to participate. Importantly, many of these treatments may need further modification in a geriatric population given the possibility of cognitive impairment, age-related sensory deficits, and other considerations, which will be discussed.

A2

Enterolith associated ileus: a complication of small bowel diverticulosis

S. Soin, J. C. Olson. *Geriatrics, Rush University Medical Center, Chicago, IL.*

Introduction: An enterolith is a mixed concretion formed in Gastrointestinal tract (GIT), usually rare in humans. Enteroliths are of endogenous origin and most usually formed from the bile constituents. However, when calcium salts predominate, they form in the distal small bowel.

Case:

80-year-old female with past medical history of type 2 diabetes mellitus, hypertension, GERD, hypothyroidism presented with abdominal pain for 24 hours. Associated with nausea, non-bloody and non-bilious emesis. Physical exam was significant for left upper and lower quadrant tenderness and absent bowel sounds. Labs on admission were remarkable for WBC 16.72 K/ul and Sodium 130 mmol/L. CT abdomen and pelvis with oral contrast showed dilatation of the small loops is approximately stable with gradual tapering of the distal ileum associated and large duodenal diverticulum, multiple jejunal and colonic diverticula. Patient was started on IV ceftriaxone and metronidazole for concerns of small bowel diverticulitis and nasogastric tube was inserted for suspicion of partial small bowel obstruction. On day 4 of admission, the patient underwent explorative laparotomy after failing conservative management, which showed dilated loops of small bowel until the distal ileum and presence of mobile hard mass above the ileo-cecal junction and was diagnosed with diverticular enterolith. She underwent enterotomy with successful extraction of enterolith. Post-operative course was complicated by hypoxia requiring oxygen support and was subsequently discharged on day 7.

Discussion:

Primary enteroliths are formed in small bowel, typically within a diverticulum and secondary enteroliths are formed in gallbladder, which reach the small bowel due to choledochoenteric fistulas. Most enteroliths are asymptomatic. Complications, if any, are likely to be severe such as obstruction, ileus, and perforation. Therapeutic approach is to crush and milk the enterolith down to colon. If this fails, Enterotomy with extraction or segmental resection of bowel are other options.

A3

Benzos… When Beers Does Not Apply: Managing Terminal Delirium

R. Atif, R. Conroy, M. Carr, J. Vadnais, M. Hasan. *Baystate Medical Center, Springfield, MA.*

Background: Terminal delirium (TD) occurs in up to 88% of patients at the end of life. Hyperactive TD requires an individualized management approach, which may include using a long-acting benzodiazepine. This medication can aggravate delirium; however, in the appropriate patient, with close interprofessional collaboration and if congruent with goals of care, it may provide net benefit.

Case: An 85-year-old lady with dementia, macular degeneration, and failed spinal stenosis surgery requiring wheelchair use, presented from an assisted living facility with agitation and elopement attempt. She had multiple delirium episodes in the past year precipitated by separation from her husband and social isolation due to COVID-19. Infectious workup was negative. CT brain showed volume loss and severe chronic microangiopathic changes. During her hospitalization, she was screaming, restless, impulsive, combative, anxious, paranoid regarding her husband having extramarital affairs, and required restraints. Her behaviors made care provision very challenging. Trazodone and olanzapine were started and titrated, and home pregabalin and sertraline were continued. She still received frequent IM/IV antipsychotics as PO medications were not administered on a consistent schedule due to fluctuating emotional distress. Her family was routinely updated, and ultimately decided on a comfort care approach. Due to persistent agitation despite maximal doses of olanzapine, scheduled twice daily clonazepam was trialed given its long acting properties, in addition to morphine. There was finally a marked reduction in her emotional distress. She eventually passed peacefully.

Discussion: Given the scarcity of evidence to guide the optimal management of TD, its treatment should be tailored to each patient. Beers Criteria recommends against benzodiazepines because of potential worsened delirium. However, if comfort is the treatment goal, TD patients with severe agitation refractory to behavioral approaches and multiple classes of medications including antipsychotics may be trialed on long acting benzodiazepines to achieve proportionate sedation and alleviate suffering. Our patient's distress was not ameliorated by multiple treatments over weeks, but she became comfortable after we scheduled clonazepam.

Conclusion: Deviation from conventional geriatric treatment paradigms, including using long-acting benzodiazepines, might be required to treat hyperactive TD in a patient-centered manner.

A4

ReCode - Reversal of Cognitive Decline Program Academic Experience of first 44 patients

M. Kogan, R. Hickson. *Medicine, George Washington University Medical Faculty Associates, Takoma Park, MD.*

Alzheimer's disease (AD) is the most expensive and morbid disease of our times. There is dramatic need for innovative AD treatments and approaches. Since 2015 our academic program had offered ReCode program to 44 patients. The ReCode program consists of cognitive and mindfulness training, greater physical activity, and improved nutrition, including dietary counseling and targeted nutritional supplements. In addition, possible contributing factors including sleep apnea, toxicity, hormonal deficiencies, and others are assessed and rectified if present. For example, even subclinical hypothyroid will be corrected with or without thyroid replacement as part of the program. The theory behind this approach is that the additive or potentially synergistic effects of correcting all drivers in the ReCode program will lead to a significant outcome despite each individual element having only a potentially small effect.

As part of the ReCode program patients with the help of their caregivers (enrollment requirement): 1) collect regular MOCA and required labs (every 3-6 months as per protocol) and 2) meet with physician, nutritionist, health coach, and program coordinator regularly (at least once every 6-8 weeks).

Here we report that out of 44 patients nearly 30% had dropped for variety of reasons including disease progression, lack of caregiver's support, inability to afford the program financially or follow it's complexity. 4 patients achieved sustained (defined as more than 12 months) MOCA improvement ranging from 4-10 points for number of years, additionally 12 patients (nearly 30%) had demonstrated complete stability of cognitive function for years without improvement in MOCA scores.

In this report we summarize details of the program based on 2 separate cases highlighting different underlying drivers that were modified. The research team is planning to partner with additional academic centers to expand this program and attempt to research ReCode program in controlled manner. [i]

[i] Bredesen DE, Sharlin K, Jenkins D, Okuno M, Youngberg W, Hausman Cohen S, Stefani A, Brown RL, Conger S, Tanio C, Hathaway A, Kogan M, Hagedorn D, Amos E, Amos A, Bergman N, Diamond C, Lawrence J, Naomi Rusk I, Henry P, Braud M, Reversal of Cognitive Decline: 100 Patients, *Journal of Alzheimer's Disease and Parkinsonism,* Volume 8, Issue 5 October 19, 2018 DOI: 10.4172/2161-0460.1000450

A5

An unfortunate outcome in an elderly male with myasthenia gravis

A. Phan, Z. Sheikh. *Geriatric Medicine, University of Massachusetts System, Chelmsford, MA.*

Background:

Myasthenia gravis (MG) is an autoimmune disorder disrupting neuromuscular transmission. It is characterized by weakness in ocular, bulbar, limb, and/or respiratory muscles. There is a bimodal distribution to the age of onset and in the older population; MG is more common in males than females in their 70-80s.

Case:

77 year old male with a history of meningioma and resection, coronary artery disease, COPD, cirrhosis, anxiety, and cognitive impairment, with multiple admissions for recurrent falls, weakness, and dysphagia. The initial working diagnosis was Transient Ischemic Attack vs. Parkinson's plus syndrome. He continued to have choking episodes, dysarthria, nasally speech, and left eye ptosis. Videofluoroscopic swallow study showed severe oropharyngeal dysphagia affecting swallow efficiency. He was found to have an acetylcholine receptor antibody level >80 nmol/L. An EMG showed "electrical evidence to raise the possibility of a postsynaptic neuromuscular junction disorder as seen in myasthenia gravis". Chest CT did not show thymoma. His symptoms improved with prednisone and pyridostigmine. A month later, he was found partially responsive at home. He required intubation in the Emergency Room. EEG showed "bi-hemispheric dysfunction or encephalopathy, possibly related to medication effects and metabolic dysfunction". Brain MRI showed "encephalomalacia in the setting of resected meningioma and hyperintensity in basal ganglia". Lumbar puncture was negative. The working diagnosis for his respiratory failure was myasthenic crisis. He received IVIG, pyridostigmine, and prednisone. He had a prolonged hospital course and developed complications, including delirium and ESBL E. Coli bacteremia. He had a tracheostomy and PEG tube placed.

Discussion:

Since the presenting symptoms of MG can include dysarthria and dysphagia, it is often confused with stroke or motor neuron disease, resulting in a delayed diagnosis, like in our patient. Therefore, in older

patients with bulbar symptoms, MG should be on the differential. Furthermore, in an older adult patient with multiple comorbidities, a prolonged hospitalization due to a major complication like myasthenic crisis can result in a poor outcome. Therefore, goals of care discussions are helpful earlier on in the hospitalization.

A6

The Case of the Crowded Room

J. Elikkottil, D. Neamtu. *Geriatrics, University of Louisville, Louisville, KY.*

Introduction

Charles Bonnet syndrome is an under-recognized syndrome of visual hallucinations in older adults with vision loss.

Case description

A 91 year old female with history of atrial fibrillation, hypothyroidism and severe bilateral vision loss from age-related macular degeneration (ARMD) came to the office with her sister to establish care. The patient has been living independently in her own home. Her sister reported that the patient is "seeing things". The patient reported "I see large crowds of people in the room. They don't talk to me. They don't bother me. They come and go. They float to the top and then disappear. Sometimes I talk to them. When they don't talk back, I know that they are not real". Patient reported that this has been going on for years but is getting more frequent.

On exam, patient had significant bilateral vision loss. She had some bilateral hearing loss as well. On review of records, it appeared that patient had normal neuropsychological testing 1 year ago at another office. MRI brain showed mild- moderate small vessel disease. Labs were unremarkable. Repeat neuropsychological testing obtained in our office a few months later was also normal. In discussion with ophthalmology, it appears that her presentation is consistent with Charles Bonnet syndrome.

Discussion

Charles Bonnet syndrome (CBS) is a syndrome of visual release hallucinations that occur in patients with significant pre-existing loss of visual acuity or visual field. Common underlying conditions are ARMD, diabetic retinopathy, stroke, glaucoma. The hallucinations can be complex formed images like people and animals or they can be abstract patterns. The primary hallmark of CBS is that it is diagnosed in patients with known pre-existing severe visual impairment. Several diagnostic criteria have been proposed. The amount of vision loss required to produce release hallucinations has not been systematically studied. In suspected cases, screening for cognitive impairment and other pathology is still indicated. In CBS, the patient's functional status, cognition and insight are usually intact. CBS is often underrecognized by clinicians and underreported by patients. Treatment includes improving vision if able and reducing social isolation. Evidence for medication management is limited but low dose quetiapine or olanzapine has been used at times for disturbing imagery.

A7

Munchausen's by proxy – an unusual form of elder abuse

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Background: Factitious disorder imposed on another, or Munchausen's by proxy, is a disorder characterized by inducing or feigning disease in a patient by a caregiver in order to receive medical care without obvious external reward. Although well described in the pediatric literature, it is under-recognized when occurring in adults, especially cognitively impaired adults.

Case: A 97-year-old female with advanced dementia presents to the Emergency Department (ED) for change of mental status which the daughter attributes to a urinary tract infection (UTI) and demands testing and antibiotics. This is her 4th ED visit since being discharged from the hospital 4 days ago after treatment of a UTI. From January 2018 to December 2019 she had 191 ED visits (including up to 3 visits in one day) and 49 admissions across 18 different hospitals, all for the same complaint. She insisted that her very demented mother have a straight catheter, an IV, and antibiotics at each of these visits.

Discussion: Munchausen's by proxy primarily has been described in pediatric patients with a mortality of 6%, however the true prevalence and mortality in adults is unknown. This case is concerning for factitious disorder imposed on another. The patient's daughter misrepresents her mother's medical history to providers and insists on intervention. As in many cases, the motive is not entirely clear but there are no obvious external rewards. The misrepresentation of a patient who cannot speak for herself then leads to invasive interventions and testing, and the patient suffers the complications without participating in treatment decisions.

Conclusion: Demented patients who can no longer speak for themselves and have impaired decisional capacity are dependent on caregivers and proxy decision-makers to act in their best interest. This is generally felt to be either following the expressed wishes of the patient, implied wishes by previous actions and statements or beneficence, weighing the benefits and burdens for a course of action. When proxy decision-makers are making decisions based on their own needs or on delusional thinking, this becomes abuse.

A8

A hunt for answers: A rare case of Tolosa-Hunt Syndrome

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Background

The differential for painful ophthalmoplegia includes primary intracranial tumor, aneurysm, and infection. Tolosa-Hunt Syndrome is a less common etiology with an estimated incidence of one case per million per year. Tolosa-Hunt Syndrome is thought to be secondary to inflammation in the cavernous sinus and superior orbital fissure, possibly related to an abnormal autoimmune response.

Case

A 77 year old male with chronic kidney disease and arthritis presented to the emergency department with 9 days of left periorbital eye pain. After petting llamas, zebras, and sheep at a petting zoo, he developed mild discomfort in his left eye. Symptoms progressed to 10/10 pain with double vision and ptosis on day 7. On exam he had decreased adduction of the left eye and ptosis, with normal movement and appearance of the right eye. Presentation was consistent with a cranial nerve (CN) III palsy, sparing the pupil. MRI brain showed asymmetric enhancement at the left superior orbital fissure and anterior cavernous sinus, indicating nonspecific inflammation. CT angiogram of the head and neck and cerebrospinal fluid were otherwise unremarkable. Ophthalmology and neurology were consulted and determined likely diagnosis was Tolosa-Hunt Syndrome after the exclusion of other, more serious etiologies. He was treated with pulse dose steroids on day 10 with significant improvement in pain by day 11. Patient was seen in the outpatient clinic day 20 and had improved levator function, encouraging for a full recovery.

Discussion

Tolosa-Hunt Syndrome is a rare, however easily treated cause of painful ophthalmoplegia. This syndrome is most common in people aged 40 and over. Typical features include orbital pain with paralysis of the third, fourth, or sixth cranial nerves (CN), third being most common. CN palsies usually remain for 6-8 weeks, even with treatment, however pain is significantly reduced in 24-72 hours after initiation of glucocorticoids. Tolosa-Hunt Syndrome should be a diagnosis of exclusion after more serious causes have been ruled out, but should be on the differential considering the rapid response to steroids.

A9

Love in the Time of Covid: An Approach to Isolation in a Long-term Care Facility During a Pandemic

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The elderly who live in long-term care (LTC) facilities are at increased risk for depression as most lack regular visitation from loved ones. Add a public health emergency (PHE) to the mix, and those visits dwindle down to none. Covid19 put a wrench in 2020 and not only changed everyone's plans, but it also took many lives, especially from the older population. Due to the novelty of this virus, guidelines were set from governing bodies that restricted visitation, which created a morose environment.

In a LTC facility in South Louisiana, protocols were put into place to protect the health of the residents, which included no communal dining, no outside visitors, and restricting activities within the facility. Effects of isolation were quickly noticed, including increased depression and overall stagnation of the residents. There was a noted 8% increase in antidepressant utilization during peak restrictions compared to pre-Covid numbers. The facility implemented several programs to combat this. Video conferencing was made available through the purchase of tablets. For example, an 88 y/o resident had daily video calls with family and did not require antidepressant therapy. This progressed to "window visits" where the resident could see their family through the window while still using audio over the phone. Another initiative that was applied was the "Adopt-A-Resident" program. This initiative was marketed via social media and permitted people from around the world to send gifts and greetings to residents to lift their spirits. The facility surveyed the residents so that donors could personalize their gifts. A 60 y/o male was uplifted after receiving a Lego gift set. As community numbers plateaued, "Tent Talks" were initiated. Clear tents were used outdoors to improve communication between loved ones without the limitation of a device. A 73 y/o female who had worsening depression despite medication adjustment had improved mood and oral intake after visits with her husband. Overall, antidepressant utilization returned to baseline with these non-pharmacologic facility interventions.

Those in a LTC facility are more susceptible to depression, especially during a pandemic. With such programs in place, the mental health of residents can be improved during a PHE. The health and safety of the residents is the top priority, and maintaining that with non-pharmacologic therapies demonstrates best practices for older patients.

A10

Incidental finding of Abdominal Coccidioidomycosis in an Elderly

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Introduction: Coccidioidomycosis is an fungal infection seen in Southwestern US and Mexico. In endemic areas pulmonary cocci causes pneumonia with 29% prevalence mostly involving lung. Intraabdominal coccidioidomycosis (IAC) is a rare condition that raises suspicion for immune compromise. IAC presents with ascites, omental mass and liver abscess. Here we discuss a rare case of omental seeding of IAC in a patient presented with acute cholecystitis.

Case Presentation: 79 y/o male from Mexico presented to ER with abdominal pain only. Physical exam showed RUQ pain with Murphy's sign. Lab showed high WBC, bilirubin, alk phos, otherwise normal. CT Abd showed cholelithiasis with gallbladder wall thickening. Left pleural effusion without emboli on CT chest. D/D was cholecystitis with cholelithiasis so started on antibiotic and surgery was consulted. During cholecystectomy it was noted he had multiple nodules in abd cavity concerning neoplasm or atypical infection. Omentum sample was taken for further eval. Thoracentesis fluid was negative for organism or malignancy. Biopsy showed epitheloid granulomata and negative for malignancy. ID recommended Itraconazole for 6-12 months. After 2 weeks F/U labs were normal.

Discussion: Cocci commonly causes pulmonary symptom due to inhalation of spore. Patients have self limited flu like illness, some acquire severe pulmonary disease. Less than 1% immunocompetent patients develop disseminated cocci with an 50% increase in immunosuppressed patients with AIDS, lymphoma, on immunotherapy. GI involvement is a rare extrapulmonary manifestation. It occurs through hematogenous route from lung. Swallowing pulmonary secretion can cause transmission. Our case demonstrates presentation of isolated PC in an immunocompetent host from a non endemic region. He had recurrent pulmonary effusion which was negative for cocci and had confirmed PC via tissue biopsy of carcinomatosis lesion found incidentally. Management involves confirmation of infection and identify risk factors. Localized infection with no risk factor requires serial assessment by F/U at 3-6 months for 2 yrs. Widespread infection or high risk requires therapy with antifungal, surgery or both.

Conclusion: This case stresses the importance of familiarity with atypical Coccidioidomycosis. Since this unique condition can mimic vast differential diagnosis of GI diseases, recognition and early diagnosis is vital in preventing extensive testing, procedures and early treatment in elderly patients.

A11

Acute coronary syndrome in a patient with undiagnosed dementia: the challenge of ascertaining capacity and adequate consent in emergency care.

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74-year-old woman presented to the emergency department of a local university hospital with chest pain for 1 day. Her history was significant for hypertension, hyperlipidemia, diabetes mellitus type 2, for which she has not taken any medications in the past 2 years. She had been previously living alone and reclusive from her family. Her ECG was concerning for a non-ST elevation myocardial infarction. Notable labs were CK-MB 12.7 and a cardiac troponin T 807. Cardiology was consulted and patient was consented for a coronary angiogram. There was no documentation assessing for baseline cognitive status. She was diagnosed with an acutely occluded left anterior descending artery, 3 vessel coronary artery disease and a drug-eluting stent was placed. Dual-anti-platelet therapy was started with a plan for staged percutaneous intervention. She developed worsening confusion, paranoia and began refusing medications, including antiplatelet medications. Psychiatry was consulted and the patient was deemed not to have capacity to make informed decisions. She was transferred to the Behavioral Health unit on a legal hold for grave disability demonstrated by frequent forgetting, and poor insight into her medical conditions. She was started on an atypical antipsychotic, and she was treated for acute kidney injury due to poor oral intake. Upon medical stabilization, her medication compliance improved. Further discussions with family illustrated her history of impaired cognition even prior to hospitalization. Her MOCA score was 9 out of 30. Her discharge planning was complicated by a lack of DPOA paperwork and family unable to provide 24-hour care. She was discharged to a skilled nursing facility and staged percutaneous intervention was postponed pending further goals of care discussions.

Dementia can often be underdiagnosed in the emergency department. Although studies demonstrate long-term benefit in invasive strategy for CAD in elderly, there is limited literature addressing acute coronary syndromes in the advanced dementia population. This case demonstrates the need for training of personnel in ED and in specialty consultation roles of Geriatric syndromes.

A12

The Eyes Have It; Progressive Supranuclear Palsy at a Glance

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Case

A 77-year-old man with a past medical history significant only for hypertension presented with several months of unsteady gait, recurrent falls and worsening cognition. As a result, he had recently moved in with his sister for increased support, but he was previously quite functionally independent. No cogwheeling or tremor were present. MRI brain revealed only chronic vascular ischemic changes. Several diagnoses had been considered including Lewy Body Dementia, Vascular Dementia, Parkinson Disease or "Parkinsonism." Patient had been noted on previous encounters to have bradykinesia, hypophonia, rigidity and postural instability. On entering the exam room, the clinician immediately noted the patient's prominent eyes and his stare. On examination he was found to lack upward gaze. A diagnosis of Progressive Supranuclear Palsy was made. Over the next year, he developed dysarthria, dysphagia and progressive weight loss and cognitive decline. A short stay at a rehabilitation facility yielded no meaningful functional improvement, and his frequent falls persisted.

Discussion

Progressive Supranuclear Palsy (PSP) is tauopathy primarily effecting the subthalamic nuclei and midbrain. Parkinsonian syndromes are a group that includes Multisystem Atrophy, Lewy Body Dementia and Cortical Basal Degeneration. This group of disorders share many symptoms with Parkinson Disease, including abnormalities in movement, cognition and behavior. Premorbid, they are each defined clinically, with unique features and criteria for diagnosis. Findings suggestive of PSP include postural - with retropulsion, oculomotor dysfunction, akinesia and cognitive dysfunction. These result in frequent falls, dysphagia, a characteristic wide-eyed stare, and impairment in voluntary vertical gaze which is the key distinctive feature. Ataxia, dysarthria, personality changes, and cognitive impairment with executive dysfunction and bradykinetic responses can also be present. While there are no clearly established treatments for PSP, tau-directed primary interventions are being explored. Treatment with dopaminergic agents may have a small benefit. Average life span is 5-8 years from diagnosis.

Summary

PSP is rare condition that can present with Parkinsonism, restriction of eye movements, early and frequent falls. Recognition of PSP is as a disease state is important as it is typically rapidly progressive, and early diagnosis allows for supportive care and expectant management.

A13

A patient in a Veterans Affairs skilled nursing facility with Dialysis Access Steal Syndrome

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The patient is a 58-year-old Black male with ESRD on hemodialysis (HD). He was being dialyzed by a tunneled catheter but had a Brachiocephalic AV graft placed in October 2020. He was a patient in a VA skilled nursing facility (SNF) for physical therapy. During a routine fingerstick check, a Certified Nursing Assistant (CNA) noted the veteran's 2nd, 4th and 5th fingertips to be cooler than normal with a bluish tinge. The CNA reported this to the Licensed Practical Nurse and the Registered Nurse (RN) in charge, who brought it to the physician. Upon questioning, the veteran stated he had intermittent pain and numbness in the hand for several weeks but had not reported it to staff. The exam was significant for cool fingertips with grossly decreased sensation and bluish discoloration. The right radial and ulnar pulses were not palpable but the RN was able to find them with a doppler, though they were muffled compared to the left.

The veteran was transferred to the ER and subsequently was taken to the OR for diagnostic arch angiogram with left upper extremity run off and fistulogram and balloon angioplasty of the left subclavian artery. Intraoperative findings included no obvious stenosis of the radial or ulnar arteries but significantly sluggish flow through both, ulnar worse than radial, with improved flow with compression of the fistula consistent with Dialysis Access Steal Syndrome (DASS).

He subsequently underwent surgery with proximalization of left Brachiocephalic fistula with the first part of the axillary artery with good results including return of pulses and decreased hand pain. The patient was schedule to go back to the SNF the day after the successful surgery.

DASS is an ischemic complication of HD arteriovenous access. It is reported to occur in 4-10% of patients undergoing vascular access procedures. Clinical features include hand pain, coolness and decreased motor and sensory function. The complications can include nerve damage, loss of fine motor function and tissue loss making prompt recognition critical. This case highlighted prompt recognition by a CNA in a SNF. She reported her concerns and findings to licensed colleagues and subsequently the physician. This enabled prompt transfer to an acute care facility and operative repair by vascular surgery giving the patient the best chance of recovery form DASS.

A14

When Hiccups Should Give You a Fright!

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Background: While hiccups are a universally experienced symptom, they are a fairly uncommon presenting complaint in the emergency department. When a patient presents with persistent hiccups that have been present for more than 48 hours, the differential diagnosis is long and varied. It can be related to almost every system in the body including gastrointestinal disease, diaphragmatic irritation, cardiovascular or respiratory disease, toxins, psychogenic causes or diseases within the central nervous system. The emergency medicine physician needs to determine whether the underlying cause is benign or life-threatening.

Case: An 82-year-old man with history of dyslipidemia, hypertension and nephrolithiasis presents to the Emergency Department for three days of intractable hiccups. He notes associated upper abdominal pain and right-sided back pain only when he hiccups, as well as decreased oral intake secondary to his hiccups. He denies fever, chills, dizziness, headache, chest pain, shortness of breath, ataxia or other symptoms. His exam reveals a slightly debilitated and cachectic appearing male with constant hiccupping and mild bilateral leg edema but is otherwise unremarkable with normal vitals and no abdominal tenderness to palpation. A CBC and chemistries were obtained along with a troponin, urinalysis, EKG and chest x-ray to evaluate for underlying causes including kidney stone, cardiac ischemia and lung masses.

His labs return with a white count of 21,000 and increased liver function tests. A right upper quadrant abdominal ultrasound is ordered for further evaluation which reveals a large complex cystic mass. A CT scan shows multiple hepatic abscesses. The patient was started on IV antibiotics in the emergency department and admitted. He had a drain placed and the abscesses grew out Bacteroides fragilits and Streptococcal anginosus. He ultimately tolerated treatment well and was discharged home in stable condition.

Discussion: Hiccups are often the cause of vagal or phrenic nerve irritation and resolve without treatment. When a patient with hiccups presents to the emergency department, care must be taken to obtain a good history looking for underlying causes that could indicate a more severe cause of their symptoms, from strokes and heart attacks to intra-abdominal pathology and infectious causes. In the elderly population, where benign-appearing symptoms can often indicate more serious disorders, due diligence must be observed to evaluate for life-threatening etiologies.

A15

The case of the wobbly hand

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Background: Atypical presentations of common diseases are well known to Geriatric practice. Recent examples include the observation that delirium was the only manifestation of COVID-19 infection in older adults presenting to the emergency room. This case report further illustrates how brain tumors in older adults can have unusual presentations that may lead to diagnostic delays.

Methods: A retrospective chart review was conducted on an older adult who presented to an internal medicine clinic

Results: An 87 year old, functionally independent Caucasian female, presented to her primary care internist and Geriatrician for an annual wellness exam, during which she reported neck pain. The pain was new and 4 out of 10 in severity, localized to the posterior left side without radiation. Motion did not alter the pain and it did not wake her at night. The pain was constant and dull. Acetaminophen reduced the pain some but not entirely. One week later, the patient returned to clinic stating that her left hand was wobbly and she couldn't control it. She feared falling. The neck pain persisted despite regularly scheduled acetaminophen. On exam, vital signs were normal, however, she exhibited athetotic movement and clonus of her left hand. Motor strength, reflexes, and sensation were intact. The Sharpened Romberg test was positive while finger to nose and Romberg were normal. MRi of the brain revealed a 2 x 3 x 2.5 cm mass in the left cerebellum.

Conclusions: This case demonstrates atypical manifestation of disease in older adults with regard to cerebellar disease. Rather than head pain, ataxia and vomiting, this older adult presented with new onset fear of falling and neck pain. It was not until unilateral uncoordinated hand movement was detected that the differential diagnosis focused on a focal brain disorder. The case also demonstrates the importance of What Matters to older adults as the patient declined neurosurgery and opted for palliative care.

A16

Unrecognized Patent Foramen Ovale May Present as Multiple IschemicStrokes in the Old

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Background: Strokes may be ischemic strokes from blockage of an artery(87%) and hemorrhagic stroke (13%). Ischemic strokes are t**hrombotic or e**mbolic, the latter from an embolus elsewhere traveling to the brain. Paradoxical embolism refers to emboli from the venous system that embolize into the cerebral arterial vasculature, bypassing the pulmonary circulation through a patent foramen ovale (PFO), atrial septal defects. PFOs are seen in 27% of autopsy cases. This anatomical variant of the interatrial septum decreases with increasing age. Stroke and cryptogenic ischemic strokes are associated with PFO. An unsuspected cause of multiple embolic strokes is PFO. **Case:** 71 year old male with diabetes, hypertension, chronic kidney disease was hospitalized after a fall. BP124/66, pulse 111, afebrile. Labs: Hb 8.4, creatinine1.44, eGFR 49, Glucose 127. CT brain: encephalomalacia and multifocal chronic infarcts in frontal and parietal lobes, cerebellum and pons. Doppler echo showed left atrial dilatation, normal left and right ventricular function and ejection fraction, mild tricuspid and pulmonic valve regurgitation, normal aortic valve. PFO noted on color doppler. Bilateral US carotid: no significant stenosis. **Discussion:** Prevalence of PFO in the healthy population is 20-25%. Detection of PFO during stroke evaluation is not surprising; the frequency is as high as 40-45%, mostly with no obvious explanation. 70,000 to 100,000 strokes/ year in the U.S.are secondary to paradoxical embolism to the brain from deep vein thrombosis via a PFO. Presumably, most of the neurologic symptoms are secondaryto paradoxical embolism of small thrombi that arise in the venous system and pass through the PFO during a transient right-to-left shunt. Possible explanations for stroke with PFO, but independent of paradoxical embolism, include secondary cardiac arrhythmias or abnormalities of the endocardial surface of the septum. Cryptogenic stroke is defined as "no clear source of stroke, diagnosed only after a thorough evaluation excludes other relevant etiologies". PFO prevalence is up to 40% in cryptogenic stroke. Patients with PFO are usually younger. PFO may be perceived as unimportant in an older patient but must be excluded as a source of emboli when no other source exists. **Lesson learnt**: Asymptomatic venous thrombosis with PFO may cause multiple ischemic strokes in older adult, warranting full evaluation for an etiology.

A17

Cancer and acute abdomen: Not the perforated way to go.

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Introduction: This case demonstrates the difficulty of assessing abdominal pain in older adults with cancer.

Case Presentation: 84 y/o female with HTN, HFpEF, a-fib, and CMML transformed to AML (on azacitibine/venetoclax) presented to clinic complaining of abdominal pain. Pain started 3 days prior in RLQ and spread across her lower abdomen, with associated bloating, nausea, and emesis. Vitals showed afebrile, normotension, and mild tachycardia. Appeared non-toxic, abdomen was distended and tender to palpation, without rebound or guarding. Labs were significant for severe neutropenia. CT scan demonstrated pancolonic diverticulosis with concern for left iliac fossa abscess. During admission she was started on broad-spectrum antibiotics, and while surgery was not indicated, a drain placed by IR produced feculent drainage. Course complicated by ongoing sepsis, hypoxic respiratory failure, and delirium. Patient had expressed wishes to limit invasive interventions, and her activated POA transitioned her to comfort care. She died five days after initial presentation.

Case discussion: The distinctive physiology of older adults leads to atypical presentations of acute abdomen, with delayed symptoms, and less predictable changes to vital signs and physical exams.[1] One etiology mostly seen in neutropenic patients with hematologic malignancies is neutropenic enterocolitis, a life-threatening condition due to inflammatory involvement of the lower intestinal tract. Risk factors include intensive, mucositis producing chemotherapy, and preexisting bowel abnormalities such as diverticulitis.[2] It is common for cancer therapy trials to exclude older adults based on age and performance status, making it difficult to anticipate their response or side effects. A recent study of our patient's regimen had shown it to be effective and well tolerated in those with AML over age 65.[3] This case highlights the heterogeneity of older adults and the necessity for a high index of suspicion to facilitate prompt evaluation and diagnosis.

1 Spangler, R., et al. Abdominal emergencies in the geriatric patient. Int J Emerg Med 7, 43 (2014).

2 Nesher, L., et al. Neutropenic Enterocolitis, a Growing Concern in the Era of Widespread Use of Aggressive Chemotherapy, Clinical Infectious Diseases, Volume 56, Issue 5, 1 March 2013, Pages 711–717.

3 DiNardo, C., et al. Venetoclax combined with decitabine or azacitidine in treatment-naive, elderly patients with acute myeloid leukemia. Blood 2019; 133 (1): 7–17.

A18

Beyond the Withdrawal. Managing Post-Acute Benzodiazepine Withdrawal in Older Adults.

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INTRODUCTION

Post-acute withdrawal, also described as protracted, extended or persistent withdrawal, refers to a syndrome that includes anxiety, irritability, hostility, mood instability, fatigue, insomnia and increased physical complaints often related to gastrointestinal symptoms, pain and weakness. Unlike acute withdrawal, where treatment guidelines and practices are highly predictable and protocol driven; post-acute interventions are highly symptom driven and individualized. Attention to co-occurring medical and psychiatric disorders is vital as well.

It is well-known that benzodiazepines pose greater risks to older adults including confusion, ataxia, syncope, risk of falls, fractures, delirium and excess hospitalizations. There is limited literature on managing post-acute withdrawal syndromes in older adults, with few available guidelines for medication management of emerging symptoms. The additional challenges of the COVID-19 pandemic have increased both the stress on older adults in need of care and of providers seeking to engage patients in therapeutic relationships. We focus on representative cases of older adults seeking treatment related to benzodiazepines withdrawal and describe flexible treatment approaches for their evolving and complex needs.

METHODS

Cases studies were identified from the patient population at Mount Sinai Beth Israel, an urban medical center serving a multicultural and socioeconomically diverse population that includes several NORC sites. Patients were identified from those who presented to the ambulatory care center that offers adult, geriatric and dual-diagnosis services. A personalized treatment planning approach was developed in each case and included the time period of the COVID-19 quarantine.

RESULTS

The results will be discussed.

CONCLUSION

Despite the proven negative outcomes of chronic use providers continue to prescribe benzodiazepines inappropriately to older adults. The need to care for patients treated with these agents is high. Post-acute withdrawal syndrome is poorly understood and under recognized in older adults. Efforts such as de-prescribing, patient centered approaches to rational prescribing and use remote education programs should be increased. COVID-19 pandemic conditions lead to an increase in overall symptoms reported but did not prevent patients from engaging in successful treatment.

A19

Acute Parotitis in an Older Adult with COVID-19

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Background

Orofacial manifestations are atypical presentations of COVID-19 infection. We report a case of acute parotitis and submandibular sialadenitis from COVID-19 infection in an older adult that contributed to persistent dysphagia.

Methods

Retrospective chart review.

Results

An 81-year-old male resident of long-term care with a past medical history of dementia, ischemic cardiomyopathy, hypertension, diabetes, and depression was hospitalized for acute hypoxic respiratory failure from COVID-19. He was treated with remdesivir and dexamethasone. On day 21 of admission, he developed a new right-sided preauricular swelling. Laboratory showed leukocytosis of 12.7. CT head and neck revealed right parotitis with multifocal rim-enhancing collections, numerous small microabscesses, and sialadenitis involving the right subjacent submandibular gland. A subtle enhancement of the left parotid gland was suggestive of additional involvement as well. Parotid drainage was cultured and grew multiple organisms - *Staphylococcus aureus*, *Proteus mirabilis,* and *Corynebacterium striatum*. The patient was managed conservatively with antibiotics, parotid gland massage, and oral care. Two weeks later, follow-up imaging showed resolving parotitis with a resolution of intraparotid collections. His clinical course was complicated with new-onset persistent dysphagia requiring feeding tube placement at discharge.

Conclusions

Acute parotitis and sialadenitis are uncommon and underreported manifestations of COVID-19. The onset of symptoms ranges from 3 to 31 days. Interestingly, acute parotitis can also be the initial presenting symptom of COVID-19. The high expression of angiotensin-converting enzyme 2 receptors in the salivary glands make these sites vulnerable to the virus. In our case, the viral sialadenitis led to secondary polymicrobial bacterial microabscesses that required antibiotic therapy. This report underscores sialadenitis as a complication of COVID-19 infection, which in elderly patients could contribute to persistent symptoms such as dysphagia.

A20

Constipation in Geriatric Patients is far from benign Case Report

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Constipation is common among geriatric patients. We present 2 geriatric patients with chronic constipation leading to urinary tract obstruction and **stercoral colitis** in the first and **Ogilvie's syndrome** of pseudo-obstruction in the other.

Case 1:

95 years old female with no significant PMH presented with urine retention and constipation. On arrival Foley catheter was placed and drained 1200 ml of cloudy urine. Initial imaging showed large stool volume and findings consistent with **stercoral colitis,** fig1A.

Discussion:

Urinary bladder and rectum share a common embryological origin and innervations. Constipation and lower urinary tract symptoms (LUTS) have been reported to occur together. **Stercoral colitis** is a **rare condition** seen in **geriatric populations** due to fecal impaction.

Case 2:

An 83 years old male with history of old CVA and chronic constipation presented with abdominal pain, nausea and vomiting. The patient was evaluated by GI and surgery for suspected bowel obstruction and **Adult Hirschsprung**. Initial imaging showed stool impaction and findings consistent with pseudo-obstruction / **Ogilvie's syndrome,** fig 1B.

Discussion:

The patient was suspected to have Adult Hirschsprung's disease (HD) characterized by colonic **aganglionosis**. Rectal biopsy was negative for HD. Ogilvie's syndrome is characterized by acute dilatation of the colon in the absence of an anatomic lesion that obstructs the flow of intestinal contents. Ogilvie's syndrome usually occurs in association with a severe illness, surgery or the use of medication, opioids and anti-cholinergics.

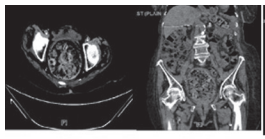

Fig 1A Constipation causing Stercoral colitis

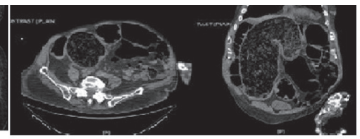

Fig 1B Constipation causing Ogilvie's syndrome

A21

Challenges of CGA administration in a multi-ethnic population

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Introduction: Recent American Society of Clinical Oncology (ASCO) guidelines recommend the use of a comprehensive geriatric assessment (CGA) in older adults receiving chemotherapy. The number of minorities over age 85 are projected to be 29.7% of the population by 2050. We present a case highlighting the challenges of administering the CGA in a culturally diverse population

Case: An 85 year old Greek man presented to clinic with recently diagnosed metastatic pancreatic cancer. Patient is a retired restauranteur who is dependent on his wife for food preparation, housekeeping and laundry. He receives no additional home assistance and has recently asked his son to help manage his finances. He has had no falls in the last 6 months and is otherwise healthy. He was recently diagnosed with dementia with a Montreal Cognitive Assessment (MoCA) score of 16. His son noted issues with depressed mood, apathy and weight loss. Physical performance testing showed that he was unable to perform repeated chair stands or maintain tandem stance. His gait speed was 0.80 m/s. He agreed to home physical and occupational therapy for balance and falls prevention but declined further evaluation for depression. The patient's son agreed to provide social, financial and emotional support. He was started on Gemcitabine monotherapy.

Discussion: Current ASCO Guidelines for Geriatric Oncology include legacy measures that have not been validated in a multinational immigrant geriatric population thus limiting providers' ability to accurately assess risk. IADL scales include questions about medication assistance, social participation and housework that do not take into account culture-specific gender or family-member roles and may result in the over-diagnosis of chemotherapy toxicity, functional impairment, dementia. Cognitive tests such as the MoCA, even when conducted with an interpreter, may underestimate cognitive abilities in those with reduced English proficiency. Future studies of CGA in culturally diverse populations are needed.

A22

Primary spontaneous pneumothorax in two long-term care elderly residents with COVID-19

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Introduction Spontaneous pneumothorax (SP) refers to air in the pleural space that is not caused by trauma. It can be subdivided into primary (without known lung disease) or secondary (attributed to an underlying lung disease). We present two cases of primary spontaneous pneumothorax in long-term care elderly residents with COVID-19 infection. **Case 1** An 89-year old Caucasian female with no chronic lung disease or trauma was emergently sent to the hospital after abrupt increase in dyspnea. She had dyspnea at rest for 1-day prior to presentation. Oxygen saturation was initially 76 % on 6 L NC and improved on non-rebreather mask by paramedics. CXR showed a moderate right pneumothorax and diffuse bilateral opacities. COVID-19 PCR testing was positive. A chest tube was inserted and treatment for pneumonia was initiated. On hospital day two the patient developed hypotension, cardiac arrest, and expired. **Case 2** A 96-year old African American female with no trauma or chronic lung disease at a long-term care facility was sent emergently to the hospital with sudden onset of dyspnea and desaturation to 86% on room air. COVID-19 PCR was positive. CXR showed a large right sided pneumothorax. Right sided chest tube was inserted and she received remdesivir and dexamethasone. She was found to have a bronchopleural fistula that resolved after five days of continuous chest tube suction. She was discharged back to the facility after stabilization. **Discussion:** Factors that increase the risk for SP include age, smoking, and gender. SP may present in a bimodal distribution. SP associated with COVID-19 is not a commonly reported in the elderly. Two cases have been reported in younger adults with COVID-19. (Sun 2020, Hollingshead 2020) A systematic review of 919 COVID-19–positive patients described pneumothorax as an uncommon complication (Salehi 2020). Our patients were not intubated at time of pneumothorax presentation. They did not have severe cough, trauma, hemoptysis, or significant tobacco use history. Neither patient had history of prior pneumothorax or any known medical history of chronic lung disease. These cases suggest that primary spontaneous pneumothorax can be the first presentation of COVID-19 infection in some older adults.

A23

The Role of Cognitive Testing in Multi-Complexity Older Adults: A Case Study

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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 newly developed 'Cognitive Clinic' at the VA-CBOC is a multi-disciplinary, multi-agency endeavor aimed to evaluate veterans aged 60+ who show signs of cognitive impairment.

Methods: A 67-year-old Hispanic male presented to the cognitive clinic through an expedited referral due to urgent safety concerns which included a recent kitchen fire and problems navigating while driving as well as a request to unsatisfactory control of chronic pain. The historical details surrounding the veteran were corroborated by his primary caregiver and brother who attended the session. The veteran had a significant past medical history of schizoaffective disorder as well as a history of illicit opioid use. The veteran's primary language is Spanish and interpretive services were provided throughout the evaluation including during cognitive testing.

Results: The veteran was assessed using the Montreal Cognitive Assessment (MoCA) with an overall score of 13/30. His performance on testing was inconsistent: initial near perfect performance on visuospatial and executive tasks (i.e. cube and clock draw) with subsequent inability to perform attention tasks (i.e. register 5 unrelated items repeat back to the examiner or digit span-testing). The veteran was referred for a urine drug screen which resulted positive for cocaine.

Conclusion: The cognitive assessment and application in this case highlights the role of cognitive instruments to be utilized to rapidly sort safety concerns and even malingering behaviors.

A24

Appearances Can Be Deceiving

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Background:

Elderly patients overwhelmingly present to hospital with delirium and sometimes it gives the impression of severe frailty, therefore hospice is considered. For hospital providers this is often the first interaction with a patient. Pre-hospitalization functional and cognitive status is an important predictor of outcomes.

Clinical Case:

90-year-old female with a PMHx of multiple subdural hematomas (SDH), subarachnoid hemorrhage (SAH), atrial fibrillation not on anticoagulation, recurrent falls, and peripheral arterial disease who presented to hospital after a fall. Earlier that day she was undergoing echocardiogram for possible Watchman procedure but afterwards fell after getting out of her car at home. This resulted in a nondisplaced occipital calvarium extending into external ear canal and mastoid air cells, SDH, and bilateral SAH. She was admitted to surgical ICU with no acute intervention performed by neurosurgery. She developed

delirium, which was initially hypoactive, then became hyperactive necessitating four-point restraints and antipsychotics. Palliative care was consulted for goals of care discussions given poor clinical status and hospice was considered. Geriatrics was consulted two weeks after admission. After talking to the family, we found that prior to this admission the patient was very functional. She was able to ambulate with a cane, prepare meals, and even operate a telephone. Her daughter also had no concerns about her memory. With removal of many psychotropic medications and supportive care her mentation improved markedly (alert and oriented x3) and rather than discharging to hospice she was able to participate in inpatient therapies, discharge to acute rehab, and then go home with her daughter.

Conclusion:

In this case, a patient with multiple major neurologic insults and delirium gave the impression of severe frailty and hospice appropriateness but was able to recover well enough to go to rehab and later home with her daughter despite the initial prognostication. As crucial as it is to assess a patient clinically on presentation to the hospital, basing treatment goals off a patient's pre-hospital functional and cognitive state is also of critical importance.

A25

Falls as the presenting symptom of autoimmune hemolytic anemia

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Background: Anemia in patients older than 65 years has a negative impact on performance status, functional independence, mobility and risk of frailty and falls. Several etiologies contribute to anemia in this age group and frequently represents a challenging clinical scenario.

We report a case of autoimmune hemolytic anemia (AIHA) in a patient who presented to the hospital after sustaining a fall.

Case: An 80-year-old African American male with history of mild cognitive impairment, hypertension, seizures, and left iliac artery aneurysm presented to the hospital after 7 days of weakness and inability to walk which lead to a noninjurious fall. At baseline, patient was independent in all activities of daily living, ambulated using a walker and lived with his son. Blood count on admission showed normocytic anemia, hemoglobin (Hgb) 10.8mg/dl (baseline 15 mg/dl). Serum creatinine was elevated at 1.7mg/dl (baseline 1.3), as was his creatinine kinase (600 U/L). Work-up for cardiac or cerebrovascular syncope, as well as seizure was negative. Shortly after admission, patient was noted to be icteric and with an acute drop in Hgb to 5.6mg/dl and elevated total bilirubin of 9.7 mg/dL (7.6 mg/dL indirect bilirubin) in the absence of bleeding. He was diagnosed with autoimmune hemolytic anemia positive for direct antiglobulin (Coombs) test, hyperferritinemia and reticulocytopenia. The patient underwent bone marrow biopsy which was suspicious for early monoclonal B cell lymphocytosis, however no evidence of lymphoproliferative disease. He was started on folate and methylprednisolone 1mg/kg/day (64 mg) IV for four days without improvement in Hgb. Methylprednisolone was increased to 1gm IV daily for 2 days with good response, however Hgb declined again after resuming 1mg/kg/day. Methylprednisolone was changed to Prednisone 1.5mg/kg/day po (120 mg) to which patient responded well. He was discharged on prednisone 120 mg with Hgb stable at 7-9mg/dl.

Conclusions: Our case reminds clinicians to consider anemia as a cause of falls, particularly when other etiologies are excluded. Diagnosis of AIHA in this patient required a high index of suspicion and detailed investigation for precipitating causes. Symptomatic anemia in this setting is an emergency requiring high dose IV steroids and close monitoring.

A26

Neuroinvasive West Nile Virus Diagnosed in Elderly Male Patient

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Introduction: West Nile Virus Neuroinvasive Disease (WNV-NID) is a rare cause of acute encephalopathy, a common reason for geriatrics consultation.

Case: 81-year-old man with a history significant for type 2 diabetes mellitus, coronary artery disease, and polymyalgia rheumatica presenting with several days of nausea, vomiting, dysgeusia and anosmia. The day of presentation he was unable to dress or transfer independently. Evaluation in the emergency room was significant for temperature of 102.3*F, lethargy, and confusion.

Management & Outcome: The patient was admitted and started empirically on broad spectrum antibiotics. Hospital course was complicated by diffuse erythematous maculopapular rash and rapid deterioration of mentation despite fever resolution. Work up of causes of rapidly progressive encephalopathy included Geriatrics Inpatient team consultation. MRI brain, CT c/a/p, and cEEG were performed but did identify an etiology for presentation. Peripheral blood infectious and autoimmune workups revealed positive serology for WNV (IgM only). Lumbar puncture was significant for pleocytosis (mainly PMNs) and serology positive for WNV (IgM and IgG). A diagnosis of WNV-NID was given. Additional testing revealed elevated titers of striational and acetylcholinesterase receptor antibodies, raising possibility of co-existing paraneoplastic syndrome secondary to myasthenia gravis. He received 6 doses of IVIG without significant improvement in mentation. He was discharged to skilled nursing facility.

Discussion: Although rare, WNV-NID remains a debilitating etiology for unexplained encephalopathy. In 2020 there were 2,150 of cases in the US, 1,310 (61%) of which were classified as neuroinvasive. Given the consultative role of geriatricians, particularly in evaluating elderly patients with altered sensorium, recognizing the possibility of WNV-NID is prudent given increased morbidity and mortality with older age. In our patient, there was possibility of paraneoplastic syndrome as well. Case studies have shown increased risk of myasthenia gravis in those with WNV seropositivity, suggesting a pathogen-triggered autoimmunity. Future areas of study could help elucidate the relationship between WNV-NID and risk of autoimmune reactivity. Because management of WNV is largely supportive, providing anticipatory guidance to patients and their families is a critical function of the provider.

A27

"Let Me Die" Ethical Dilemma When Patient Voice Is Drowned Out: Case Report

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Background: Geriatricians often encounter difficult end-of-life situations as critically ill elderly patient's capacity to make decisions may fluctuate due to delirium. It is not rare to face dilemma when family's wishes conflict with patient's previously stated wishes. Ethics and legal teams sometimes need to be involved when family's hopes do not match patient's tradjectory.

Case description: Mrs. L, a 90-year-old cognitively intact woman with history of extensive cardiovascular disease, pulmonary fibrosis, and diabetes, was admitted for acute leg ischemia requiring urgent above knee amputation. Her hospitalization was prolonged and complicated by delirium, respiratory failure requiring intubation, then tracheostomy, and inability to eat for which she underwent PEG tube placement. Mrs. L had previously articulated her wish in the Living Will to not be on artificial measures to prolong life, declaring herself as DNR/DNI upon admission. Her code status was reversed to Full Code for amputation surgery, after which patient's capacity to make

decisions fluctuated due to delirium. She could often nod her head yes/no to simple questions and occasionally mouthed some short phrases; She was witnessed mouthing, "Let me die" more than a few times, which was distressing for the caring teams. She had two sons who were her health care agents. Her primary health care agent, the younger son, who was highly distrustful of all the providers, strongly wished for her full recovery; Despite numerous discussions, he claimed that she would like to continue to fight and is only depressed due to amputation. The older son, alternate health care agent, disagreed, hoping for transition to comfort focused care, which eventually led to a lawsuit between the brothers. Ethics committee and the legal team were consulted, which led to appointment of a guardian for the patient. Eventually, family meeting was held with the medical teams, the appointed guardian, and lawyers of both brothers, with consensus on withdrawal of ventilator support. Mrs. L passed peacefully shortly after.

Conclusion: Discrepancy in the clinical situation and the hopes of the family is unfortunately not rare. Good communication is helpful in mitigating conflicts, however if there is a clear ethical dilemma, legal and ethics professionals need to be consulted in order to provide care that aligns with patients' wishes.

A28

The effective use of electroconvulsive therapy (ECT) in the treatment of superimposed depression on dementia in an older male

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BACKGROUND:

Dementia and depression can be co-morbid. Treatment of superimposed depression on dementia can be challenging for two key reasons. First, symptoms of depression often overlap dementia. Second, patients with dementia often underestimate or underreport depressive symptoms. We demonstrate a safe and effective case of the use of electroconvulsive therapy (ECT) in the treatment of superimposed depression on dementia in an older male who presented to our hospital.

METHOD:

Brief Case Report

PARTICIPANT:

A 68-year-old man who presented with adult failure to thrive and was found to have depression superimposed on dementia.

INTERVENTION:

The patient was admitted to an inpatient psychiatric unit for treatment of depression. His therapeutic regimen included ECT three times weekly, stimulant, and antidepressant.

MEASUREMENTS:

Patient underwent MoCA and Mini-cog testing.

RESULTS:

Patient's MoCA score improved after treatment with ECT.

CONCLUSION:

In general, patients who undergo ECT for the treatment of depression may experience reversible cognitive side effects. Notably, the side effect profile of ECT, especially in elderly patients with dementia, remains largely unknown. Furthermore, it is known that use of psychotropics including antipsychotics in the elderly carry great risk. Greater consideration of ECT as a therapeutic intervention for depression continues to be warranted in elderly patients, particularly those with dementia.

A29

Unusual Presentation of Multiple Myeloma in Elderly Patient

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Introduction--81 year old female with depression; diabetes mellitus, hypertension; goiter developed a localized red, itchy, flat and dry rash in lower and upper extremity and back after starting antidepressant (Mirtazapine) in March 2018. Since it did not resolve after stopping medication, was seen by dermatologist and biopsy showed drug reaction, nummular eczema. It initially improved with topical steroid but recurred. She was referred to allergist in April 2018, was started a trial of Allegra, Zantac and topical ointment for possible food allergy. Basic laboratory evaluation was unremarkable including normal calcium, renal function, no anemia, normal protein, except elevated IgE, M spike in immunofixation. Thyroid ultrasound revealed heterogeneous enlarged left lobe of the thyroid, increased in size from 2 years ago. PET scan in May 2018 revealed abnormal metabolic activity in the left neck, likely pathologic lymphadenopathy, and small areas of active myelomatous involvement in the proximal shafts of the right humerus and right femur and questionably L4 spinous process. Bone marrow biopsy was consistent with multiple myeloma(MM). Pt was started chemotherapy, on follow up had disease progression, so regimen was changed. She missed few treatments due to family issues, but later resumed chemotherapy, but after few months she expired in 2020.

Discussion: MM, hematologic malignancy of plasma cell, presents with bone pain, anemia, or renal failure, sometimes blood work can be unremarkable until late like in our patient. Cutaneous lesions are rare and even unusual during its course, cutaneous plasmacytoma though specific occurs late in course of the disease. There are only few reported cases of cutaneous presentation of MM. Rarely leucocytoclastic vasculitis, urticaria, autoimmune bullous diseases, and pyoderma gangrenosum may be the initial presentation of MM. This can pose a diagnostic challenge to the physician as the strength of association of these conditions with MM is reportedly low. Rash not responsive to conventional therapy is an important clue.

Ref: Cutaneous Manifestations of Multiple Myeloma: Binodini Behera, Monali Pattnaik, Bharti Sahu, Prasenjeet Mohanty, Swapna Jena, and Liza Mohapatra

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A30

New-Onset Severe Anorexia During COVID Pandemic May Have Little to Do with COVID

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Introduction

Social isolation at any age may lead to depression; coupled with social distancing guidelines during the COVID-19 pandemic can have psychological effects in older adults. We discuss a case of new-onset anorexia noted during the COVID pandemic following retraction of family visits to the nursing home.

Case

70-year-old female with schizoaffective disorder, insomnia, cataracts, and arthritis was in long-term care since 2015. Late in 2020, she became lethargic after she stopped eating anything for over a day despite encouragement to feed and being offered her preferred meals. She was disinterested in participating in her preferred activities and no energy to get out of bed. Evaluation failed to reveal metabolic disorders or infection. She was placed on intravenous fluids for 5 days. A psychiatry consult confirmed depression; mirtazapine was initiated with no relief of manifestations. She expressed sadness at not seeing her son who used to visit regularly. She scored 2 and 14 in PHQ2 and 9 respectively. Medications: aripiprazole, melatonin, mirtazapine,

bupropion, and zolpidem. She was COVID-19 negative. Video calls helped her see and speak to her son, but she remained sad and refused to eat. An exemption was sought from the facility to allow her son visit despite restrictions due to COVID protocols. Exemption was granted. On the very day of her son's visit, she began to eat all her meals with supplements; she continued to eat well as her son visited regularly.

Discussion

Anorexia is a common manifestation of depression, illness, or medication adverse effect in older people. Loss of smell and taste with anorexia is a common manifestation of COVID-19 illness. While prescribing medications to enhance appetite may be an easy option for physicians, taking the time to listen to the patient and looking for a reason often offers a more effective and satisfying solution. In this case, the cause of anorexia and poor intake was depression brought on by the son's prolonged absence. The improvement was dramatic upon his return. Guidelines are at best a guide, but individual approaches may often solve an identified problem.

Lessons learned

New-onset anorexia is common in older adults in the COVID epidemic; yet, it pays to search for another identifiable cause.

Social isolation is common during epidemics and associated with depression, warranting steps to address the impact of isolation on moods.

A31

Bias in Geriatric Fibromyalgia Patients

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Fibromyalgia is a condition which produces non-specific, widespread pain and has a strong correlation with underlying psychosocial factors. It has been considered a negative stigma, particularly affecting female patients. Studies demonstrate early labeling of these patients results in missed diagnoses and delayed care (Yunus). Additionally, there has been notable gender bias in management of chronic pain in elderly female fibromyalgia patients compared to males (Yunus). The following discussion illustrates the case of a 67-year-old female with PMHx of depression, fibromyalgia, and IBS, who experienced several alarm symptoms for 13 months before a diagnosis of ovarian cancer was finally established. Throughout the patient's clinical course, fibromyalgia was often cited by different healthcare professionals, despite serious warning signs. This resulted in delay of patient care and significant emotional distress. Patient presented with abdominal pain, early satiety, nausea, and constipation. Basic labs and CT w/o contrast were performed and negative for acute findings. It was suspected that patient's symptoms were secondary to fibromyalgia and non-pharmacologic methods were recommended. Patient continued to have symptoms and psych/pain medications were added. After several months, patient was referred to different specialists, all who documented patient's original diagnosis of fibromyalgia. Throughout the year, patient had a total 50-pound weight loss and dramatic decline in functional status. Eventually, CT abdomen/pelvis with contrast was performed which demonstrated extensive calcified lesions consistent with peritoneal carcinomatosis. She was immediately referred to oncology and underwent radical hysterectomy with pathology showing serous ovarian carcinoma. Post surgically, patient was started on chemotherapy and had complete resolution of symptoms. The purpose of this discussion is to underline common bias seen in geriatric care, particularly in those with fibromyalgia. Although the underlying diagnosis for this patient was eventually discovered, the delay in care may have been prevented with consistent workup early on. Fibromyalgia is a diagnosis of exclusion and it is essential for physicians to rule out other conditions before patients receive this label.

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A32

PEG Tube Occlusion Is Preventable: An Ounce of Water Is Good for Prevention

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Background

Percutaneous endoscopic gastrostomies (PEG) help provide nutrition in persons unable to feed normally. However, PEGs often fail to function satisfactorily and are associated with poor outcomes, some preventable.

Case

An 85 y/o female with advanced dementia, hypertension, diabetes, heart and kidney disease was admitted to the long-term care in 2018 after a hospital stay for falls and anorexia, severe malnutrition, and failure to thrive. PEG was placed in the hospital after discussions with family. A neck mass was diagnosed as a submandibular gland with a sialolith. Her PEG feeds included pureed, nectar thick feeds at 1485 kcal/24 hours, with instructions to flush with 30 ml of water before and after feeds. Medications: aspirin, clonidine, ferrous sulphate, insulin, hydralazine, vitamins, nicardipine, acetaminophen. She developed hypokalemia (3 mEq/L) (not on laxatives/diuretics, no diarrhea); was given a single dose of 40 mEq potassium chloride via PEG. Shortly, the PEG was found blocked by crystals; attempts to flush the tube failed. The PEG was replaced ultimately.

Discussion

The decision to place PEG is complex and follows discussion with patient's proxy/caregiver, on the pros and cons, without offering undue expectations, better quality of life (QOL) or enhanced life expectancy. PEGs are associated with aspiration, local trauma, increase in pressure ulcers, and worsening of QOL. Once placed, efforts are required to maintain a functioning PEG and patency. The most common reasons for tube occlusion are medication-induced occlusion, polypharmacy, incompatible drug-enteral formulation, and failure to maintain flushing protocols. Flushing regularly with water, a cheap resource, pre/post feeds and medication administration helps PEG longevity. Extended-release medications cannot be crushed and administered via PEG. If possible, liquid preparations of medications are better, although sorbitol induced diarrhea may result. When water fails to unclog, warm saline flushes, enzymatic agents, mechanical devices such as the Tube Clear System, wire manipulation, colas, and acidic juices are options that may be helpful.

Lesson learned

PEG occlusion from medications is common but largely preventable.

Liquid formulations when available and flushes with water pre / post-feeds and medications must be routine.

An ounce of water for prevention will prolong PEG life!

A33

Mirtazapine augmentation for treatment resistant depression in a patient with insomnia and frequent hypertensive urgency

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INTRODUCTION: Mirtazapine is a non-adrenergic and specific serotonergic antidepressant. Its mechanism of action involves A2 adrenergic receptor blockade, enhancing serotonin and norepinephrine release. It is associated with increased sleep efficiency and total sleep time and decreased sleep latency in patients with major depression and insomnia, with no suppression of REM sleep. Common indications for its use include unipolar major depressive disorder, panic disorder and chronic tension type headache prophylaxis. It is often used in augmentation of mainstay therapy for major depressive disorder.

CASE: A 71-year-old female with type 2 diabetes mellitus on insulin presented with uncontrolled hypertension, insomnia, generalized anxiety disorder and treatment resistant depression. She was

previously treated with paroxetine with inconsistent response over 10 years. After shared decision making, paroxetine was changed to sertraline and patient was referred to psychiatry. Owing to lack of significant clinical response, sertraline was titrated to maximum tolerated dose of 100 mg/day over 4 months. During this period of up titration of sertraline and close follow up with both psychiatry and primary care provider, patient experienced frequent episodes of hypertensive urgency associated with disabling anxiety diagnosed as panic attacks. After interdisciplinary discussion, clonidine was added and was associated with at best modest control of blood pressure without improvement in anxiety. Olanzapine was also trialed without significant improvement. Eventually mirtazapine augmentation was started at 15 mg/day for her worsening anxiety and insomnia. On two-week follow-up visit, patient reported significant improvement in her depression, sleep duration and significant reduction in her baseline anxiety.

DISCUSSION: Healthcare providers should be aware of possible adverse effects such as hypomania and hyponatremia associated with strategies like augmentation and combination with the use of these agents. Our case was predicated by multiple biases - premature closure, confirmation bias, and availability bias. Uncontrolled depression masquerading as hypertensive emergency resolved following mirtazapine augmentation. This is an important reminder of variable presentation of common diagnoses and highlights the importance of provider persistence in finding the right drug combination for a patient to regain basic quality of life.

A34

Acute post-operative anemia due to blood loss contributes to delirium in the elderly: a case study

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Background: Delirium is a common clinical problem in hospitalized elderly patients especially in the postoperative setting. Anemia is not only a frequent postsurgical complication but can also be associated with a postoperative delirium partly through impairment of cerebral oxygenation. This can lengthen the duration of hospitalization and result in increased morbidity and mortality.

Methods: An 83 year old woman with history of colon cancer, status post right hemicolectomy, presented to colorectal surgery clinic after evidence of interval development of an abdominal hernia, a left sided mass and pain. CT showed enlarged lymph nodes and a colonoscopy revealed a villous adenoma of the left descending colon which was confirmed as benign on biopsy. Although on histopathology the mass was benign, it was treated as malignant based on characteristics found on imaging and clinical features. Hence, she underwent a left hemicolectomy with ostomy in addition to the hernia repair.

Results: Patient was cognitively intact and lucid preoperatively and on post-operative day 1. However, on post-operative day 2, the patient had an acute change in mental status, after the hemoglobin and hematocrit had dropped from 11/35 to 7.1/23. No other significant laboratory abnormalities were observed. The primary team called the geriatrics consult service who made the diagnosis of post-operative delirium. Although, changes in environment, presence of pain, and post-operative stress can each contribute to delirium, the geriatrics team was of the opinion that the predominant contributing factor for the change in mental status was cerebral hypoxemia secondary to acute blood loss and anemia. Geriatrics recommended blood transfusion to maintain hemoglobin level above 8 g/dl. Patient was transfused with 2 units of PRBCs, resulting in an increase in Hb to 9.8, with rapid improvement and prompt resolution of her delirium.

Conclusion: As demonstrated in this case, post-operative anemia due to blood loss in the elderly can contribute to post-operative delirium. Awareness of anemia as a contributing factor for the development of delirium is key because early treatment of the anemia can reduce the intensity and duration of delirium and thereby significantly improve clinical outcomes in elderly patients.

A35

Newly Diagnosed Late-onset Myasthenia Gravis in a Nonagenarian: A Case Report.

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Background: Myasthenia Gravis is an autoimmune disorder where autoantibodies against acetylcholine receptors cause dysfunction of the neuromuscular junction and present as fluctuating weakness of skeletal muscles in variable combinations. The incidence and prevalence of late-onset myasthenia gravis (LOMG) in octogenarians and nonagenarians is very low. The existing therapies include anticholinesterase agents, immunosuppressive and rapid immunomodulatory therapies.

Methods: A 93-year-old woman, previously independent in her ADL s and IADL s, was brought to her primary care physician (PCP) with 'droopy left eyelid' and mobility issues for 6 weeks. Examination revealed ptosis of the left eye and normal lab findings. She was started on aspirin and referred to ophthalmology. Visit with Ophthalmology revealed weakness of voice, weakness of neck muscles and ptosis of left eye. She was diagnosed with Myasthenia Gravis and started on Pyridostigmine 60 mg t.i.d. At a 2-week follow-up visits her symptoms worsened with generalized weakness and significant shortness of breath on exertion. Patient was brought to the emergency room immediately.

Results: On examination, significant findings were a left-sided ptosis, weakness of neck flexors, deltoids, triceps, biceps, and hand grip. Her single breath count was only 10, negative inspiratory force (NIF) around 20 cm of water and bedside ice pack test was positive (improved ptosis). Her workup was significant for presence of serum acetylcholine receptor binding / blocking / modulating antibodies. CT scan of chest, abdomen and pelvis was negative for neoplasms. She was admitted to ICU for myasthenia crisis watch and was treated with daily intravenous immunoglobulin at 400 mg/kg dose and low-dose prednisone. After 5 days of treatment, the patient's ptosis, neck muscle weakness and shortness of breath improved significantly. She was discharged home with follow-up at the neurology clinic.

Conclusion: Clinical identification may be more difficult with late onset myasthenia gravis since advancing age itself can cause decreased total eyelid area with sagging of the lower eyelids and facial muscles. Our report demonstrates that maintaining a high index of suspicion with prompt diagnosis and therapy can lead to excellent recovery and prognosis, even in a 93-year-old nonagenarian.

A36

Late-onset Systemic Lupus Erythematosus with Neuropsychiatric Features

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BACKGROUND

Systemic lupus erythematosus (SLE) is an autoimmune disease characterized by the presence of nuclear auto antibodies leading to an immune complex formation and inflammation of multiple organs[1]. This disease mostly affects women of reproductive age. Late-onset SLE (LO-SLE) is considered in individuals diagnosed with SLE after the age of 50[2]. The incidence of LO-SLE is only 12-18%[3].

CASE

A 66-year-old Hispanic male with diabetes mellitus developed progressive weakness, weight loss and cognitive decline. Mirtazapine was prescribed as an appetite stimulant, but when he was admitted with confusion and falls, it was discontinued as it was presumed the

cause of his symptoms. After discharge to a skilled nursing facility the presence of pancytopenia, proteinuria, history of new onset psychosis, arthritis of the small joints and perioral rash lead to the suspicion of SLE. Further workup revealed Antinuclear antibody (>1:2560), double stranded DNA antibody (>1000), Complement 3 (23), Complement 4 (8), proteinuria (3.9 grams/24 hour), C-reactive protein (32mg/L) and rheumatoid factor (28 IU/ml). Vitamin B12, Folate, TSH, CSF study, MRI of brain and brain stem were all unremarkable. Renal biopsy showed diffusely proliferative and membranous lupus nephritis class IV. Despite aggressive treatment he clinically deteriorated and was admitted to hospice at family request.

DISCUSSION

Neuropsychiatric manifestations (Ischemic Stroke, Vasculitis, Cognitive Impairment, Antiphospholipid Syndrome, Psychosis, etc.) occur in majority of patients suffering from SLE. Antiphospholipid antibodies increase the odds of neurological complications and are common in patients with SLE. LO-SLE patients manifest higher rate of rheumatoid factor, antinuclear antibody, anti-Ro and anti-La antibodies. LO-SLE also characterizes smaller female to male ratio. Treatment goal is of remission or low disease activity, as well as minimizing damage attributable to medication side-effects[4]. Despite recent therapeutic advances, the morbidity of SLE remains considerable. The most common causes of death in patients with SLE are renal disease, cardiovascular disease and infection. Given the relative rarity and clinical feature overlap with other conditions, LO-SLE has had less clinical awareness resulting in a delay of diagnosis and management.

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A37

A veteran with a thigh hematoma as an initial presentation of Vitamin C deficiency (Scurvy)

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Introduction: Scurvy is a clinical syndrome that is caused by a deficiency of vitamin C. Risk factors include alcohol and tobacco use, low-income, and male gender. Scurvy is characterized by bruising, perifollicular hemorrhage, petechiae, gingivitis, arthralgias and anemia. The consequences of missing the diagnosis can be severe and the treatment is simple the diagnosis should not be missed.

Case Description: The pt. is a 65 yo male admitted to a Veterans Affairs Skilled Nursing facility for physical therapy.

The pt. had been admitted to a VA hospital with shortness of breath and a thigh hematoma. He was homeless and admitted to heavy alcohol use. His diet consisted of eating mostly at fast food restaurants. His fruit and vegetable diet intake were onions and pickles on fast food burgers. He was afebrile, pulse 127 and BP of 97/68. He had a firm ecchymosis over left medial thigh in addition to 1cm purpuric lesions over bilateral lower legs and chest. lab data showed a hemoglobin to 11.8 (baseline 16 one week prior) with continued downtrend to 7.8 during hospitalization. A CT of left lower extremity demonstrated skin thickening and soft tissue edema within superficial and deep subcutaneous tissues of left thigh, most pronounced over medial aspect with diffuse nodular infiltration

A biopsy ruled out vasculitis as potential etiology. His Vitamin C level which was pending came back as undetectable. The pt. was started on Vitamin C 100 mgs po daily. At the time of discharge the thigh hematoma had improved but not resolved and his Hgb had stabilized. He was to have follow up with his PCP and dermatology.

Discussion: Vitamin C deficiency is more common than might be thought, the prevalence varies from 7 % in the U S and up to 74 % in North India, however overt scurvy is rare in industrialized countries.

Institutional and long term care settings may predispose to some vitamin deficiencies such as vitamin D deficiency especially in winter months. However most long term care setting have access to fruits and vegetables and have oversight with registered dieticians making scurvy something that clinicians do not see often and may not be high on a differential. However if a clinical scenario is compatible, we should have a high clinical suspicion and Vitamin C deficiency should be considered and treated

A38

Tacrolimus Induced Catatonia-A Costly Tale

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Background: Medication related adverse effects often contribute to morbidity in older adults with complex care needs, which may contribute to increase healthcare utilization. We present a unique case with medication induced catatonia, resulting from an adverse drug reaction.

Case Presentation: A 58 year old male with history of depression since 2015 on sertraline, s/p renal transplant in 2004, on tacrolimus (7mg/6mg) and mycophenolate, presented with gradual decline in mental status over 3 months. With no prior history of catatonia, family reported minimal responsiveness, limited expressivity and not acting himself.

On physical exam, patient was mute. withdrawn, but alert to self, not following commands. He was noted to be stiff along with bilateral upper extremity rigidity. Given the suspicion for serotonin syndrome, sertraline was held. Tacrolimus level was 7.8.

Neurology, rheumatology and psychiatry services were consulted to evaluate the decline in mental status. Multiple findings were suggestive of catatonia. Extensive evaluation included CT/MRI Brain, EEG, CSF analysis, paraneoplastic panel, HIV, syphilis, COVID-19, urine toxicology, heavy metal screen, thyroid panel, autoimmune panel, complement studies, SPEP and infectious workup. All were inconclusive.

Given no obvious infectious, neurologic, rheumatologic, metabolic or malignant etiology, psychiatry favored the diagnosis of medication induced catatonia due to tacrolimus. Naranjo Scale score was 1-2. Tacrolimus was switched to cyclosporine a month after his presentation.

He was treated with lorazepam and had clinical improvement with mutism, increased interactivity and spontaneous behavior though rigidity and hyperreflexia persisted. Despite up titrating lorazepam, clinical improvement was unimpressive. He subsequently required

electro-convulsive therapy with significant improvement in resolution of hypertonicity, frontal release signs and primitive reflexes. He was discharged to subacute rehabilitation.

Conclusion:

Rational prescribing is common in older adults with complex care needs and may result in a drug-induced disease. Often times adverse drug reactions may be unpredictable. Clinicians should maintain a heightened level of vigilance, knowledge and awareness for ongoing adverse drug event monitoring for less common idiosyncratic reactions, which may lead to potential morbidity and mortality and increased health care utilization.

A39

Expressive aphasia as an unintended consequence of nitrofurantoin use in elderly

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Background:

Urinary tract infection is a common infection in adults 65 years and older. Nitrofurantoin is a commonly used broad-spectrum antibiotic with both gram positive and negative coverage. However, it is listed in the Beers List as being inappropriate for use in the elderly. In patients with renal impairment, the renal excretion of nitrofurantoin is decreased and drug does not reach urinary minimum inhibitory concentrations. Nitrofurantoin has inadequate therapeutic effect in these patients while the systemic drug accumulation increases the risk of adverse events. The most common adverse effects include weakness, dizziness, headache, confusion, nausea, hepatotoxicity, pulmonary toxicity, eosinophilia and peripheral neuropathy. This case elucidates the potential toxicity of this drug in a nonagenarian who developed transient expressive aphasia during nitrofurantoin therapy.

Case description: A 95 year old F with medical history significant for HTN, HLD, renal impairment (GFR 34), chronic constipation and recurrent UTI (with multiple antibiotic allergies) who presented to the office with complaints of new onset expressive aphasia and confusion. Patient had recently been diagnosed with Klebsiella and E. Coli UTI 4 days prior during an ED visit and was started on nitrofurantoin 100 mg. Patient and her family noticed by Day 2 of therapy she was having word finding difficulty. There was no associated headache, dizziness or weakness. Her neurologic exam was positive for expressive aphasia. After discontinuing nitrofurantoin, her symptoms spontaneously improved approximately 5 days after treatment.

Discussion:

This case shows the potential for encephalopathy and expressive aphasia with use of nitrofurantoin. In 2015 AGS Beers Criteria revised its recommendation to avoid use of nitrofurantoin in renal impairment from patients with a ClCr < 60 ml/min to those with ClCr <30ml/min based on results of 2 large retrospective studies. This change and increased resistance to other antibiotics has resulted in a surge in prescribing among the elderly. However we need to continue to weigh the risks vs benefits of therapy as nitrofurantoin is associated wtih significant adverse effects. It is also important to educate patients on these potential side effects as this will help to improve patient outcomes.

A40

Dementia or misunderstanding? Communication challenges in a hospitalized non-English-speaking older adult with dementia

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Background

Communication with healthcare professionals can be a challenge for non-English-speaking older adults. From differences in culture and caretaking roles, to unique personalities and the presence or absence of non-verbal cues. Although studied in some care settings, such as nursing homes, little has been published about the treatment challenges with hospitalized non-English-speaking older adults, particularly those with dementia. We review a case of a non-English speaking hospitalized older adult and the barriers to communication impacting his care.

Case

78-year-old fully dependent male with dementia arrived from Uruguay with his daughter 3 days prior to admission for altered mental status and lethargy. Medical history includes rapid decline in cognition over the past 4 years. Following his retirement and a change in residence, his family noted depressed affect, aggressiveness, hallucinations, and wandering. He was diagnosed with Alzheimer's Disease in Uruguay several months ago. Following some hospitalizations and drug-induced parkinsonism, he was brought to the U.S. to be close to family. In the hospital, the patient remained mostly uncommunicative despite the use of interpreters, and rejected food from providers, leading to concerns for delirium. It was not until an exception was granted for his daughter to assist in his care that the patient began to speak and accept food. Through his daughter, we learned that the patient had always been shy except when with her.

Conclusion

Communication challenges for hospitalized non-English-speaking older adults with dementia require attention. To comprehensively evaluate and treat "altered mental status" in the hospital, it is imperative to consider cultural and social contributions and to make adaptations to standard communication practices. This should include but is not limited to detailed history from and presence of loved ones at the bedside, presence of familiar objects (photos, blankets, food) and activities (music, activities), and the use of in-person interpreters. The Covid-19 pandemic further complicates communication with this subset of patients by the use of technology, use of personal protective equipment, and visitor restrictions. It is critical to help orient patients by creating as familiar of an environment as possible.

A41

Recurrent herpes zoster in an immunocompetent patient

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Background:

Herpes zoster (HZ) is caused by the reactivation of varicella (VZV) dormant in sensory and autonomic nerves. Once exposed to chicken pox, VZV remains latent and reactivates due impairment of immunity due to aging or stress. HZ is considered to be a once in a lifetime experience and recurrence is thought to be rare. However new studies show that recurrence is more prevalent than previously believed. Recurrence is not just limited to special populations with hematologic malignancies, exposure to chemotherapeutic or immunetoxic agents like arsenic. One study found recurrent HZ risk ranges from 1% to 6% with no real difference between immunocompetent and immunocompromised patients (Nakamura et al). Below we describe a case of recurrent HZ in an immunocompetent elderly female.

Case:

An 85-year-old F with past medical history of vitamin b12 deficiency, shingles who presented with complaints of painful red spots, itching, tingling and burning along T5-T10 left sided dermatome of her back. She never received the shingles vaccine. She reported 2-3 episodes per year. She had no history of immunocompromising condition. She was previously seen by an ID specialist and started on Valtrex 1000 mg TID. Upon my evaluation she had a mildly erythematous rash along T5-T10 dermatome extending to the back. Labs ordered included CBC, CMP, protein electrophoresis, immunologic workup including B and T cell count which were unremarkable. She was referred to infectious disease and started on famvir for 10 days. Upon re-evaluation patient's rash resolved.

Discussion:

The risk of HZ increases as population ages. There has been an increase in number of cases of recurrent zoster especially in unvaccinated patients (Yawn et al). Older patients are especially at risk because immunity wanes with age. Aging affects the immune system at multiple levels - reduced production of B and T cells in bone marrow as well as diminished function of mature lymphocytes in lymphoid tissues. While the CDC recommends a single dose of HZ vaccine for people age 60 and older whether or not person reported a prior episode of zoster, this may be not enough to prevent recurrence. There may be a role of suppressive therapy in these patients. Recurrent HZ is associated with disruptive symptoms. Currently suppressive therapy is only recommended in immunocompromised patients - HCT recipients for 1 year following transplant. Suppressive antiviral therapy may be beneficial in these patients.

A42

Out of the Frying Pan and Into the Fire

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Background

After fleeing to Pennsylvania during the NYC pandemic, a patient avoided COVID-19, but contracted West Nile Virus (WNV). WNV is an arthropod-borne arbovirus that first appeared in North America in 1999. 80% of those infected are asymptomatic, 20% develop febrile illness, and < 1% develop neuroinvasive disease. We present a case of WNV in an older adult who developed neuroinvasive disease with associated movement disorder and bladder dysfunction.

Case description:

An 87 year old woman with history of hypothyroidism, CAD, CVA, atrial fibrillation, CKD, and mild cognitive impairment presented to a hospital with altered mental status (AMS). She stabilized and was discharged home. Due to reoccurring fevers and AMS, she was readmitted with a temperature of 101.5F.

Physical exam showed obtundation, grimacing upon palpation of suprapubic region, unintentional tremor in upper extremities, and negative Brudzinski and Kernig signs. Labs were unremarkable. Chest x-ray, and contrast (CT) angiogram of chest were negative; non-contrast CT abdomen showed no source for infection. MRI of the brain showed chronic changes suggesting microvascular ischemic disease, chronic small left cerebellar infarct and moderate parenchymal volume loss. Given AMS and history of suspected recent insect bite, patient was empirically treated for viral, bacterial, and vector-borne meningitis. Fevers persisted and patient's mental status fluctuated. Lumbar puncture was suggestive of viral meningitis. Eventually, West Nile Virus IgM was positive in CSF, IgG was negative. Other serologies were negative. Antibiotics and antivirals were discontinued. Mental status slowly improved but due to persisting urinary retention she was discharged home with an indwelling urinary catheter. Eventually both the urinary retention and tremors resolved.

Conclusion:

WNV neuroinvasive disease is suspected to follow viral penetration of the blood–brain barrier and direct invasion of neurons. This patient's WNV meningoencephalitis was confirmed by detection of WNV IgM in CSF. Her symptoms included AMS, dyskinesia/tremors (present in up to 90% of WNV-seropositive patients), and acute urinary retention (bladder dysfunction occurs in 3-63% of patients with neuroinvasive disease).

A43

Cefepime Induced Delirium Can Mimic Acute Stroke

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BACKGROUND:

Cefepime is a 4th generation cephalosporin often used to treat gram-negative infections.

CASE REPORT:

A 79-year-old woman with a history of hypertension, anxiety, chronic pain, fibromyalgia, peripheral neuropathy, prior right AKA, and CVA was admitted with acute osteomyelitis and cellulitis of 3rd toe. Initially she was tachycardic at 140, and EKG showed sinus tachycardia. Diastolic BP was around 100. The HR slowed after rehydration, and BP normalized with analgesia. CBC showed mild leukocytosis with neutrophilia of 74%. ESR and CRP were elevated at 56 and 146, respectively. Lactic acid was normal. She tested negative for COVID-19, RSV and influenza. CXR showed low lung volumes. Blood cultures were drawn before initiation of antibiotics (Vancomycin and Cefepime). Orthopedics evaluated the patient.

On day 1, the patient was found noted to be confused. CT of head showed extensive periventricular and subcortical white matter hypodensities. MRI of brain showed no acute abnormalities. MRA showed no abrupt vessel occlusion of the circle of Willis. Aspirin and statin were recommended by Neurology.

On day 6, the Geriatrics team was consulted. The patient was minimally verbal, not following commands. She did have perseveration and answered with "What" or "Wait" to most questions.

Blood cultures returned showing no growth, and the mild leukocytosis had resolved.

Her acute delirium was thought to be multifactorial, due to infection, pain and possibly some contributing medication (probably Cefepime).

Patient's home dose of Gabapentin and Duloxetine were halved and scheduled Tylenol was recommended. Cefepime was discontinued and Rocephin was started.

On day 7, the patient underwent left 3rd toe amputation. Her mental status improved and she became more attentive and was able to answer orientation questions correctly by day 8.

On day 9, she was back to her baseline mental status. She experienced no worsening of her delirium post-op.

CONCLUSION:

This case focuses on the importance of recognizing the effects of antibiotics on cognition and mental status in geriatric patients. Cefepime induced encephalopathy can occur even with normal renal function and can lead to marked changes in mental status. For patients presenting with expressive aphasia and changes in mentation, prompt removal of the delirium-contributing drug may allow for rapid resolution of the delirium.

A44

Making the Case for What Matters: Patient- Centered Cancer Surveillance in Myotonic Dystrophy Type 1

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Background: Myotonic Dystrophy Type 1 (DM1) is a musculoskeletal disorder affecting multiple body systems including ophthalmic, cardiac, endocrine, and respiratory, hence requiring multisystem surveillance for secondary complications, including cancer. DM1 has a mutation in the *DMPK* gene which increases the propensity for malignancy, up to twice that as compared to the general population. An interdisciplinary approach with coordination among specialists (e.g. neurologist, endocrinologist, cardiologist, ophthalmologist, geriatrician) is needed for monitoring and screening of related illness/cancer as DM1 progresses. Ultimately, individualized approach to what matters in aging adults is paramount and coincides 4M's of the Age-Friendly Health System Care Model.

Case Presentation: 67-year-old female with advanced DM1, FTT, Afib, and thyroid nodules was admitted to a nursing home exhibiting progressive truncal weakness, dysphagia, dysarthria and ADL difficulties. She rapidly developed a firm 3cm mass under her right mandibule, prompting further evaluation. FNA revealed acinic cell/mucoepidermoid carcinoma. Geriatric Oncology guided her work-up which included neck CT showing right parotid tail mass, concerning for primary salivary gland neoplasm and abdominal/pelvis CT with soft tissue pancreatic lesion with severely dilated pancreatic duct, again suspicious for malignancy. Attempted Endoscopic Ultrasound for pancreatic biopsy was aborted due to hypoxia and respiratory distress. Ultimately, she and her spouse opted for comfort care measures and hospice care, declining further disease directed treatment.

Discussion: This case highlights the need for a patient-centered, interdisciplinary team approach to care of older adults with DM1. Cancer surveillance recommendations from DM professional societies align with USPSTF for breast, lung, colon, and cervical cancer screening. Providers can also evaluate for CNS, abdominopelvic (uterus/ovary/pancreas) and thyroid cancer and encourage skin self-examination. In our case, progressive debility, respiratory compromise and elicited goals of care discussion precluded further work-up of her two malignancies. Given high risk of multiple malignancies in DM1 older patients, cancer screening, evaluation and treatment should be individualized and account for goals of care, prognosis and first and foremost, consistent with age-friendly care.

A45

Bullous Pemphigoid-Geriatric presentation may be a non-bullous rash

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Back ground:

Bullous pemphigoid is a chronic, inflammatory, subepidermal, blistering disease. It can present as a diffuse eczematoid rash without blisters.

Case:

60 year old male with HTN and residual right sided weakness and partial aphasia from an old stroke presented to our hospital in spring 2020 with a diffuse body rash with excoriations as well as confusion and weakness. Initial Derm consult felt it was drug rash vs acute eczematous dermatitis vs psoriasiform dermatitis vs other Livedoid vasculopathy

Dermatology performed a spot biopsy of abdomen and punch biopsy of lesion to leg. Results yielded eosinophilic dermatitis on abdomen and fibrosing dermatitis likely lividoid vasculopathy. Immunopflourescence was missed with this sample.

Bullous pemphigoid antibody results returned positive a few weeks later. He was started on topical steroids as well as high dose oral prednisone. He was readmitted to the hospital 2 months later with a worsening rash as he had stopped medications. Another punch biopsy performed this time with immunofluorescence. It showed: Eosinophilic spongiosis and linear basement membrane zone staining consistent with bullous pemphigoid. Immunofluorescence stained sections were stained for IgG, IgA, IgM, C3 and fibrinogen. There was linear staining along the basement membrane zone with C3. T. Labs were remarkable for leukocytosis only.

The patient was placed back on high doses of steroids and also started on Cellcept 1000 mg bid. This time because of loss of social supports he was sent to a Skilled Nursing Facilty (SNF) to get sub acute rehab and ultimately became LTC. The rash responded within weeks and he was able to wean off steroids slowly over next few months.

Conclusion:

Bullous pemphigoid is a well-known Geriatric skin syndrome. A high index of suspicion is needed and biopsies must be sent for IMF as the typical tight blisters may not be present. Our patient only exhibited a diffuse red excoriated rash.

A46

The story of a toothache-How multiple teeth abscesses caused a dramatic multisystem presentation?

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Background: Tooth infection is a known cause of endocarditis with sequelae. Our case highlights a dramatic presentation where TEE was negative but presentation fit a severe endocarditis with newly precipitated metabolic complications. Though our patient was chronologically not in a geriatric age bracket yet developed numerous complications from poor metabolic health and multiple decompensations typical of geriatric patients.

Case: 46-year-old male with a history of hypertension and hyperlipidemia and no known prior DM had recently been feeling very fatigued with poor appetite and weight loss. He presented to our ED due to tonic- clonic seizures. Glucose was 1169, WBC was 30 k and creatinine was 1.8. The patient was intubated and transferred to the MICU. He was started on HHS protocol with fluids and insulin. He was found to have septic shock from MRSA bacteremia with source identified as multiple tooth abscesses on a CT head and neck done at presentation.

He required pressors. From empiric antibiotics he transitioned to Vancomycin. Patient grew MRSA from blood cultures and dental abscess fluid. TEE was negative for vegetations. Dental consult found multiple broken down teeth with generalized severe decay throughout mouth. CT report confirmed large peri apical abscesses hence 12 teeth were removed some at bedside and some later in the OR. One week into his illness, shortly after extubation, he developed an acute mental status change and right arm weakness and an MRI showed multifocal acute infarcts involving the bilateral frontal lobes, right corona radiata, left globus pallidus, right occipital lobe, pons, and left cerebellar hemisphere. Most were punctate in nature. Neurology and ID both felt it was likely septic emboli even though TEE was negative.

He was discharged to our affiliated SNF and ultimately was switched to Daptomycin (Vancomycin caused a rash) and completed an 8 week course. Despite critical illness neuropathy from his severe illness, bladder retention and the septic embolic strokes he progressed rapidly with PT. He was discharged to the community within 6 weeks and ultimately made complete cognitive and neurological recovery.

A47

Cognitive and Functional Decline in Nursing Home Residents During the COVID-19 Pandemic: A Case-series

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Background

COVID-19 has impacted recreational and social activities as health departments have restricted these activities, especially in nursing homes. While social isolation is associated with poorer mental health outcomes and cognitive decline, the effects of the pandemic on mental and physical function are unclear. This case-series aims to describe three patients at a nursing home who had accelerated cognitive and/or functional decline during the pandemic.

Methods

We performed a retrospective chart review at a skilled nursing facility in Illinois. A total of 3 (all with dementia) out of 26 residents were identified as having rapid cognitive and/or functional decline after the start of the pandemic. We present patient characteristics and outcomes during this time period.

Results

Case 1: Prior to March 2020, he was ambulatory with rolling walker; standby-assist to moderate assist for ADLs. As of Jan 2021, she is wheelchair-bound and non-ambulatory. She is max assist with most ADLs. She has profound word-finding difficulty. Her appetite has diminished, resulting in a 25 lb weight loss.

Case 2: Prior to March 2020, he was max assist for most ADLs, ambulatory in wheelchair with limited speech. As of Jan 2021, he is bed-bound, nonverbal, dependent with his ADLs. His appetite has diminished resulting in a 35 lb weight loss.

Case 3: Prior to March 2020, he was non-ambulatory requiring max assist with ADLs. As of Jan 2021, he is max assist to dependent with ADLs. He developed depression and displayed behavioral disturbances such as irritability, angry outbursts, and delusions.

Conclusion

Three patients in our nursing home had a significant decline in cognitive and/or functional status during the pandemic. We are unclear whether COVID-19 has accelerated this decline or whether this is a natural progression of their dementia. We recommend the use of tools that aid with cognitive stimulation and social interaction in order to slow this decline.

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A48

Assessment of medical decision-making capacity in older adults with mild TBI complicated by fluctuating physical, metabolic, and emotional function

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Introduction: Geriatric patients are at increased risk of traumatic brain injury (TBI) secondary to falls with worse neurocognitive, psychosocial, and physical functional outcomes. Medical decision-making capacity (MDC) assessment requires demonstrating the dimensions of ability to understand risks and benefits, expression of choice, appreciation of consequence and reasoning in thought process. TBI may impact MDC differently in younger and older adults

Case: 74-year-old Black female with a history of transient ischemic attack, hypertension, benign thyroid tumor and partial thyroidectomy, recent traumatic subdural hematoma and frontal subarachnoid hemorrhage with a Glasgow Coma Score of 15 indicative of mild traumatic TBI and chronic mild hyponatremia who was admitted to a skilled nursing facility for subacute rehabilitation (SAR). She was admitted to hospital twice over one month for acute on chronic hyponatremia with neuropsychiatric symptoms manifesting as paranoia and confusion. She was then admitted to SAR, where psychiatry attributed her mood and behavior alteration solely to TBI. Sodium dropped to 122mmol/L but despite rapid decline, she repeatedly refused hospital readmission. As she demonstrated the four pillars of decision-making capacity mentioned above in spite of other neuropsychiatric derangements, her wishes were respected and she maintained her autonomy and legal rights. Her family was updated and she continued to remain under strict observation at SAR.

Discussion: Most MDC studies in TBI patients are done in a younger population. Partial recovery of complex consent abilities has been demonstrated in younger individuals but it is uncertain whether similar results can be extrapolated to an older age group. There is more data about the primary outcome on mortality or GCS scores from sub-analyses of larger studies, without considering the confounding negative effects of delirium, dementia, and other organic neurologic and metabolic intermittent disorders. We need a neurocognitive model for MDC in older adults with TBI, adjusted for age-associated GCS criteria and other confounding variables, to determine capacity for treatment consent and refusal.

A49

Lithium Toxicity in Elderly

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Background

Lithium is an effective medication for the treatment of bipolar disorder and is the first line pharmacological treatment for long-term management. It has a narrow therapeutic index requiring close monitoring. Lithium toxicity is rare; however, the elderly are more susceptible. We describe the case of a patient on chronic lithium therapy that presents with clinical lithium toxicity and mania.

Case presentation

79-year-old male with a history of bipolar 1 disorder, dementia associated with alcoholism, essential tremor and current alcohol use presents from an assisted living facility with altered mental status and sexual inappropriateness noted two days prior to admission. Patient demonstrated uncharacteristic behavior including undressing in the hallway, walking around in unbuttoned shirt stating 'I'm flying' and masturbating. Lithium level the day prior to admission was 1.0mml/L(within normal limits). In the ED ammonia level, lactic acid, troponin, ethanol, folate, vit B12 level were normal. Patient was admitted and evaluated by geriatric, neurology and psychiatry teams. Physical exam findings included coarse tremor in left upper extremity (LUE), bilateral lower extremity weakness, increased salivation, tangential speech, labile mood, and grandiose thoughts. Patient's presentation including LUE tremor, confusion, and agitation was thought to be signs of lithium toxicity based on geriatric and psychiatric evaluation. Lithium was held for two days and levels began to decrease. However, patient's sexual inappropriateness continued to be observed during admission. He was restarted on reduced dose of lithium and depakote sprinkles as treatment for mania with noted improvements. Cetirizine was trialed to assist with salivation and nasal congestion. Neurology work up including MRI brain was negative and patient alcohol use thought to be contributing to tremor. He was started on propranolol to assist. Lower extremity weakness was likely due to polyneuropathy with sensory ataxia leading to gait and ambulatory difficulties. Upon discharge tremor, increased salivation, and agitation improved, and cognition returned to normal.

Conclusions: Lithium toxicity can occur even when the lithium level is within the therapeutic range. In elderly patients on chronic lithium therapy consider lower therapeutic range to reduce incidence of toxicity. We must recognize clinical signs/symptoms of lithium toxicity in the elderly and maintain broad differential when caring for patients.

A50

Atypical presentation of Huntington's disease

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Introduction: Huntington's disease is a neurodegenerative disease that involves trinucleotide CAG repeat expansion on chromosome 4 with the age of onset between 30-40 years old. We are presenting here an interesting case of late-onset Huntington's disease with intermediate-range CAG repeats.

Clinical Case: 67 y/o female with a history of cirrhosis presented to the clinic with a gradual onset of cognitive impairment, involuntary movements, which have been worsening for the past 6-8 months. She lost her driving ability 3 years ago when she has involved in a car wreck. The husband reported that the involuntary movements have started 10 years ago, since then she has been on ropinirole without any improvement. Recently started benztropine, which did not help her. Examination as per Unified Huntington's disease rating scale indicates moderate generalized chorea. MRI Brain showed generalized

cerebral volume loss and nonspecific ischemic changes. B12, RPR, HIV, TSH came back normal except for B12 deficiency and hypothyroidism. Huntington's genetic testing showed 28 CAG repeats, in the intermediate range (27-35), ANA positive, ceruloplasmin normal. Low dose risperidone was started after discontinuing ropinirole, benztropine, discussing with the liver team. Also started Levothyroxine, B12 supplements.

Discussion: Huntington's disease is a chronic, slowly progressive autosomal dominant disease and it can be divided into individual stages. In the early stage, patients are functional with mild difficulty in coordination and slow voluntary eye movements. In the middle stage, patients lose the ability to work, drive, manage their own affairs, and have balance impairment, multiple falls, swallowing difficulty, weight loss. In late-stage, slow and consistent deterioration in cognitive and motor function causes significant morbidity and early mortality. The advanced stage can last for a decade or longer and complications include immobility, aspiration pneumonia, other infections resulting in death in 10-40 years after disease onset. There is no cure to date, only supportive care involving a multidisciplinary approach and symptomatic treatment with Tetrabenazine, which is contraindicated in our patient due to hepatic impairment.

Conclusion: Huntington's disease should be considered in the differentials when the patient develops involuntary movements to identify the disease at an early stage and to discuss further goals of care with the patient and the family.

A51

Oral Pemphigoid: An Unusual Reversible Cause Of Failure To Thrive

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Background- Failure to thrive (FTT) in older adults is one of the most common conditions encountered. In thinking of FTT etiologies, it is critical to look at all reversible causes and to continue to pursue others if improvement is not seen, so that the underlying issue can be found and treated in an attempt to maintain longevity with quality of life. We present a case of FTT with an unusual reversible cause, Oral Pemphigoid (OP).

Case Presentation: A 91 yr old woman with Dementia and Osteoporosis living in LTC was at her baseline weight of 130 lbs until early 2020. In March, she reported feeling "lousy" with mouth pain. Oral exam was unremarkable. In April, she sustained a femur fracture and had ORIF. She was noted to be at risk for malnutrition in mid-April and was started on Ensure, but reported appetite as "eating a little." Three months later, she still reported feeling "lousy" due to mouth pain. No significant abnormality was noted in the mouth. Speech consult was done. Loose dentures and pocketing food was noted. In late July, the patient had new erythema on the maxillary ridge. Recommendations were made to use Peridex mouth wash and off dentures x 1 wk. Due to ongoing mouth pain, erythema of the upper palate with new lesions and weight loss of 23 pounds, she was seen at the dental clinic, diagnosed with presumptive OP and started on oral topical steroids. She was referred to oral surgery for biopsy. After three weeks, the patient reported significant improvement in her mouth pain, was eating better and gained 10 pounds.

Discussion: Common causes of FTT for this patient, included a sentinel event such as fracture, potential use of opiates leading to loss of appetite or malfitting dentures resulting in difficulty eating. However, when addressing none of these etiologies led to resolution, it was apparent that we needed to keep investigating her mouth pain. OP is an uncommon autoimmune condition with a low incidence of two per million, more often affecting women over 60. While the underlying etiology of OP is unclear, antibodies are known to react with mucous membranes forming blisters, which can develop into painful ulcers. Treatment of OP includes topical or systemic steroids. OP can last years or go away after one treatment course. In our patient, treatment was effective, tolerable and led to resolution of her symptoms and FTT.

A52

Nutrition challenges in older burn patients: To PEG or not to PEG?

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Burns are a common cause of injury in older adults and are associated with significant complications such as delirium and malnutrition. Older adults comprise 17% of patients admitted to burn centers in the US and often have worse treatment outcomes compared to younger adults.

An 86 year old male with a history of dementia, hypertension, hyperlipidemia, diabetes mellitus 2, and benign prostate hypertrophy presents to the hospital for bilateral circumferential lower extremity (LE) burns. He had gone to shower at night unsupervised and was found the next day unconscious in the bathtub with hot water running. He was admitted to the burn ICU for 8% total body surface area burns to bilateral LEs. Trauma workup, including MRI brain to evaluate for stroke, was unremarkable. The hospital course was complicated by hypoactive delirium within 3 days of admission necessitating nasogastric tube (NGT) for nutrition and medications, rhabdomyolysis, metabolic derangements, urinary retention, infection, and poor wound healing. Geriatrics was consulted early in the course for assistance with goals of care and delirium management. The family wished for the patient to have all intensive care. He was hospitalized for 68 days. Due to prolonged hypoactive delirium, a PEG tube was placed for long-term nutrition. The next day he became unstable requiring mechanical ventilation and pressors, and was found to have a urinary tract infection and multiple ischemic strokes. After discussion with the family, a decision was made to focus on comfort and the patient passed away soon after.

Maintaining adequate nutrition in older adults with dementia or delirium can be challenging but is also important for wound healing. The decision to introduce an artificial short term or long term feeding solution is often the cornerstone of family meetings for older adults with poor nutrition. Although early initiation of nutritional support via NGT is generally recommended for acutely injured burn patients, data suggests that PEG insertion in patients with dementia neither improves short-term or long-term mortality. For older burn patients, the Baux score, which uses age and percent burns to objectify probability of mortality, as well as consideration of prior functional, cognitive and nutritional status, may help clinicians estimate prognosis and guide patients and families through these difficult decisions.

A53

A case of delirium and infective endocarditis

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Background

Delirium is a geriatric syndrome that warrants prompt and thorough review.

Methods

The case is an 86 years old lady with history of right parasagittal meningioma status post 60Gy/30# radiotherapy in May 2016. She was independent for feeding, dressing and grooming but required assistance for transfer and toileting.

The patient was admitted for 3 weeks duration of agitation and paranoia towards her carer. She fulfilled the Confusion Assessment Method criteria during admission assessment but her physical examination was unremarkable except for a right knee swelling and hearing impairment. The mildly elevated inflammatory markers and gross

pyuria were the only abnormal initial investigation findings. A review of her medication list revealed multiple medications given a general practitioner including lorazepam, fluoxetine, amitryptylline and chlorphernamine. A comprehensive geriatric assessment did not reveal any evidence of cognitive impairment. The initial impression was that of delirium precipitated by urinary tract infection (UTI), gout flare and medications, predisposed by hearing impairment.

Results

The patient's delirium persisted despite treatment of the UTI and gout flare with antibiotics and colchicine respectively. Her subsequent brain magnetic resonance imaging study did not reveal any acute changes and the parasagittal meningioma was deemed by the neurosurgeon not to be a cause of the delirium.

The patient developed fever shortly after admission. As her gout had responded to treatment and she was still in delirium, a full septic work up was done. Her blood culture subsequently grew Staphylococcus aureus and her transthoracic echocardiography revealed a thin 5mm mobile echo that was attached to the posterior mitral valve leaflet. The cardiology and infectious disease specialists were consulted and both agreed with the diagnosis of infective endocarditis. The patient was started on culture guided intravenous antibiotics therapy and improvement in her delirium was noted one week later. She was subsequently transferred to a community hospital for completion of antibiotics where her delirium continued to improve.

Conclusion

This case reinforces the need for constant re-evaluation of patients with non-resolving delirium. The case is interesting as the patient did not have any classical signs of infective endocarditis and delirium was the only abnormality present on admission. Case reports of infective endocarditis in elderly with native valves presenting with delirium are rare.

A54

Acute Cognitive Decline

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Introduction:

Lyme Neuroborreliosis can manifest as lymphocytic meningitis, cranial neuropathy, encephalopathy, and less commonly encephalomyelitis, which can impact cognition.

Case presentation:

A 73-year-old male with a past medical history of hypertension presented for evaluation of acute decline in cognition and episodes of confusion over a period of two months. One week prior to the onset of symptoms patient had a tick bite. Several emergency room visits for confusion did not reveal an underlying pathology. At the time of our evaluation patient was independent in his ADL but he was no longer able to manage his medications, finances, or drive. Physical exam was unremarkable with no focal neurological deficits. His score on Montreal cognitive assessment was 13/30. Lab work was unremarkable however, blood and cerebrospinal fluid were both positive for Lyme Ig-G antibodies. An MRI of the brain showed white matter changes suggestive of microangiopathy. Neuropsychological testing was notable for deficits in all cognitive domains. Infectious Disease consultation recommended treatment with ceftriaxone 2 gm/day for 21 days for possible Neuroborreliosis. After a brief period of subjective improvement, he continued to have episodic confusion. Subsequently CSF biomarkers for Alzheimer's disease were obtained, including A-beta 42 and P- Tau, which were indicative of Alzheimer's disease. He was started on donepezil.

Discussion: Establishing an accurate diagnosis of Lyme Neuroborreliosis requires simultaneous measurement of B. Burgdorferi antibodies in peripheral blood and CSF, corrected for total immunoglobulin concentration in each fluid, which suggests true intrathecal infection. An accurate diagnosis distinguishes between encephalopathy or true encephalitis. Lyme encephalomyelitis is a rare condition and is diagnosed by inflammatory parenchymal changes in the brain or spinal cord on MRI along with inflammatory changes in CSF. It is very responsive to treatment with antibiotics however permanent deficits may remain.

Conclusion: Delirium and dementia commonly coexist, with pre-existing dementia being a risk factor for delirium. Delirium is a known risk factor for new-onset dementia, and it is a marker of the vulnerability of the brain. In this case, we feel there was a baseline cognitive impairment due to a pre-existing neurodegenerative process which increased his risk for delirium with ongoing symptoms after he contracted Lyme disease.

A55

Percutaneous Endoscopic Gastrostomy Is Never a Replacement for Comfort Feeding

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Background

The AGS Choosing Wisely Workgroup does not recommend Percutaneous Endoscopic Gastrostomy (PEG) tube feeding in advanced dementia. PEGs do not prevent occurrence or healing of pressure ulcers, aspiration pneumonia nor improve quality of life or life expectancy, as confirmed by our case series.

Cases

Rationale for PEG in the 5 patients:

Case1: 81 years, male, glioblastoma multiforme, oro-pharyngeal dysphagia.

Case 2: 85 years, female, failure to thrive, after discussion with family

Case 3: 57 years, female, relapsing multiple sclerosis oropharyngeal dysphagia, after discussion with surrogate

Case 4: 50 years, male, hypoxic encephalopathy, oro-pharyngeal dysphagia

Case 5: 78 years, male, cerebrovascular accident, dysphagia.

Discussion

Feeding difficulties are common in advanced dementia, posing challenges to providers of care. The health care proxy / caregiver must be provided adequate information on the benefits and harms resulting from PEGs, without offering undue expectations. The decision must be in the best interests of the patient, and in accordance with the patient's expressed current or prior wishes, either written or verbal; and not what the proxy would prefer. Our cases demonstrate the adverse events following PEG insertion within 4 – 18 months: recurrent pneumonia, weight loss, local complications, no demonstration of better quality of life or lesser suffering; the findings are consistent with literature. There is no difference in life expectancy between comfort and PEG feeding; but quality of life is better with comfort feeds.

Lessons Learnt

PEGs offer little to no benefit in preventing pressure ulcers, aspiration pneumonia, weight loss and in improving quality of life

Health care providers and caregivers need education regarding the benefits of comfort feeding versus the poor outcomes from tube feeding in advanced dementia

Variables	Case 1 (4 months)	Case 2 (1.5 years)	Case 3 (4 months)	Case 4 (4 months)	Case 5 (1 year)
Dementia	Yes	Yes	Yes	Yes	Yes
Albumin	3.2 -> 2.8	3.1 -> 3.5	Not done	4.1 -> 3.6	3.3 -> 3.6
Hgb	12.9 -> 12.8	9.3 -> 9.9	9.4 -> 12	12.7 -> 9.8	14.4 > 14
Wt (lbs)	Lost 14	Gain 19	Gain 2	Lost 7	Lost 2
Pressure ulcers	Yes	Yes	None	Yes	Yes
Pneumonia	Twice	Twice	None	Recurrent	None
PEG self removal	Once	None	None	Recurrent	Recurrent
Other complications	Infection at PEG site; hematemesis	PEG port leak, needing exchange;clogging	Recurrent diarrhea; evaluated for C difficile	On restraints	Stoma infection

A56

Atypical dementia with gait abnormality

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Case: An 89-year-old woman who recently moved from a nursing home to live with family presented with complaints of subacute difficulties with ambulation, balance, and memory concerns. She was fixated on the idea that she could return to independent living in her private apartment, yet her relative dependence in ADLs seemed to belie this possibility. Short test of mental status (Kokmen) was unexpectedly within normal limits (35/38), not corresponding to her apparent lack of insight into her medical conditions and dependence on assistive devices to safely ambulate. Her reported gait impairment and brain imaging showing signs of fluid "pocketing" contributed to ambivalent imaging of cerebral atrophy normal pressure hydrocephalus (NPH). Comprehensive neuropsychiatric testing was pursued to better reconcile her of discrepant cognitive testing and neurobehavioral symptoms

Discussion: The diagnosis of mild cognitive impairment (MCI) is generally defined by the presence of objective memory impairment not appropriate to age, but where the patient has preserved ability to function in daily life. The Short test of mental status and other point-of-care cognitive tests are frequently useful in diagnosing dementia in older adults. However, the interpretation of these scores should be carefully correlated with individual patient's functional status and behaviors. A formal neuropsychiatric assessment might be needed in order to clarify a diagnosis of MCI, given that the cognitive deficits are often relatively mild and/or subtle. For this patient, her score on point of care cognitive testing was not commensurate with clear defects in her thought process as it related to her medical conditions.

Bedside evaluation, combined with neuroimaging, provides the information needed to ascertain the likely cause of dementia in most patients. A presumptive diagnosis of Alzheimer's Disease (AD) is made in most cases based on a typical clinical syndrome. When features atypical for AD predominate, particularly early in the disease course, other diagnoses (e.g., Diseases of Lewy body, Frontotemporal dementia, Normal pressure hydrocephalopathy) are often considered. For this particular patient, the presence of "pocketing" of CSF on neuroimaging may have actually introduced more ambivalence than clarity in diagnosing her disease, especially when considering AD vs. NPH, highlighting the need for further neuropsychiatric testing in specific cases.

A57

A Case of Rheumatoid Arthritis after Upper Respiratory Tract Infection

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Background: Rheumatoid arthritis (RA) is a chronic autoimmune inflammatory disease that can lead to uncontrolled joint destruction and deformities. The clinical presentations of RA can comprise the generation of autoantibodies to infection dependent pathways including viral infections. We present a rare case of new onset, RA in a patient after exposure to a viral upper respiratory tract infection.

Case Presentation: A 76 yo previously healthy male presented with severe pain and stiffness for several months. In January 2020, the patient travelled to New Zealand and developed upper respiratory tract infection symptoms which resolved when he returned home. Over the next several months, the patient developed worsening stiffness, pain and weakness in both lower and upper extremities, and had increased difficulty rising from a seated position. He developed marked swelling in the digits and dorsum of both hands. Patient had a limited response to ibuprofen. In October, he was seen by an orthopedic surgery and was started on oral high dose prednisone. He was seen by Rheumatology, where he had several labs performed and was found to have an elevated ESR and cyclic citrullinated peptide antibodies were negative. It was thought that he had seronegative rheumatoid arthritis and he was started on hydroxychloroquine in addition to prednisone. He rapidly became pain free and returned back to his baseline active lifestyle.

Discussion: It has been suggested that infectious agents have been associated to cause RA. Some suggested pathways include the production of cross-reactive antibodies to both pathogens and self-antigens due to structural similarity between the microbe and host microbes. It is thought to be associated with aberrant immunological response, as studies have shown T cells, B cells, and cytokines imbalances have been related to RA reports. Superantigens produced by infections can cause T-cell activation and cytokine release stimulating the immune system and autoimmune response. During the COVID-19 pandemic, reports have indicated that proinflammatory cytokines such as TNF-α, IL-6, and IL-1, have been shown as the pathogenic factors in rheumatic diseases, and be responsible for tissue damage in multiple organs. It is worth suggesting that upper respiratory tract infections such as COVID-19 can promote proinflammatory states in patients increasing their susceptibility to autoimmune and rheumatological diseases.

A58

SARS-CoV-2 Playing Peek-A-Boo with High Blood Pressure

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Background:

When compared to younger patients, older adults suffer a greater severity of illness with higher mortality rates caused from SARS-CoV-2. However, accurate diagnosis may be missed or delayed due to atypical presentations. This has been associated with worse outcomes, subsequent decline in functional and mental status, and death.

Case:

A 90-year-old female with history of controlled hypertension and dementia presented for a routine outpatient follow-up visit. Her blood pressure on presentation measured 184/87 mm Hg and remained elevated on repeat measurements. She had been compliant with medications without recent changes in diet or weight. She otherwise was asymptomatic. Due to her unexplained and persistently elevated blood pressures, we referred the patient to the emergency department (ED). In the ED, the patient tested positive for SARS-CoV-2 and was diagnosed with hypertensive urgency with otherwise normal labs. She had a negative cardiac and neurological workup. Patient declined in functional and mental status, yet never developed typical infectious symptoms. She received supportive care and monitoring and was ultimately discharged with home-health support.

Discussion:

While advanced age is a leading predictor of the severity of SARS-CoV-2, another emerging trend is the atypical presentations among the elderly. This includes falls, delirium, and worsening of underlying chronic disease without other infectious symptoms. In the absence of hypoxia, cough, fever, and other indicators that prompt SARS-CoV-2 testing, there is increased risk for undiagnosed infection. Patients are often discharged home without appropriate monitoring and supportive care. The delay in diagnosis, may result in worse outcomes with long-term functional decline, unpredictable sequala, or death. This has been observed anecdotally and described in a few case studies. While this may be partially explained by age-related immunosenescence, the pathophysiology of atypical presentations of SARS-CoV-2 is not fully understood, as older adults typically have more severe respiratory symptoms and end-organ damage.

Conclusion:

This case highlights the importance of the variable and atypical presentations of SARS-CoV-2 among the elderly. Failure of early diagnosis may be detrimental with worsening of infection, long-term decline in functional and mental status, or death.

A59

Post-Acute COVID Syndrome: Prolonged Night Sweats

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Background:

SARS-CoV-2 has been associated with prolonged symptoms in afflicted patients. Most common ailments include neurological symptoms, general malaise and GI symptoms. However, despite the many patients infected with this virus, there has been limited documentation of symptoms that persist beyond 5 weeks.

Case:

A 69-year-old male with a history of benign prostatic hyperplasia, coronary artery disease and hypertension was seen in the outpatient clinic for a new onset of myalgias, low grade fevers and mild cough. He initially stated that his symptoms improved with the initiation of an anti-histamine but had not completely resolved. He tested positive for SARS-CoV-2. At his 4-week follow up visit, he stated that although his presenting symptoms improved, he developed new night sweats. These were not associated with fever, pain or unintentional weight loss but did persist for 4 weeks after the initial SARS-CoV-2 diagnosis. Further investigation revealed a CBC and quantiferon with normal results.

Discussion:

According to the Infectious Disease Society, some patients after the initial acute phase of infection continue to experience COVID-19 related symptoms - fatigue, dyspnea, arthralgias, and chest pain. However, the duration of these symptoms is not well understood. A study of 26 patients who recovered from COVID-19 were followed for 6 weeks via telemedicine calls. The most commonly reported persistent sequelae were respiratory symptoms, followed by neurological symptoms, general malaise symptoms and GI symptoms. Among the general malaise symptoms, night sweating was reported in 7.7% of patients with prolonged symptoms. Also, night sweats may be a thermoregulatory mechanism to decrease body temperature harboring underlying illness. Usually, the release of inflammatory mediators during infection temporarily raise core body temperature resulting in night sweats and shivering as a response to then decrease temperature. Though not well studied, in SARS-CoV-2 infectious inflammatory mediators may have a role in night sweats.

Conclusion:

Prolonged symptoms in the post-SARS--CoV-2 infectious state have been observed. Night sweats have not been commonly observed in post-acute COVID syndrome, and this case represents a rare phenomenon.

A60

Anagrelide associated episodic hypertension and palpitations

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Introduction:

Essential thrombocythemia (ET) has been correlated with pulmonary embolism, stroke and myocardial infarctions. Good platelet control reduces incidence of thromboembolic complications in ET[1]. Hydroxyurea is standard of care, but can be leukemogenic over time and does not selectively lower platelets[1]. Anagrelide, a platelet phosphodiesterase blocker, can selectively reduce elevated platelet counts in a dose dependent manner[2].

Case:

An 83 year old female presents with JAK2 positive ET, ascending aortic ectasia, liver cysts, hyperlipidemia and hypertension presented for evaluation. She has not had stroke, clots, or bleeding since ET diagnosis in 2016. She takes hydroxyurea 1000 mg once a week and 500 mg daily the remainder of the week and anagrelide 0.5 mg daily. Blood pressures were previously well controlled on lisinopril monotherapy. After initiation of anagrelide, she noted episodic palpitations and systolic blood pressures ranging from 165 to 200 mmHg following anagrelide administration, even after addition of amlodipine. When anagrelide was held, blood pressures remained within normal range.

Discussion:

Moderate dose anagrelide normalizes platelet counts in about half of patients[1]. Side effects that limit use include self-limiting headaches and palpitations. In approximately half of the elderly patients on anagrelide-hydroxyurea combination therapy, the lower doses of both can maintain efficacy with fewer adverse effects[1]. As anagrelide has positive inotropic effects secondary to phosphodiesterase inhibition, hypertension may be another expected adverse effect as with this patient[3]. Further investigation into anagrelide-induced hypertension is warranted.

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A61

Neurodegenerative Overlap Syndrome: A Case of Mixed Alzheimer's Disease and Dementia with Lewy Bodies

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Background

Dementia with Lewy Bodies (DLB) is the second most common neurodegenerative dementia after Alzheimer's Disease (AD). Despite established diagnostic criteria for both neurodegenerative diseases, distinguishing AD from DLB can be challenging due to extensive clinical and pathological overlap. Cases of mixed AD and DLB are often underdiagnosed.

Case Presentation

A 64 year-old male presented with a 2-year history of short-term memory loss. His medical history was significant for depression and dream enactments. He was functionally independent. The physical and neurological exam, were unremarkable. He scored 22/30 on Mini-mental State Examination. On more domain-specific tests he demonstrated impairment in both verbal and visual memory, executive functioning, attention, and visuospatial domains. He was diagnosed with amnestic mild cognitive impairment, multi-domain (MCI). Brain magnetic resonance imaging (MRI) and volumetric studies only showed moderate white matter disease and normal hippocampal and mesial temporal lobe volumes. Over the course of 8 months, he developed dependency in managing finances and transportation and transitioned to the dementia stage. Our clinical suspicion of probable AD was confirmed with positive cerebrospinal fluid biomarkers. Over the next few months, the patient developed tremor and bradykinesia, vivid visual hallucinations and more frequent REM sleep behaviors. The patient met 3 of 4 core clinical diagnostic criteria for probable DLB[1]. Dopamine transporter (DaT) scan was performed that demonstrated abnormal uptake in the putamen. Our clinical diagnosis of probable DLB was supported by the abnormal DaT scan as a confirmatory biomarker. This confirmed the final diagnosis of probable AD, mixed with DLB.

Conclusion

AD mixed with DLB is often underdiagnosed. Symptom-based clinical suspicion with application of appropriate biomarkers may assist in establishing the accurate diagnosis[2]. This case highlights the importance of identification of prodromal signs of DLB to enable clinicians to plan care and provide treatment options effective before debilitation.

Reference:

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A62

A CATastrophic Rash!!

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Introduction:

A zoonosis is an animal disease that is transmissible to humans. Children, elderly and immunocompromised population are at higher risk of acquiring zoonotic disease. Even though cats are accountable for spread of wide array of bacterial, fungal, and parasitic zoonotic pathogens, probability of transmission from interaction is minimal and may be further reduced by simple safety measures.

Case report:

A 72-year-old man with past medical history of depressive disorder, gastroesophageal reflux disease, hyperlipidemia, obesity, type II type diabetes mellitus visited outpatient clinic with his partner reporting a diffuse itchy rash. The patient and his partner adopted a stray cat a few weeks prior to the presentation. The cat had a recent fungal infection resulting in loss of several patches of hair, and was treated with oral and topical medications.

On exam, he had diffuse erythematous rash mostly involving trunk, arms/hands, and face with associated pruritis. There was concern for scabies and/or pediculus humanus corporis, therefore prescribed a course of oral ivermectin treatment along with topical Neosporin- without any significant improvement. He was then referred to the dermatologist for further management. Patient and his partner deferred further investigation with fungal scraping, or biopsy of the site, as they were educated by the veterinarian that it is "ringworm" infection. Given the concern he was prescribed 2-4 weeks therapy of terbinafine with subsequent symptomatic improvement. He was also advised to get rid of their newfound companion animal, given the high risk of infection recurrence. It was a very difficult decision for them requiring reassurance, counseling and education to prevent future infection.

Discussion:

Identification of zoonotic infections in humans requires good history taking skills and clinical acumen. There is a need for education on zoonotic disease prevention practices for pet-owning households with individuals at higher risk of infection, and to educate future veterinarians about providing appropriate prevention information to the owners. This can decrease not only emotional but clinical and transmissible burden for most of our vulnerable elderly population with companion animals by taking simple preventive measures.

A63

Painless Jaundice with a Painful Course

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Background: Cholangiocarcinoma is a rare malignancy that typically presents between ages of 50-70 years. Early disease is usually asymptomatic, while advanced stages usually present with jaundice, right upper quadrant pain, and weight loss. Surgery (± adjuvant therapy) offers the only possibility of cure, with worse resection rates in intrahepatic and perihilar tumors compared to extrahepatic tumors.

Case Presentation: A 78 year-old female with a history of atypical parkinsonism with behavioral disturbances, dementia, stroke with residual weakness and degenerative lumbar spinal stenosis presented to the geriatric clinic with 10 days of painless jaundice, pruritus, dark urine, and reduced appetite. Exam was pertinent for normal vitals, jaundice with scleral icterus, mild generalized abdominal tenderness without organomegaly, and negative Murphy's sign. Labs showed normal CBC and renal function, transaminitis with obstructive pattern, T bil 12.8, D bil 9.8, and INR of 1.3. Same day outpatient abdominal ultrasound showed a 2.4cm gallstone in the gallbladder neck with intrahepatic biliary ductal dilatation. The patient was referred to the ED and was subsequently admitted. CT and MRCP imaging were concerning for perihilar cholangiocarcinoma. CEA was elevated at 156 and CA 19-9 was normal at 4.1. Gastroenterology, interventional radiology, oncology and surgery were consulted, and percutaneous transhepatic cholangiography with drain placement and brush biopsy were performed. Four days after the procedure the patient developed septic shock secondary to streptococcus bacteremia requiring transfer to the ICU and treatment with pressors, mechanical ventilation, dialysis for renal failure, and amiodarone drip for atrial fibrillation. Palliative team was consulted in the ICU, and the patient's family chose full code with active treatment. On ICU day 10, the patient died from septic shock complications.

Discussion: Rapid progression of painless jaundice in a geriatric patient should raise a high clinical suspicion for advanced cholangiocarcinoma. Assessment of frailty, functional status, and comorbidities (in addition to cancer-specific tests) is crucial for accurate prognosis. Early geri-palliative team involvement can provide geriatric comprehensive evaluation and facilitate communication with the outpatient team and challenging goals of care discussions to improve patient stratification before proceeding with high risk procedures/treatment.

A64

Metastatic Neuroendocrine Cancer: An Unusual Cause of Hip Pain

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Introduction:

When an older adult presents with complaints of chronic hip pain, the differential diagnosis usually consists of common conditions such as osteoarthritis, spinal stenosis, bursitis, lumbar radiculopathy, and muscle strain. However, there are less common causes that can be overlooked. We are presenting a case of hip pain due to metastasis of a tubulovillous adenoma.

Case Presentation:

An 82-year-old Caucasian female, with a history of osteoporosis, atrial fibrillation, osteoarthritis, falls, cognitive impairment and depression presented to the geriatric clinic complaining of worsening right hip pain over the past 3-4 months. She had received minimal benefit from steroid taper, acetaminophen, and duloxetine. She was advised to add diclofenac gel, increase acetaminophen to 1000 mg TID and to consider trochanteric bursa injections. She also was referred for home physical therapy. Over the next month, fatigue and weakness increased and her pain became more severe. She also developed worsening constipation and decreased appetite.

An MRI of the pelvis was done and showed several osseous metastases, including a 3.2 cm mass in the anterior superior iliac crest extending into the right gluteal musculature, and a 3.9 cm colonic mass in the sigmoid colon suggestive of a primary colon cancer. CT scans showed pulmonary nodules, mediastinal and hilar lymphadenopathy, and potential hepatic metastatic disease.

An urgent colonoscopy showed a partially obstructing tumor in the mid-sigmoid colon, the biopsy of which showed an invasive tubulovillous adenoma with features of high-grade neuroendocrine carcinoma. Soft-tissue biopsy of the iliac bone showed a metastatic poorly-differentiated carcinoma, but the immunohistochemical studies failed to provide a specific line of differentiation or an anatomic site. As the metastatic cancer was not a high grade neuroendocrine cancer, chemotherapy was not recommended. She was started on radiation therapy, but treatment was discontinued due to worsening functional status. Hospice was recommended.

Discussion:

Hip pain is most commonly a manifestation of musculoskeletal conditions. However, other causes including malignancy may need to be considered, especially when multiple systemic symptoms are also present.

A65

Can Steroid Joint Injection improve Neuropsychiatric Symptoms in Patient with Dementia? Case Report.

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Background: Pain is common in older adults and is strongly linked to agitation and depression. 40-80% of nursing home residents with dementia experience pain occasionally. We are presenting a case where pain management decreased the neuropsychiatric symptoms. **Case:** An 80-year-old woman with dementia and Huntington's Disease was admitted for long-term-care at a nursing home facility. Her medical history included depression, generalized anxiety disorder, and osteoarthritis. Since her admission, patient intermittently displayed aggressive behavior towards the staff. She also suffered from chronic right shoulder pain. Despite the daily pain medication and physiotherapy, her pain was not under control. Patient had frequent and intense aggressive outbursts, particularly during personal care. Upon assessment, patient scored 12/15 on BIMS and 10/27 on PHQ9, which was higher than her average baseline. Apart from a reduced range of motion of the shoulder joint her physical exam was unremarkable. Routine laboratory tests were all normal. She received intra-articular DEPO-MEDROL. Following that, the patient's pain was relieved and interestingly, her behavior also improved. Five months later the same sequence happened again, and the patient was given intra-articular DEPO-MEDROL again. This time her response was partial; her behavior improved but did not return to the baseline despite being pain-free. As there was no obvious precipitating cause for her residual symptoms; we assume that they were related to the progression of Huntington's disease. Discussion: **Discussion:** This case report highlights the importance of a thorough evaluation of patients with dementia to exclude and treat any comorbid conditions associated with abnormal behaviors. Patients with both dementia and Huntington's disease face difficulties in communication, adding more complexity to the diagnosis. In this case, both pharmacological and behavioral modalities were tried but with no considerable benefit. Only after sufficient control of osteoarthritis pain with intra-articular steroids, behavioral symptoms improved significantly. In conclusion, adequate pain assessment and management is crucial in agitated patients with dementia.

A66

5M's Approach to an Older Adult on the Head and Neck Surgical Oncology Service

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A 72-year-old woman with a history of Oropharynx Cancer (T3N0M0 p16 negative squamous cell carcinoma of the left tongue base) status post chemoradiation with concern for local recurrence was admitted to the Head and Neck Surgical Oncology Team for a biopsy procedure. Her multiple co-morbidities included Hypertension, Aortic Stenosis, Depression, Anxiety, COPD, Peripheral Neuropathy, Constipation, and a History of Alcohol and Tobacco Abuse. Her course was complicated by accidental removal of the nasogastric tube post procedure, inability to use an oral route for pain control, an aspiration event with concern for pneumonia, and delirium.

Inpatient Geriatrics was consulted for evaluation on post-operative Day 2. She was dependent on a walker for ambulation. ADL dependence included bathing, dressing and grooming and IADL dependence included shopping, housework, laundry, finances management, meal preparation, home repairs and driving.

Daily geriatric consultative care focused on what matters most, medications, mentation, mobility and multimorbidity helped navigate the patient through the challenges of a hospital stay for an older adult. *What Matters:* She was committed to the evaluation of the potential recurrence of her cancer and was interested in care decisions directed towards this goal. This was addressed and confirmed upon at the onset of the consultation. *Medications:* Close attention was paid to the administration of pain medications during her non-oral period to reduce the risk of sedation as well as control her acute and chronic sources of pain. *Mentation:* Delirium was anticipated and discussed daily with Nursing and promptly well-managed with mostly non-pharmacological measures. *Mobility:* Ambulation was encouraged and acted upon with daily Nursing interventions which included getting out of bed multiple times. *Multimorbidity:* All medical issues such as pneumonia, electrolyte imbalances and constipation were followed and successfully treated to completion. The Head and Neck Surgical Oncology Service was appreciative for the assistance from the Geriatric Consultative Team in enabling this patient to receive age-friendly health care.

This case discussion highlights how a new collaboration between Head and Neck Surgical Oncology and Geriatrics facilitated an Age Friendly Health System's 5M's approach to care for older adults.

A67

When Delirium is Skin Deep - Delirium in older adult with Necrotizing Fasciitis

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Background

Delirium characterized by inattention and acute cognitive dysfunction affects an estimated 14–56% of all hospitalized geriatric patients. We describe and interesting presentation of hypoactive delirium from necrotizing fasciitis in a geriatric trauma patient.

Case

A 74 year old robust male with hypertension was admitted to the trauma intensive care unit following a high velocity motor vehicle collision causing unstable C6-C7 fracture and incomplete tetraplegia. Patient sustained small cerebellar infarct from vertebral artery trauma and small left scalp abrasion. Patient was initially GCS 11 with negative Confusion Assessment Method. Upper extremity movements were brisk with small toe movements. But fluctuating mentation between GCS 11 and GCS 3 demanded an exhaustive neurologic workup. No source was identified and neurology opined patient's stroke was non contributory. Geriatrics recommended hypoactive delirium workup as patient became persistently GCS 3-4 without sedation. Despite treatment for ventilator associated pneumonia and urinary infection, persistent infectious source was unidentified. Examination by geriatrics team revealed significantly increased scalp abrasion. The wound continued to increase in size with necrosis, requiring repeated extensive debridement. Tissue cultures grew mucormycosis and patient was started on amphotericin B. Patient was planned for further debridement, however, given poor prognosis with injuries and mucormycosis family and patient transitioned to comfort-focused care.

Discussion

Geriatric patients may present with atypical symptoms that hamper accurate diagnosis of diseases. They are susceptible to necrotizing fasciitis due to age related thinning of skin, immunosenescence and comorbidities. Rapid diagnosis and prompt opertative treament is standard. However later onset of symptoms makes early diagnosis difficult, increasing mortality. This case contributes to the limited existing literature on necrotizing fasciitis in older adults.

A68

A Puzzle Finally Solved

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Background: Amyloidosis is a term referring to the deposition of fibril, a variety of proteins, in tissue. There are multiple types of the disorder and an array of clinical manifestations dependent on type, location, and amount of deposition. Most commonly affected organs are the kidneys, heart, and liver; although any system can be targeted. Treatment is dependent on multiple factors and ranges from stabilizing and silencing agents to organ transplant. Amyloidosis is often undiagnosed due to shared symptoms with common conditions and nonspecific clinical features. Unfortunately, this leads to improper management and heavy symptom burden on patients and families.

Methods: Case presentation of a new patient presenting to a geriatrics primary care practice to evaluate an array of chronic symptoms impacting quality of life. After some difficulty finding a cohesive diagnosis, the patient was diagnosed with two forms of amyloidosis, AL and hereditary ATTR.

Results: An 82-year-old female with history of coronary artery disease, carpal tunnel syndrome, spinal stenosis, peripheral neuropathy presented with fatigue, chronic pain of multiple joints, worsening functional mobility, and progressive dyspnea. She was followed by multiple specialists: cardiology (for CAD), orthopedics (for CTS and spinal stenosis), and rheumatology (for vague joint and systemic symptoms suspected to be rheumatoid arthritis), however there was no clear unifying diagnosis. Despite this support, her symptoms remained difficult to manage. A transthoracic echocardiogram done to further evaluate her dyspnea provided the first evidence for amyloidosis. Evaluation with cardiac MRI, then endomyocardial and fat pad biopsy, led to a definitive diagnosis. She was referred to a multidisciplinary amyloid center, leading to adjustments in her medication regimen with brief improvement in symptoms. Unfortunately, due to the advanced stage of disease at diagnosis, treatment options were limited. She developed arrhythmias, ischemia, decompensated heart failure and did not survive.

Conclusion: Amyloidosis masquerades as multiple seemingly separate diseases. While amyloid is a difficult disease to manage with current limitations to treatment, there is great benefit to early diagnosis. Genetics also plays a role in many of the forms, making correct diagnosis important for family as well. Patients greatly benefit from proper diagnosis and involvement of amyloid specialists, whose expertise can improve outcomes and quality of life.

A69

A Sight to Remember: A Case of Scleritis in a Nonagenarian

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Introduction: Scleritis is a rare eye condition with significant associated morbidity, including vision loss. It is traditionally divided into anterior and posterior subtypes, with approximately 90% of cases affecting the anterior portion. At this time, the exact mechanism of inflammation is not well-defined, but it is frequently associated with an underlying inflammatory or autoimmune disorder. This case study illustrates the presentation and treatment of an individual found to have both anterior and posterior scleritis.

Case: A 90 year old female with history of cataract surgery, chronic dry eye on cyclosporine and s/p punctal plugs, CAD, AFib on warfarin, HFrEF, T2DM, HLD, Parkinson's disease and hip fracture s/p intramedullary stabilization within the last month presented to the hospital for evaluation of worsening right eye pain, swelling and decreased vision that began in the preceding 2 weeks. Prior to hospitalization, she had endorsed eye pain at rest as well as with ocular movement, erythema, excessive tearing, purulent discharge and worsening visual acuity. On initial evaluation, she was found to have a leukocytosis of 11.2 and CT imaging with pre and post-septal inflammatory changes, hyperattenuation within the R globe suggesting choroidal detachment and proptosis of the R globe. Due to concern for orbital cellulitis, she was started on IV antibiotics. Ophthalmology consult advised initiation of high dose IV steroids, which produced a rapid and dramatic response. Work up for underlying inflammatory, connective tissue or vasculitic disease was negative. MRI was performed and supported an inflammatory cause with anterior and posterior scleritis of the R globe noted, as well as a decrease in circumferential subchoroidal fluid following initiation of steroids. The patient was discharged steroid ophthalmic drop taper and plan for 2 week follow up with Ophthalmology after improvement in proptosis, chemosis, and visual acuity in her affected eye was noted.

Discussion: Currently, there is limited data on older adults and scleritis. Scleritis is more common in younger adults, with documented average ages of presentation being 40-60s. This case is unique as it describes a nonagenarian, with no known inflammatory and/or autoimmune condition, diagnosed with scleritis. We present this case to review the presentation and exam features that distinguish scleritis, to discuss evaluation, treatment and expand existing knowledge of scleritis.

A70

A rare cause of headache and syncope in Octogenarian: Tarlov Cyst.

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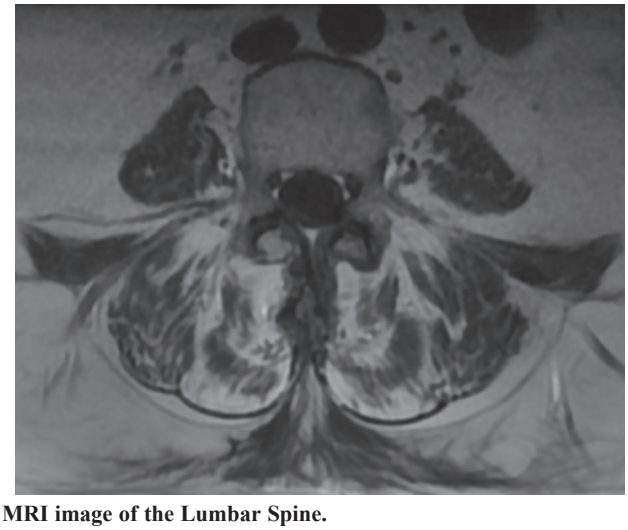
Perineural cysts, also known as Tarlov cysts (TC), are cerebrospinal fluid-filled growths that develop at the intersection of a dorsal root ganglion and posterior nerve root. They are typically asymptomatic and incidentally found during routine spinal imaging. Tarlov cyst causes symptoms in sporadic cases. The literature is limited when it comes to the management of symptomatic patients with Tarlov cysts. We are reporting an octogenarian who presented with headache, syncope, and gait abnormality leading to multiple falls due to a Tarlov cyst with a CSF leak, treated with an epidural blood patch (EBP). Patient headache and syncope entirely resolved after EBP treatment. The patient also reported improved balance and gait after treatment. Patient symptoms didn't recur ten months after the treatment. This case provides an opportunity to consider this rare condition presenting with typical symptoms, the chance to diagnose and manage Tarlov cyst in symptomatic patients.



MRI image of the Lumbar Spine.

A71

Killer Constipation: Why Evaluation and Early Intervention is Crucial

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Introduction: Constipation is common, with an estimated 1/3 of people experiencing it. If left untreated, fecal impaction, where stool forms a large mass and cannot be spontaneously evacuated, can develop. The prevalence of fecal impaction increases with age. Diet, medication side effects, and comorbidities affecting transit all contribute to this phenomenon. The following case discusses fecal impaction and its devastating, and potentially deadly, results.

Case: An 85 year old female who lived alone and had a PMH of breast cancer maintained on letrozole, chronic constipation, HTN and COPD arrived via EMS for evaluation of failure to thrive, progressive abdominal distention over the last few days, hypoxia and confusion. Last BM was on day of presentation. On exam, she was cachectic at 37.9 kg and a firm mass was easily palpable in the left lower quadrant of her distended abdomen. CT noted massive fecal impaction (up to 14 cm in diameter) in the distal sigmoid colon and rectum but no free intraperitoneal air. Despite initial intervention with mineral oil enema and manual disimpaction, stool burden remained significant. No spontaneous stool evacuation, other than liquid overflow incontinence, was noted. GI was consulted but felt patient was not a candidate for endoscopic removal due to degree and anatomy of the impaction. CRS evaluated and offered to perform an exam and disimpaction under anesthesia while noting risks, including perforation. Ultimately, the decision was made to pursue comfort care rather than surgical intervention. She passed away from complications less than 72 hours after admission.

Discussion: We present this sad case to emphasize the importance of inquiring about and addressing constipation prior to the development of fecal impaction. Fecal impaction places individuals at risk for injury to bowel and nearby vessels, nerves and tissues. Additionally, mortality is high, with Sommers et al. noting a 21.9% in-hospital mortality rate. Our patient had underlying constipation and was on letrozole, which can be constipating. She reported a bowel movement on day of presentation; however, in retrospect, she likely had longstanding overflow diarrhea. If she had been having similar episodes of intermittent liquid stool at home, it may have affected her use of stool softeners and laxatives. As Geriatricians, assessing constipation, aggressively addressing it and educating patients on normative bowel habits is of utmost importance for patient comfort and health.

A72

Upper airway obstruction: A frequently misdiagnosed condition with severe implications

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Background:

Asthma and COPD are commonly treated conditions in the outpatient setting. However, patients with frequent exacerbations or intractable symptoms usually are misdiagnosed or have an underlying exacerbating condition. We wish to present 2 such cases which serve as good examples of upper airway obstruction masquerading as Asthma/COPD.

Case 1:

A 73 YO obese lady with a prior diagnosis of Asthma/COPD overlap syndrome (ACOS) was seen in clinic multiple times for respiratory issues which manifest with wheezing and upper airway obstruction. She was on maximal therapy with Inhaled corticosteroids + long acting beta agonists + Long acting muscarinic antagonists. Despite this she suffered multiple exacerbations. During one such visit, she was noted to have minimal wheezing and mostly upper airway stridor. A CT chest and neck was done which showed a hypodense lesion in lateral wall of the trachea. This was followed up with a Bronchoscopy which showed near complete occlusion of trachea because of a mass origniating in mid trachea. This was resected with near complete resolution of stridor. She did have another exacerbation of her ACOS but without stridor. Biopsy returned as Minor Salivary Gland Neoplasm which required multiple follow up bronchoscopies for ablation.

Case 2

A 68 YO Caucasian lady with morbid obesity and diagnosis of Asthma since chlldhood was seen in clinic for first time.

She had a weak voice along with muld upper airway stridor. She reported multiple ED visits and hospitalizations for respiratory issues in the last 12 months. Pulmonary function testing was done which showed flattened Flow volume loop. She underwent bronchoscopy with severe subglottic stenosis of the trachea. She underwent debridement and dilatation with near complete resolution of symptoms.

Discussion:

Poorly controlled Asthma/COPD are commonly encountered in geriatric population.

Frequently, the diagnosis is already made before the patient's are seen in clinic for initial evaluation. However, in patients with poor control of symptoms evaluation for another alternate or concomitant condition needs to be performed. Diagnosis and treatment of these underlying/ alternate conditions will improve quality of life to a great extent

A73 Encore Presentation

Cefepime-Induced Neurotoxicity in Geriatric Patients with Cognitive Dysfunction: Case Series

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Cefepime is a fourth generation cephalosporin that has become increasingly popular in use amongst hospitals across the United States. Cefepime is known to cross the blood-brain barrier, and as such, has been a suspect in medication induced encephalopathy. Cefepime-induced neurotoxicity (CIN) is characterized by encephalopathy 2 to 5 days after Cefepime administration as well as EEG abnormalities, namely the triphasic wave. Other notable symptoms: reduced consciousness, myoclonus, seizures, and agitation. CIN has been shown to be reversible with early recognition and withdrawal of the antibiotic.

1: Patient is a 66 yo F with PMH of CVA, vascular dementia, and chronic urinary retention, who presented with abd pain. CT Abd showed acute cystitis, and patient was started on Cefepime. On the 2nd day of hospitalization, new onset disorientation and somnolence were noted. Work up for encephalopathy, which included TSH, B12, Folate, RPR, infectious work up, and brain imaging, was non-significant. Subsequently, EEG was completed to evaluate for possible seizure like activity, and showed diffuse slowing with triphasic waves, indicating cefepime-induced neurotoxicity. Cefepime was discontinued, and mentation gradually improved over the following 72 hours.

2: Patient is an 85 yo F with pMH of T-LGL lymphoproliferative disorder with chronic neutropenia and CKD Stage 3 who presented with fall. Patient developed fever and was started on cefepime due to concern for neutropenic fever. The following morning, patient noted to be minimally responsive with right sided facial droop. Work up for altered mental status was extensive, including infectious work up, brain imaging, urine toxicology, TSH, and EEG. EEG was revealing for background slowing with superimposed triphasic waves, concerning for marked encephalopathy due to cefepime toxicity. Cefepime was discontinued, with improvement of mental status. Patient did not return to mental status baseline. 3 months later, patient was admitted to hospital for AMS due to hypoglycemia.

Conclusion: Many of the reported cases of CIN were patients older than 65 yrs old. Patients at risk for delirium, such as those with history of CVA, dementia, or underlying cognitive dysfunction, are at an increased risk of developing neurotoxicity with Cefepime.

Monitoring of renal function and frequent neurochecks can assist in safely administering cefepime, particularly in those most at risk, such as the geriatric population.

A74

A Program Evaluation of the Hospital Elder Life Program in a Community Teaching Hospital

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BACKGROUND/OBJECTIVES

The growing population of older adults and the numerous negative outcomes associated with delirium challenges health systems to provide specialized older adult care. One intervention that has been shown to have positive effects on older adults is the Hospital Elder Life Program (HELP) which utilizes volunteers to help prevent delirium and immobility. This project sought to answer the following questions: What was the effect of HELP volunteers on clinical outcomes (rate of patient falls, use of patient sitters and lengths of stay) and what was the associated financial impact?

METHODS

This project was a retrospective program outcomes evaluation.

SETTING/PARTICIPANTS

Charts of patients that were 70 years and older admitted to the Neurology/Stroke Unit, at community-based teaching hospital in Metro-Detroit Michigan between February 2017 and May 2018 were reviewed.

MEASURES

The time frame includes 8 months pre-implementation of HELP volunteers and 8 months post-implementation. To analyze the patient population and compare the homogeneity of both groups before and after implementation, the Chi-square test was used for gender, race, ethnicity, and language, and T-test was used for age. Descriptive statistics was used to describe fall rates. The Wilcoxon rank test was used to analyze length of stay and sitter hours. A study site statistician conducted the analysis of data using Statistical Analysis System. The financial services department assisted in obtaining information regarding the financial impact of falls, patient sitters, and LOS.

RESULTS

A total of 1670 patients were included in the review. Falls decreased from 15 during the pre-implementation period to 9 falls post implementation. Average length of stay decreased from 4.1 days to 3.9 days (p= 0.027). Total patient sitter hours decreased from 4,210.10 hours to 3,742.70 hours, for a difference of 475.40 hours (p= 0.80). The estimated cost of a fall, with or without injury, while hospitalized was unable to be obtained from the financial department. In the post-implementation study period, HELP volunteers on one nursing unit showed minimum cost savings of $48,053.05 through the reduction of LOS and use of patient sitters.

CONCLUSION

The results of this project are consistent with literature, concluding that volunteer visits from the HELP positively impacts patient outcomes and reduces financial costs and substantiates the need to sustain and expand the current program.

A75

Results of the experimentation of an automated detection platform for situations at risk of geriatric decompensation "GER-e-TEC", with the first patient included.

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Introduction. - Telemedicine can help in the management of patients suffering from chronic pathologies, particularly elderly patients with numerous comorbidities. We experimented with the e-platform MyPredi - dedicated to the automated, intelligent detection of situations at risk of decompensation of geriatric syndromes - for the first patient included in the GER-e-TEC study.

Methods. - The MyPredi platform is based on medical sensors communicating and relaying real-time feedback to an intelligent system of physiological information that analyzes medical ontology, ultimately leading to the generation of alerts. These alerts are linked to a deterioration in the state of health of patients in relation to a decompensation of chronic pathologies. To validate these alerts, an experiment was conducted between September of 2019 and November of 2019 where the platform was deployed with patients monitored in internal medicine. During this phase, the alerts were collected and analyzed retrospectively in terms of sensitivity, specificity, and positive and negative predictive values with respect to clinical data. We report the results of this experiment for the first patient included.

Results. - The telemedicine solution made 11,253 measurements for the patient throughout his hospitalization, with an average of 304 measurements per day. The telemedicine solution issued 70 alerts for the patient during his stay, with an average of 2 alerts per day. The patient had 23 mild alerts, 16 moderate alerts, 25 critical alerts, and 6 severe alerts. Cardiac decompensation and bed rest were the main risks that generated the most alerts (n=10). In terms of sensitivity, the results are 100% for all geriatric risks, and very satisfactory in terms of positive and negative predictive value.

Conclusion. - MyPredi telemedicine platform enables the generation of alerts - in an automatic and non-intrusive way - relating to the deterioration of a patient's state of health with regard to geriatric risks.

A76

An evidence-based approach for identification of malnutrition and prevention of skin breakdown.

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Background: Geriatric patients have an increased risk for skin breakdown due to advanced age, immobility, comorbidities, and poor nutrition. As malnutrition contributes to impaired skin integrity, patients may experience ulceration, infection, and pain. Internal evidence within a long-term care facility in Maryland supports a practice change, as the assistant director of nursing expressed concern about moisture associated skin damage (MASD) and pressure ulcers, as well as delayed risk recognition and communication of changes in dietary intake. Specifically, the incidence rate of skin breakdown in January of 2020 was 6.37%, with a benchmark of 3% and goal of 0% for in-house acquired wounds.

Purpose: The purpose of this QI project is to implement and evaluate use of the Mini Nutritional Assessment (MNA) for patient admissions/readmissions within a LTC setting, for early recognition of malnutrition and prompt intervention to prevent skin breakdown.

Methods: Implementation relied on Lewin's Change Theory, in order to utilize evidence to manifest and sustain a change in practice. Strategies and tactics included meetings with administrative and nursing staff to review current processes for patient admission and dietary evaluation, training of staff, a brief trial of change, and adoption of a new communication system. The project was implemented at a 130-bed facility and clinicians included 15 nurses, 2 providers, 1 dietician, the DON and administrator. Inclusion criteria included all admissions/readmissions, with no exclusion criteria given site priorities. Implementation data was collected at weekly intervals, with outcome evaluation at baseline, 7 and 14 weeks. Data collection was performed using electronic reports, chart audits, and observation. Measures to protect confidentiality and privacy included collection of anonymous data. Data was analyzed using run charts to evaluate trends and variation in MNA use.

Preliminary Results: Preliminary findings suggest that MNA utilization will likely continue to increase throughout the implementation phase, with support from a structure of strategies and tactics, focused on buy-in, collaboration, and education.

Conclusions: The presence of a malnourished state may contribute to impaired skin integrity and even ulceration, pain, and infection. This project was designed to implement and evaluate the use of the MNA to support early recognition of malnutrition and prompt intervention to prevent skin breakdown.

A77

Effect of an inpatient pharmacist medication management intervention on hospital readmissions in Medicare Advantage patients

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Background: Multicomponent interventions led by pharmacists are more effective for reducing hospital readmissions compared to single intervention strategies (Bach et al., 2019). A quality improvement study was undertaken to evaluate the Population Health Inpatient Medicare Advantage Pharmacist (PHIMAP) intervention, a multicomponent intervention delivered predischarge. The intervention included inpatient pharmacist participation in interdisciplinary rounds, discharge medication reconciliation, bedside medication delivery, personalized medication lists, and medication counseling. Pharmacists made post-discharge phone calls to all patients, including those who did not receive PHIMAP.

Methods: The intervention was provided on weekdays by one pharmacist at an urban tertiary hospital in Los Angeles, CA. A retrospective cohort design was used to analyze readmissions data on Medicare Advantage patients. Inclusion criteria were inpatient admissions between Nov. 2018-Feb. 2020. Exclusion criteria were discharge to an institutional setting and hospice status. A logistic regression model was estimated with an outcome of 30-day readmission and covariates of study group, age, race, sex, language, marital status, length of stay, discharge location, number of outpatient medications, and Elixhauser Comorbidity Index.

Results: Among 503 patients (median age 73 years; 54.4% female; 55.9% white), 59 (11.7%) had 30-day readmissions. Unadjusted 30-day readmission rates were not significantly different between intervention group (12.4%, 95%CI 10.6-17.9) and control group (8.9%, 95%CI 3.7-15.9). Intervention group patients had higher comorbidity burden than the control group (Elixhauser Index median [95%CI]: 29 [24-31] vs. 16 [14-22]) and were less likely to be discharged on weekends, $p<0.01$. Nonetheless, multivariable analysis showed no significant difference in 30-day readmission in the intervention group compared to the control group (odds ratio=1.22, 95% CI 0.56-2.69).

Conclusion: We found no statistically significant effect of PHIMAP on 30-day readmission in Medicare Advantage patients. Due to correlation between weekend discharge and control group assignment, future study is planned with historical controls and pre-post comparisons.

Reference: Bach Q, Peasah S, Barber E. Review of the role of the pharmacist in reducing hospital readmissions. *J Pharm Pract. 2019*;32(6):617-24.

A78

virtual visits during the COVID-19 pandemic: opportunities and challenges in medication safety

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Background: How primary care professionals support medication safety in community dwelling multimorbid older adults during the COVID pandemic may be fundamentally changed by widespread use of virtual visits. Many of these patients take 5 or more prescription medications daily which may include high risk medications.

Methods: 21 interviews were conducted with professionals (MD, NP, PA, RN, MA) in multiple primary care practices to elicit their observations of opportunities and challenges related to medication safety in these patients. These interviews were conducted in fall 2020.

Results: Most interviewees reported that due to technology barriers, virtual visits were predominantly conducted by audio only. Video visits were thought to be enabled by a family member who remained as part of the visit. In comparison with in-person visits, several opportunities of virtual visits in improving medication safety were cited. These include:

- medication container accessibility when are in their own home; reconciliation can be more thorough and comprehensive;
- with video, medication bottles and conditions of medication safety in the home can be viewed;
- less no shows
- home living conditions can be observed;
- family member can add information

The interview participants cited challenges of virtual visits in medication management as well:

- without video cannot see medication containers;
- not always possible to use video because some patients not comfortable with sharing how their home looks;
- harder to get a sense of adherence without facial expressions without video;
- harder to communicate new information and assess understanding in audio only situations (no ability to provide written text on a screen);
- limited physical exam information (visual and audio) available during video visits;
- family member can limit information.

Conclusions: Most virtual visits were limited to audio only which limited the ability of the PCP to observe nonverbal cues such as facial expressions. Professionals felt that virtual visits were well received by patients and families. Medication safety was enhanced when virtual visits included video streaming but was often dependent on family caregivers as well as patient willingness to participate.

A79

Patient Priorities Care as Framework for What Matters

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Background: To optimize care for older adults, the John A. Hartford Foundation and the Institute for Healthcare Improvement created the Age-Friendly Health System Initiative based on the 4Ms (What Matters, Medications, Mentation, and Mobility). "What Matters" focuses on identifying and aligning care for each older adult with their unique health outcome goals and care preferences. Matters most is the keystone M, yet is the most challenging to implement. Patient Priorities Care (PPC), an evidence-based approach that aligns healthcare decisions with the priorities (outcome goals and care preferences) of complex older adults, provides a framework for translating the concept of "What Matters" into clinical decision-making.

Methods: PPC was adapted for the DeBakey VA Medical Center geriatric clinic in January 2018 following training of 3 geriatricians, 1 PA, and 6 geriatric fellows by co-developers of PPC. Over two years, 24 geriatrics fellows and 9 geriatrics PA residents were trained in the PPC approach. When the clinic transitioned to age-friendly care for all non-urgent clinic visits in February 2020, PPC became the approach for eliciting and acting on "What Matters" for every Veteran. We modified the clinic note template to include documentation of goals and care preferences, anchored to what matters, with relevant alignment of healthcare as the first step in the plan.

Results: Findings from a focus group of providers, patients, and caregivers identified the PPC framework as acceptable and reasonable for addressing "What Matters". The clinic incorporated the 4Ms into 39 of 114 non-urgent visits (34%) over the first 2 months (February and March 2020) of age-friendly care. Only 11% of visits in April and May 2020 incorporated 4Ms following Covid-related changes in clinic workflows. With resumption of traditional clinic workflows, 28 of 44 (64%) non-urgent, in-person visits in December 2020 included 4Ms documentation.

Conclusion: Despite initial Covid-19 related disruptions, PPC is a clinically feasible and acceptable framework for identifying what matters and performing relevant alignment of care as part of an age-friendly care transformation.

A80

Transitions of Care: Hospital to Home, Aging Adult Services Attendant Care Program

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BACKGROUND: Aging Adult Services (**AAS**) is a Geriatric Specialty Program at Stanford Health Care, which provides transitional care services for patients 65 and over, that are discharged from hospital to home, to clinics, and facilities. AAS developed the Attendant Care Program (**ACP**) to support patients who are high risk for readmission and have caregiver needs. ACP offers 72-hour tuck in service or up to 30 days of attendant care. Predominant reasons for readmissions include progression of advanced illness, caregiver burn out, inadequate discharge follow-up, medication adherence, care compliance, health literacy, and minimal psycho-social support.

METHODS: Using a Risk of Readmission tool, high-risk hospitalized patients over the age of 65 were screened for care giver support needs. If it was deemed assistance was needed with ADLs/IADLs and there was a lack of care giver support, a financial screening was completed, and the patient was referred to the program. Care giver services were initiated within 24 hours of discharge from the hospital. After discharge AAS followed with post discharge calls, home visits and collaboration with community partner. Aging Adult Services Attendant Care Program collaborated with community partners to address readmission reduction, bridging the gap during transitions, reducing caregiver burden, supporting patient wellness and post-discharge care in high-risk hospitalized patients.

RESULTS: 64 patients received the Attendant Care Program and had average Risk of Readmission (ROR) score of 5. 15 patients were readmitted to the hospital over a 12-month period. The readmission rate was 23%. Overall, ACP patients whom were readmitted had multiple comorbidities and advance illness, which resulted in higher ROR score.

CONCLUSION: With a focus on transitional care through the continuum, care coordination and home visits provided by the AAS Transitional Care Coordinator were endorsed as very valuable, by patients. For many of the ACP patients it was their first experience receiving care and they felt highly supported and comforted. Interventions that led to positive outcomes were medication adherence, home visits, care coordination with PCP and other health partners, linkages and resources, memory support and disease education.

A81

Care experiences of patients and caregivers in a home-based primary care program

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Background: Home visits are an alternative care model for patients who struggle with clinic-based care due to functional or cognitive limitations. Prior research has demonstrated its effectiveness in reducing unnecessary acute care utilization. In 2018, Stanford began a Home-Based Senior Care (HBSC) program offering comprehensive primary care and intensive social work visits in the home environment for high-need Medicare patients. A quality improvement evaluation followed to understand the patient and caregiver experiences, as well as barriers and facilitators of the program.

Methods: We surveyed by phone or email 122 patients and next-of-kin caregivers enrolled in HBSC on their satisfaction with care at three and six months in the program. Free text responses to questions on positive and negative experiences were analyzed using content analysis. Additionally, we conducted in-depth semi-structured interviews with a purposeful sample of 18 patients and caregivers to gain further insights into the program.

Results: The survey response rate was 67%, by mostly caregivers. Within the free-text responses, communication was identified as both a facilitator and a barrier to care. Lack of clarity about afterhours care and delays in phone communication were contributors to lower satisfaction with care. Messaging via the patient portal was noted as an effective way to communicate with caregivers. In the qualitative interviews, participants reported reduced need for transportation as the major benefit. Geriatric competence, proactive management of conditions, and subsequent trust in providers contributed to a positive experience with the program. Caregivers reported benefits of the intensive social work follow up connecting them to community resources.

Conclusions: HBSC program benefits functionally and cognitively impaired patients and their caregivers by reducing barriers to receiving primary care. Training of providers in geriatric patient management builds trust with patients and families. Quality improvement efforts should focus on multi-modal communication to ensure high quality of care delivered in the home for this vulnerable population.

A82

A Community Engagement Model to Drive Advance Directive Discussion and Completion

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Background

Advance directives (ADs) describe individuals' preferences for life-sustaining treatments and/or surrogate decision makers, to help avoid unwanted, burdensome treatments at the end of life. However, only 36.7% of adults have completed an AD.[1] There is growing interest in adopting a public health approach to end-of-life care, including ADs.[2] A pilot program, the Advance Directives at Work in Tennessee Program (AD@WorkTN), intends to enhance AD completion by the general public workforce.

Methods

The AD@WorkTN initiative targets adults in the Tennessee workforce. Over a 1-year period, 10 workshops were conducted for 260 human resources leaders, representing 154 businesses. Each workshop provided resources to employers, so that ADs can be integrated into the employee orientation and benefits enrollment process. Educational materials, web tools, podcasts, and a demonstration of how to complete an AD were included. Participants were directed to the Honoring Choices Tennessee (HCT) website, containing the state AD with detailed instructions, and the MyDirectives app, to securely upload completed ADs. Surveys were administered to employers after completion of workshops.

Results

Following the workshops, there were 464 visits to the HCT website and 7 visits to the MyDirectives website. Thus far, a logistics company, a specialty sales company, and a private university have plans to include ADs in their annual benefits enrollment process

beginning 2021, targeting approximately 335 employees to complete an AD. A large health system, consisting of approximately 11,000 employees, has indicated plans to institute ADs into the employee benefits enrollment process once the pandemic resolves.

Conclusions

AD@WorkTN is a promising model to promote integration of ADs into the employee orientation and benefits enrollment process. Enhanced discussion and completion of ADs among employed individuals may encourage intergenerational conversations about end-of-life care and documentation in healthcare records.

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A83

Impact of Urinary Incontinence and Overactive Bladder in the Long-Term Care Setting: A View From Directors of Nursing

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Background: Urinary incontinence (UI) and overactive bladder (OAB) are highly prevalent in long-term care (LTC) facilities. Compared with LTC residents without UI/OAB, residents with UI/OAB have higher healthcare resource utilization, a greater number of comorbidities, and increased rates of polypharmacy. Managing UI and OAB can be burdensome to LTC staff and facilities with respect to staff time, incontinence product use, and quality measures. We assessed and quantified the impact of UI and OAB on staff, residents, care processes, and quality measures in LTC settings.

Methods: A 70-question quantitative online survey was sent to directors of nursing (DONs) of NADONA and AAPACN. DONs were eligible if they worked for ≥1 year in a facility with ≥100 beds, where ≥80% were LTC beds. Survey topics included facility characteristics and resident care, incontinence product costs and burden, quality measures, and treatment (in the context of UI). Data are reported at an aggregate facility level and are presented descriptively.

Results: A total of 71 DONs completed the survey. The mean number of residents per facility was 115. Most residents (68%) were female; 62% of all residents had UI. Of residents with UI, 40% were always incontinent, 81% used briefs/products for UI on an ongoing basis, and only 14% were treated with medication. About half (54%) of DONs considered the cost of UI products to be higher than other facility supplies. DONs reported that CNAs spend 56% of a shift managing UI needs (eg, assistance with toileting, changing briefs), and 59% reported that UI management is at least some cause of high CNA turnover. Resident falls occurred at a mean of 14.3 per month per facility, with 36% of falls occurring while trying to get to the bathroom. LTC quality measures reported as significantly impacted by UI included urinary tract infection and falls with major injury. A total of 74.6% of DONs were unaware of a link between anticholinergics and risk of developing cognitive issues/dementia.

Conclusions: Management of residents with UI and OAB can be burdensome to LTC facilities and staff. Low treatment rates, low awareness of anticholinergic treatment risks, high incidence of falls due to urgency, and high CNA turnover highlight the need for improved treatment and management in this population.

A84

Use of aspirin for primary prevention and optimization of cardiovascular risk among Managed-Medicare patients in an ambulatory care setting

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Background: Early evidence regarding the use of aspirin for primary prevention of atherosclerotic cardiovascular disease (ASCVD) showed promise in the reduction of cardiovascular morbidity and mortality, however, new evidence and clinical practice guidelines suggest the risks of bleeding with aspirin use may balance or outweigh the cardiovascular benefits in specific populations.

Methods: A retrospective chart review of 300 randomly selected Managed-Medicare patients from a single primary care organization prescribed aspirin at the time of data collection was conducted to determine aspirin appropriateness and assess optimization of cardiovascular risk factors including hypertension, hyperlipidemia, smoking, and obesity. Patients were excluded if aspirin was used for secondary prevention of ASCVD. The determinations of optimal care were based on the 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease.

Results: Overall, 156 patients met exclusion criteria and were not included in the study results. Analysis was conducted on the remaining 144 patients determined to be using aspirin for primary prevention of ASCVD. Analysis revealed that 91.7% of patients were inappropriately maintained on aspirin despite changes to the primary prevention guidelines. The most common reasons for aspirin inappropriateness were age over 70 (68.2%) and presence of at least one bleeding risk factor (22.7%). The percentage of patients deemed to have non-optimally controlled hypertension, cholesterol, smoking status, and weight were 47.3, 22.2, 5.6, and 84.7, respectively.

Conclusions: Retrospective analysis was helpful in understanding the baseline use of aspirin for primary prevention of ASCVD and overall cardiovascular risk optimization in this population. Despite being at high-risk of ASCVD events, the majority of patients reviewed were not candidates for aspirin use based on the updated guideline recommendations. Education regarding the new recommendations for aspirin use in primary prevention will be required to ensure appropriate prescribing and prevention of major bleeding events. Emphasis on the optimization of blood pressure, cholesterol, weight, and smoking status will be required for reducing the risk of ASCVD, especially in patients where aspirin use is not appropriate.

A85

Barriers and facilitators to implementation of clinical deprescribing tools: Lessons learned from a national, interprofessional deprescribing collaborative

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Background:

Deprescribing improves outcomes for older adults with multimorbidity and polypharmacy. However, there is little evidence on the implementation of clinical deprescribing tools. Few studies have suggested limitations to deprescribing, without consensus on strategies to overcome these challenges. We evaluated the results of a recent, national deprescribing collaborative to determine barriers and facilitators to implementation of clinical deprescribing tools.

Methods:

This is a quality improvement from October 2019 to August 2020 that included 25 Veterans Affairs hospitals: 13 implemented a clinical deprescribing tool, 12 surveyed to assess challenges in rural

areas. We modeled the Virtual Breakthrough Series Collaborative to provide mentoring, feedback, and scheduled check-ins with each site. Quantitative and qualitative data were collected by online survey and semi-structured interviews. Narrative responses were analyzed using coding to determine common themes. We used a validated framework, the Consolidated Framework for Implementation Research (CFIR), to assess barriers to implementation.

Results:

Participants of the deprescribing collaborative served older patients with polypharmacy nationwide. Sites utilized diverse, interprofessional teams in various clinical settings. Providers' responses were classified into three CFIR constructs including readiness for implementation, identify key stakeholders, and promote adaptability. CFIR constructs were mapped to Expert Recommendations for Implementing Change strategies to refine implementation processes. Here are key implications of our findings:

1. Determine barriers and facilitators based on the specific patients, team members, site, and health system before implementation.
2. Identify champions to promote and maintain the intervention.
3. Use feedback to adapt implementation to meet local needs.

Conclusions: Engaged, interprofessional teams and an understanding of the specific patients, site, and system are key to successful implementation of a clinical deprescribing tool.

A86

Quality Improvement in Nursing Homes: A Scoping Review

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Background: Limited evidence describes quality improvement strategies used in NHs, their effectiveness, or how to replicate them across settings. Guided by Proctor and colleague's Framework for Implementation Research, the purpose of the study was to map-out evidence from QI studies in NHs and describe strategies to improve and replicate effective approaches in future research.

Methods: The Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews (PRISMA-ScR) framework was used to conduct a systematic literature search to identify reports published between July 2013 and February 2019. Inclusion criteria were: (1) the term "quality improvement" to describe their methods, or reported use of a QI model (e.g., Six Sigma) or strategy (e.g., plan-do-study-act cycles), (2) findings related to the impact of QI on either service and/or resident outcomes, and (3) two or more NHs included. Two reviewers screened all reports and extracted data on study design, setting and population; problem targeted; solution to address the problem; QI strategies; and outcomes (implementation, service, and resident). Vote counting and narrative synthesis were used to describe the frequency that studies used types of QI strategies, implementation outcomes, and reported service and/or resident outcomes.

Results: Of 2302 articles identified in the search, 77 articles reporting on 59 studies met the inclusion criteria. Studies focused on 23 clinical problems, such as falls and hospital transfers. Studies used an average of 6 to 7 QI strategies; 55% reported use of in-person training, but only 20% reported plan-do-study-act cycles. On average, studies assessed two implementation outcomes; most frequently staff perceptions of the clinical intervention and less commonly fidelity and sustainment. A set of 49 studies reported service outcomes and 34 reported resident outcomes. In studies with statistical tests of improvement, service outcomes compared to resident outcomes more frequently improved.

Conclusion: The findings in this study map-out evidence of QI in NHs. The findings suggest areas for refining QI in future studies to promote the replication and synthesis of promising solutions. The findings also suggest the value of using the Framework for Implementation Research for describing attributes of QI in NHs.

A87

Constipation: an often-overlooked etiology of the encephalopathy enigma

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Background:

Constipation is a commonly missed problem in the elderly and is a risk factor for encephalopathy. Increased mortality, length of stay and functional decline can be consequences of constipation (1). In the acute care setting, documentation of the consistency, frequency and volume of bowel movements is often lacking. The literature is deficient in how frequently constipation contributes to encephalopathy. The goal of this initiative is to elucidate the prevalence of constipation as a contributor to encephalopathy in patients seen in geriatric consultation at our institution.

Methods:

A chart review was conducted for all patients age >= 65 evaluated in consultation for management of encephalopathy at our institution between 12/1/19 through 5/5/20.

Results:

A total of 67 patient charts were reviewed. 33% of the patients were found to have constipation (no recorded bowel movement) or were evaluated for stool impaction given abdominal distention. 86% of these patients were under the hospitalist service and 13% were under surgery. These patients were further evaluated with abdominal x ray and received enemas or suppositories to relieve their constipation. The encephalopathy improved or resolved after these measures were taken.

Conclusion:

Constipation is a major problem in the hospitalized elderly and can lead to encephalopathy. This is hypothesized to be due to reduced mobility, dehydration, poor oral intake and multiple medications. Our study suggests that 1 out of 3 hospitalized elderly are likely to be constipated and this can contribute to significant morbidity through their hospital stay. Our encephalopathic surgical patients had less prevalence of constipation. This could be due to the surgeons being more focused on bowel movements with an already implemented bowel regimen on order sets. Our analysis is limited as it pertains only to the inpatient setting at one acute care hospital. This raises the importance of a thorough history and physical exam around bowel function in all hospitalized elderly. Incorporating EMR alerts when patients have not had bowel movements after an expected amount of time and inserting bowel regimens in order sets are possible ways this issue can be addressed.

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A88

Feasibility of implementing a nursing discharge teaching intervention for multimorbid inpatients.

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Background: Discharge teaching should be a core nursing intervention within the overall discharge preparation as multimorbid inpatients must be provided with the knowledge and skills to self-manage their health conditions. Its implementation remains unsatisfactory in Switzerland. Overcoming implementation barriers requires understanding the nature of the nurses' behaviour to be changed and identifying types of implementation intervention that could support these

changes. The objective of this study is to test the feasibility for nurses of implementing a novel nursing discharge teaching intervention in their daily practice.

Methods: This study was conducted in medical units in three hospitals in Switzerland. A sample of 13 nurses was recruited to be trained in and deliver the intervention. Pre-implementation, they participated in qualitative and quantitative evaluations of their teaching behaviors and feasibility of the intervention. Behavioral determinants of nurses regarding discharge teaching delivery were assessed in the pre-implementation phase through focus groups and with the Determinants of Implementation Behaviour Questionnaire (DIBQ). The plan for implementation was based on the Theoretical Domains Framework and the Behavior Change Wheel of the COM-B model.

Results: Mean age of responding nurses was 29.8 with an average of 5.1 years of work experience. Results of the DIBQ showed that socio-political context was the main barrier to discharge teaching delivery. More specifically, nurses reported a lack of support and resources from the organization. Nurses also reported having little control over teaching delivery and difficulties with planning teaching when patients are not motivated or when there is little time. These results are corroborated by the content of the focus groups. Environmental context and resources was the most reported domain influencing their behaviour regarding discharge teaching.

Conclusions: Results of the pre-implementation phase of this study generated an understanding of barriers and facilitators to discharge teaching delivery at the individual nurse level. Thus, these results provide crucial information on which behavioral determinants should be addressed by targeted implementation strategies to support the intervention implementation.

A89

Development of a Hospital Palliative Service Line Based on Needs Assessment Utilizing the Clinical Frailty Scale (CFS)

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Background

The palliative care service is an essential element of patient care within the hospital setting. Palliative care consultation leads to improved patient satisfaction and quality of life, while being cost effective through reduction in length of stay and readmission rate. Frailty syndrome is a physiological process involving declining function, organ system failure, and decreasing adaptability to stress. The CFS is a validated screening tool utilized by various specialties in correlating hospital outcomes, surgical readmission rate, prediction of unplanned hospitalization, disease prognostication, and risk of death [1]. To determine palliative care needs, the Geriatric department of a small community hospital in rural Western North Carolina performed a needs assessment utilizing the CFS.

Methods

CFS scores were calculated on all patients 60 and older admitted to the hospital over a 30-day period by reviewing nursing intake, case management and physical therapy documentations. A score of 7-9 (severely frail) indicated a need for palliative care consult. A score of 6 (moderately frail) indicated a need for possible palliative care consult due to disease burden and high risk for readmission (15%).

Results

CFS scores were calculated for 204 patients. COVID-19 patients (n=24) were excluded due to unpredictable outcomes and length of stay. The average patient age was 74.86 years (SD 9.41). 20% (n=41, 95% CI 14.6-25.6%) of the patients had a score between 7-9, and of those the average hospital length of stay was 4.97 days (SD 4.15), as compared to the rest of the population, 4.10 days (SD 3.80). 23% (n=47, 95% CI 17.5-29.4%) of the patients had a score of 6.

Conclusion

Assessment of frailty by utilizing the CFS in hospitalized patients demonstrated a need for palliative care consultation in a small community hospital. Data on CFS and length of stay afforded the implementation of a pilot palliative care consult service to promote service utilization. Of note, patients with CFS score of 6 may benefit from inpatient geriatric consultation due to disease burden.

Reference

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CFS		n	Average stay
1-6	Less severely frail	163	4.10 (SD 3.80)
7-9	Severe frailty, terminally ill	41	4.97 (SD 4.15)

CFS and Length of Stay

A90

Do no harm : Instutional experience of central nervous system (CNS) - Active medications (CAMS) prescription per Beers criteria update.

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Abstract Body : Background CAMs are neuropsychotropic agents that modify brain and systemic function through intricate neurochemical pathways. Older adults on CAMs are at an increased risk of experiencing adverse drug reactions (ADRs) and geriatric syndromes such as delirium, fractures and cognitive decline. Patients on CAMs may also face challenges of increased healthcare costs, medication non-adherence and decreased functional status. The 2019 Beers criteria update recommends against prescribing >/= 3 CAMs (including opioids) to reduce ADRs. We evaluated institutional adherence to this guideline in our ambulatory patient population and explored the association between CAMs, commonly occurring ADRs and prevalent patient factors.

Methods Retrospective chart review from electronic medical records flowsheets in Heron (a search discovery tool to search de-identified data from various hospital and medical center sources) was performed. We reviewed patients aged 65 years and older presenting to Internal, Family and Geriatric Medicine (primary care) clinics in our health system from Mar 1 --Oct 31, 2019. Cross sectional analysis identified number of patients on >/= 3 CAMs in their active med list. We also reviewed demographic and comorbidities in these patients.

Results Preliminary results show 214 of 3196 consecutive patients were prescribed >/= 3 CAMs (6.7%, P value < 0.0001. This suggests that the proportion of patients >/= 65 yrs on 3 or more CAMs is significantly greater than 0%. Please refer to table for further analysis. Conclusions Initial results demonstrate that CAM polypharmacy and ADRs were significantly prevalent in adults >/= 65 at our institution. With further analysis, we will identify patient sets for more ADRs including falls and urinary retention and explore the temporal association with preexisting cognitive disorders. This underscores the importance of thorough screening of the patients with Beers criteria for CAM polypharmacy in the ambulatory setting. Future work will focus on the adoption and implementation of institutional quality measures to serve as checkpoints for providers while prescribing and monitoring patients on CAMs.

ADRs experienced	>/=3 CAMs	<3 CAMs
Fracture	35 (16%)	198 (6%)
Cognitive impairment	22 (10%)	203 (5%)

A91

An Interdisciplinary Approach to Improving the Completion Rates of Health Care Proxy (HCP) Forms at a Geriatrics Ambulatory Clinic

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Background: Healthcare proxies (HCP) enable patients to prepare for scenarios where they lack capacity to make medical decisions for themselves. Approximately 67% of adults do not have an identifiable HCP. Our project aims to improve the rate of completed HCP forms in a Geriatrics primary care clinic within a safety net hospital system. Our intervention focused on educating clinic staff and medical providers.

Methods: We conducted three monthly educational trainings beginning August, 2020 for providers, patient care assistants (PCA), and clerical staff. PCAs checked the Electronic Medical Record (EMR) to see if HCP forms were present during registration, and if not, patients were provided with HCP forms in their preferred language. Providers then encouraged patients to appoint a HCP and had the completed forms uploaded to the EMR by clerical staff. Providers were encouraged to have repeated conversations with patients who lacked HCP forms. We analyzed data at baseline and monthly for 3 months post-intervention to determine program efficacy, with plans to provide additional educational training and re-analyze at 6 months.

Results: The baseline HCP completion rate in our clinic was 10.1% which improved to 15.2% and 14.5% in months 1 and 2 respectively, post educational intervention. The third month post-intervention, showed a marginal decline in HCP completion rate to 9%. However, the mean rate of HCP completion over 3 months post-intervention improved to 12.9% (27.7% improvement from baseline).

Conclusion: Based on these preliminary analyses, our interdisciplinary clinic-based process has led to some improvement in HCP completion rates. As an ongoing intervention, additional enhancements will be considered with continued data collection to continually improve this collaborative approach.

A92

Virtual Cognitive Testing: Is It Really the Same?

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Background

In the early months of the COVID pandemic, a geriatric consult clinic affiliated with a fellowship program was forced to close for over a month. During that time, the clinic was able to see patients virtually, but due to limited data on virtual cognitive testing in rural and underserved populations, the clinic was unable to accommodate those needing cognitive evaluation. The Montreal Cognitive Assessment (MoCA) is a validated assessment tool to evaluate for cognitive impairment. Two studies address the comparability of in-person MoCA and virtual testing. Neither study found a significant difference between virtual and in-person testing in veterans and stroke patients (1,2).

Methods

A memory clinic in rural Western North Carolina compared the difference between virtual and in-person MoCA testing within their patient population. All patients seen in-person for cognitive assessment were given the opportunity to participate in a virtual MoCA within a six-month window of their in-person visit. A questionnaire regarding their experience was given to those who completed the virtual MoCA.

Results

27 of 120 eligible patients agreed to participate in virtual testing. The average age of participants was 76.8 (7.2 SD) years old. One Way ANOVA found no statistical significance between in-person and virtual MoCA testing (p = 0.7290, 95% CI). The average difference between in-person and virtual MoCA was +/- 1.107; mean in-person MoCA was 16.85 (8.30 SD) as compared to virtual MoCA of 16.96 (7.90 SD).

Conclusions:

This small pilot study found virtual cognitive testing to be non-inferior to in-person testing. Almost all patients required assistance in setting up the virtual encounter. Barriers to this research included willingness to participate and access to virtual platforms. Although the results of this pilot study are promising, the data is limited due to small sample size and further research should be conducted.

References:

1. Chapman JE, et all. Comparing face-to-face and videoconference completion of the MoCA in community-based survivors of stroke. J Telemed Telecare. 2019 Dec 9

2. DeYoung N, et all. The reliability of the MoCA using telehealth in a rural setting with veterans. *Journal of Telemedicine and Telecare*. 2019;25(4):197-203.

Patient Experience

Easy to use	Ability to hear well	Ability to see well	Liked the virtual MOCA	Use of glasses	Needed assistance to set up virtual encounter
24 88% (95% CI 71-98)	22 81% (95% CI 62-94%)	26 96% (95% CI 81-100%)	21 78% (95% CI 58-91)	18 67% (95% CI 46-83%)	21 78% (95% CI 58-91%)

A93

Lessons Learned from utilizing the VIONE Deprescribing Tool in a VA Community Living Center (CLC)

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Background

Polypharmacy, the use of multiple medication by a patient often results in adverse effects in older adults on account of age-related changes in pharmacokinetics and pharmacodynamics in addition to multi- morbidity. Prior to the intervention, no standardized medical tool was used for deprescribing in the Perry Point CLC.

VIONE is a deprescribing tool first developed at the Central Arkansas VA in 2016. It is an electronic tracking system embedded into clinical profiles to capture data on deprescribed medications. Deprescribing medications using this approach has resulted in decreased pill burden and improved utilization of human and economic resources.

VIONE stands for:

Vital – is this medication essential for my health?

Important – How important is this medication to improve my quality of life?

Optional – By taking this medicine, do the benefits outweigh the risks?

Not Indicated – Am I taking medications that are no longer needed?

Every medication has a reason -Does every medication I take have a clear reason?

Methods

The CLC interdisciplinary team (IDT) members were educated about the tool during clinical meetings in September 2019. This was followed by utilizing the tool at IDT meetings for the 77 CLC residents identified as receiving fifteen or more medications or by individual provider review. The resident or family member participated in the discussion. The process was completed in June 2020.

Results

90% of the residents reviewed had medication reductions and are presently on less than 15 medications. All the residents are very satisfied with the changes. The main barriers to reduction included the need for multiple medications to meet the standard of care for veterans with multimorbidity. Polypharmacy was deemed unavoidable in veterans with certain diagnoses for example those receiving ventilator care. An important lesson learnt was the need for additional nursing education.

Conclusion

The VIONE tool is an effective tool for reducing polypharmacy in the CLC. Nurse led educational interventions should be developed at the local level to maximize nursing engagement.

A94

Home Blood Pressure Monitoring for Hypertension Management during COVID-19 Pandemic

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Background: Home blood pressure measurement (HBPM) has been a time-honored supplement to periodic in-office measurement to facilitate primary care physician (PCP) diagnosis of hypertension (HTN), its ongoing control and medication management. PCPs, in response to COVID-19, adopted telemedicine as the sole means of care, elevating HBPM as the essential HTN surveillance tool. We assessed the feasibility of this approach in a Veteran Affairs (VA) geriatric clinic.

Methods: Study subjects included all the Veterans seen by New York Harbor VA geriatrics fellows' clinic between January 1, 2019 and March 1, 2020 and who have HTN listed as an electronic health record (EHR) diagnosis. Those with systolic blood pressure (SBP) > 140 mmHg were prioritized. We called these patients to assess adherence to BP self-care and reconcile medications, to identify reasons for poor adherence and to offer solutions. Patients were called again within two months to re-assess adherence, collect BP measures and adjust medications as needed.

Results: Among 102 patients diagnosed with HTN, 41 had not achieved the goal of SBP <140 mmHg prior to this intervention. We reached 78% (n=32) of these 41 patients (requiring 1-3 phone calls). All reported medical adherence, but none were found to consistently check BP at home with any frequency or proper technique. For the 14 patients having no BP monitor at home, we sent a monitor to 10 through prescription and enrolled 4 in a home telehealth (HT) program that uses daily remote measurement. We provided detailed instruction of proper HBPM during the initial interview. At follow-up, 47% (n=15) practiced HBPM and reported BP readings within goal, indicating no need for change in care. Of these 15, 11 had their own BP monitors; 2 achieved control through the HT program. However, only 2 of the 10 patients who received the prescribed BP monitor started HBPM and demonstrated good control.

Conclusions: Given our reliance on telemedicine, HBPM is feasible for outpatient HTN management. Close PCP follow-up to encourage consistent HBPM practice may improve and sustain the success of this strategy. The quality of self-reported data should be assessed during office visits.

A95

Pandemic Pivot: Volunteers' Friendly Telephone Calls to Community Dwelling Older Adults to Foster Re-engagement with PCPs

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Background: During the height of the COVID-19 pandemic in New York City, many older patients were isolated at home and fearful of returning to physicians' offices. Volunteers from our modified Hospital Elder Life Program - Empowering Elder Novel Interventions (ERNI), were redeployed to create a socially supportive telephone calls program in an effort to re-engage patients with their primary care physicians (PCP).

Methods: We assigned trained ERNI volunteers to call patients 75 years and older from one NYU medical practice, and screened patients for interest in participating in a friendly telephone calls program. From 6/1/20 to 10/15/20, volunteers reached 716 of 2,350 patients, 212 of whom opted in to have regular calls from volunteers (Intervention). Another 212 (not yet contacted) patients were selected for comparison (Control) by choosing every sixth patient by alphabetically listed last name. We reviewed electronic medical records for patient encounters with PCPs and subspecialists dated after the first phone call, and to identify those with no appointments.

Results: Overall mean age was 82 (standard deviation (SD): 5.5); intervention-group mean age 82.4 (SD: 5.6) versus 81.7 for controls. 64% of all patients were female, (intervention 70% versus 56% for controls). In the intervention group, 146 (69%) had at least one PCP follow up as compared to only 95 (45%) of those in the control group ($p<0.01$). Intervention-group patients visited subspecialty clinics more often as well (142 (67%) compared to 102 (48%); $p<0.01$). Out of the intervention group, 35 (17%) had neither PCP nor subspecialty clinic visits compared to 81 (38%) in the control-group ($p<0.01$).

Conclusions: Older adults who received telephone calls from our volunteers during the COVID-19 pandemic were significantly more likely to then have PCP and subspecialty visits compared to the control group. The degree to which this led to greater use of health services for care that would be deemed necessary and missed opportunities among those who were not called requires further study.

A96

Improving the Cognitive Screening Rate in Patients with Uncontrolled Diabetes: A Quality Improvement Initiative

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Background: Patients with diabetes have a 1.5-2.5-fold higher risk for dementia. The latest guidelines recommend screening all diabetic patients for cognitive impairment. We aimed to increase the cognitive screening rate in patients with uncontrolled diabetes, starting with hemoglobin (Hb) A1c above 9.

Methods: Using the electronic medical record, we obtained a list of patients with Hb A1cs > 9 who visited a New York City academic geriatrics clinic between July 2019 to July 2020. We excluded those with documented cognitive impairment, not reachable by phone or declining to answer. The AD8 was administered to all who were reached and those who scored 2 or greater were offered an in-person evaluation where we performed a Mini-Cog. PCPs were informed of scores < 3. The patients were evaluated using their preferred language. We also surveyed geriatricians and geriatric fellows within this clinic.

Results: 92 patients had an A1c above 9 of whom 21 had documented cognitive impairment, 31 were not reachable by phone, 6 declined screening, 2 were deceased. Of the 32 included patients, 14 were English speaking, 16 Spanish, 2 other. 12 had AD8 scores > 2. 9 were evaluated during an in-person visit (3 no show). 5 scored < 3 on the Mini-Cog. Of 6 geriatricians, 4 were aware of the screening guideline, only 2 reported screening all their diabetic patients and 6 aim to screen them all moving forward. The rates for the geriatric fellows were respectively 2, 0 and 5 out of 5.

Conclusion: Detecting cognitive impairment is essential for diabetic management, which was quite prevalent in this clinic. Guideline-directed cognitive assessment using a combined telephonic pre-screen followed by an in-person Mini-Cog© appears to be a practical approach for improving screening rates.

A97

Warfarin Therapy: Addressing Barriers and Improving Anticoagulation Care During the COVID-19 Pandemic

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Background: When the COVID-19 pandemic swept across New York in March 2020, an expansion of telehealth was an immediate response to limit patient risk of infection. However, telehealth could not replace needed frequent clinic visits for those patients on

warfarin requiring INR checks. Many vulnerable patients had to choose between checking INRs and potential COVID-19 exposure. We sought to understand and address challenges that INR clinics faced during the pandemic with a goal of building a better system for our patients requiring regular INR monitoring in times of disruption in physical access to care.

Method: In an academic medical center geriatric clinic in New York City, we obtained the list of patients on warfarin from July 2019 to July 2020. We reviewed charts from March to August 2020 for those eligible to be switched to direct oral anticoagulant (DOAC), excluding patients already on DOAC, out-of-the country, or deceased. Our exclusion criteria included hypercoagulable states, mechanical valves, valvular atrial fibrillation, or those who declined DOACs in the past. We also noted missed appointments, as well as barriers to in-person care, including functional limitations, dementia history, living situations and lack of support. By phone, we provided clinic appointments to better connect patients back to their physicians and social work referrals to assist with home support if needed. After review, we informed patients' primary physicians of those eligible or those unable to be switched to a DOAC but could benefit from home phlebotomy.

Results: Between July 2019-July 2020, we identified 75 patients prescribed warfarin, of which 33 (44%) were excluded. Out of 42 patients included in this study, 16 (38%) were eligible to be switched to a DOAC; 26 (62%) required lifelong warfarin therapy and were identified for home phlebotomy. We also established routine appointments for 15 patients who had lost follow up and referred 10 patients to Social Work.

Conclusion: The challenges faced by anticoagulation monitoring during the COVID-19 pandemic are multifaceted but can be alleviated by an individualized system of care addressing patients' specific needs. Our next step is to create an algorithm of patient identification for remote care options to be used in different care settings during periods of disruption.

A98

Geri-Mobile Health: Feasibility of a VA Mental Health Mobile Apps Training Program for Older Veterans

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Background: The VA has developed mobile applications (apps) to support mental health self-management. Older Veterans can likely benefit from these apps but may need assistance to learn how to operate them. The Geri-Mobile Health Program offers personalized training to older Veterans interested in learning to use these apps to address their well-being goals. Here we examine the program's initial effects on mobile device proficiency, quality of life (QoL), usage of and comfort with apps, and acceptability.

Methods: Veterans are referred by VA providers or may self-refer to the Geri-Mobile Health program. Mental health clinicians conduct individual sessions to teach basics about devices and introduce VA mental health apps. Participants complete initial assessments of mobile device proficiency (Mobile Device Proficiency Questionnaire; MDPQ), QoL, the number of days per week they use apps, and their comfort with apps (1: "not at all"; 5: "extremely comfortable"). At post-treatment, initial assessments were repeated including the Client Satisfaction Questionnaire to examine program acceptability.

Results: Twenty-five referrals have been received with 18 Veterans enrolled (M age: 72.92; SD=5.99). To date, 11 participants have completed treatment, 3 are in treatment, 3 are on hold due to COVID, and 1 began to use apps independently after an initial session. On average, participants (n=11) completed 8.18 sessions (SD = 3.37). Significant improvements in MDPQ scores were observed at post-treatment ($t(10)= -2.77$, $p= .009$). Nonsignificant improvements were seen in QoL. Participants increased the number of days apps were used from 1.09 to 2.9 days per week at post-treatment. Additionally, they reported increased average comfort using apps to manage their health (Pre=3.18; Post=4), high overall satisfaction with the program (82% very satisfied), and that 100% would definitely recommend the program/return if they were to seek help again.

Conclusion: Analyses suggested that the Geri-Mobile Health program increases older adults' mobile device proficiency and is highly acceptable. Larger studies should examine the program's clinical impact on mental health symptoms and quality of life. Programs such as this serve as an example of how to equip older adults with the knowledge necessary to manage their mental health symptoms using apps.

A99

Long-term impact of a Geriatric Prescribing Context

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Background: The medication-related death of a hospitalized older adult elucidated the inappropriateness of medication default doses in our electronic health record (EHR) for older adults. In response, we created and implemented the Geriatric Prescribing Context (GPC), an EHR-based set of age-specific dose and frequency defaults for patients 75 years and older, in July 2017. Inpatient medication orders aligned with GPC defaults and showed significant dose decreases at one year for 9 of 10 most commonly used medications.[1] This investigation examines GPC alignment over the 39 month time period following its implementation.

Methods: We collected order data for the 10 most commonly used medications at OHSU Hospital retrospectively from July 2016 through Sept 2020. We used Statistical Process Control charts to assess the proportion of time medication orders aligned with the GPC's recommendations. Signals of special cause were evaluated to identify time periods when shifts in process averages likely occurred and suspected shifts were assessed using binomial proportion tests. We used RStudio (RStudio, Inc., version 1.2.5001) and Microsoft Excel (2016) to perform statistical analyses and control charts, respectively.

Results: The pre-implementation phase of all medications displayed no special causes. After significant initial improvement in 2017, control charts revealed four different patterns of performance. Four medications maintained the initial improvement. Two medications showed a second significant improvement at a later date. One medication showed a second significant improvement but declined back to the initial improvement level. Three medications showed a subsequent decline in performance not statistically different from baseline. Overall, 7 of the 10 medications were prescribed at more age friendly dosing compared to baseline after 39 months.

Conclusions: The GPC is an effective method to support safer prescribing for hospitalized older patients but long-term impacts may be medication-specific. Further investigation is needed to ensure a geriatric prescribing context remains effective across drug classes in the long term.

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A100 Encore Presentation
Making an Impact with PACT (Post-Acute Care Transitions) - A Transitions of Care Model for Vulnerable Patients
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Background

The PACT program began from a growing need to care for a challenging population - patients hospitalized for a severe medical condition but cannot be safely discharged after stabilization and requiring post-acute nursing home care. Placement of these patients can be challenging as some nursing home facilities do not accept patients with extensive barriers in discharge planning. To improve care for these patients with complex needs, including homelessness, substance use disorder, and mental illness, we designed the PACT program to provide skilled nursing home access and facilitate safer disposition back to the community.

Methods

Recognizing this gap in care, Santa Clara Valley Medical Center contracted with a local skilled nursing facility to reserve beds and provided a dedicated team to care for these patients. Using a physician-led multidisciplinary approach, PACT coordinates a seamless transition for patients from the hospital to nursing home where patients can access resources related to mental health, homeless medicine, substance use, wound care, housing programs, and palliative services. Once a patient is ready for discharge from the nursing home, a team-based assessment informs a care coordination plan for patient integration back into the community.

Results

From January 2018 to November 2020, 172 patients were admitted to the PACT program. Prior to nursing home admission, their average length of stay in the hospital was 21 days. The number of hospital non-acute patients decreased by over 50%, improving hospital bed capacity by an estimated increase of over 13,000 hospital bed days, and allowing for a potential increase of 2,000 hospital admissions. The potential cost avoidance over this period was calculated to be approximately $30 million. In addition, PACT patients have a low 30-day readmission rate of 8.1% and improved access to follow-up care.

Conclusions

Santa Clara Valley Medical Center's Post-Acute Care Transitions (PACT) initiative focuses on seamless transfers of complex patients from the acute hospital to a skilled nursing facility and facilitates their safe discharge back into the community. The PACT program has proven to be a success with improving hospital flow, increasing SNF access to a vulnerable population, and maintaining a significant reduction in 30-day readmissions. We believe this post-acute transition model can be replicated and adapted for other health systems.

A101
Prevalence of Loneliness in women- "Only the Lonely"
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Introduction/Objectives: Unmet social needs are barriers to health, patients want providers to ask about social issues and connect them with resources. Social determinant of health factors, negatively impact women, who report poorer health than men, at all ages. Loneliness, the internal perception of inadequate personal relationships, negatively impacts physical and mental health, and is as detrimental as smoking 15 cigarettes daily. We estimated loneliness prevalence, association with care utilization and health related quality of life among women, 18 years and older.

Design/Methodology: Cross-sectional surveys of women presenting for outpatient primary care. Respondents replied to the 3 item UCLA loneliness Scale. A score of 6 or above was considered lonely.

Results: 294 women were surveyed, mean age 71.6 years with 52% married. 42% were White, Black and Asian made up 28% and 16% respectively, with Hispanic women comprising 11%. The overall prevalence of loneliness was 14% (41/294). The mean score of the 3 item UCLA loneliness scale was 3.89 (SD=2.22). 30% reported "sometimes" or "often" feeling lack of companionship, left out or isolated. Loneliness decreased with age, 20% of those less than 65 reported loneliness, compared with only 11% of those over 65 years of age. Divorced, separated, widowed or never married and individual who were disabled experienced loneliness. Poor physical and mental health in the past month and Emergency room visits were associated with loneliness.

Those with high levels of social connectedness, 62% reported strong ties with family, 37% a place of worship, 23% recreational activities and 17% listed travel as important to wellbeing.

Conclusion/Discussion: Our finding support other loneliness research and adds the perspective of an ethnically diverse population. Despite time constraints, the 3 item UCLA questionnaire can be incorporated into primary care workflows.

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A102
Inpatient Mortality and End of Life Outcomes for Patients with Hematologic Malignancies after a Palliative Medicine and Acute Leukemia Unit Partnership
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Background:

Palliative medicine involvement is infrequent in patients with hematologic malignancies, despite high symptom burden, aggressive care at the end of life (EOL), and high rates of inpatient mortality. Studies by Moreno-Alonso et al (2018), Howell et al (2015), Cheng et al (2015) demonstrate rates of inpatient deaths for these patients in a palliative care unit (PCU) occurring at 5.5%, 7.5%, and 30.2%, respectively. We propose that our established palliative-leukemia unit partnership facilitates greater opportunities for PCU admissions in this cohort at the end of life.

Methods:

The study was a retrospective chart review of patients with non-transplant hematologic malignancies who were seen by Palliative Medicine at North Shore University Hospital and died during their admission between 5/2017 and 2/2020 consulted by the Acute Leukemia Unit team. Our hypothesis was that compared to prior studies, our partnership will allow higher utilization of end of life PCU services in these patients. The primary outcome was a rate of PCU utilization at the end of life of > 40%. The secondary outcome was a transition from full code to DNR in > 50% of patients after palliative consultation.

Results:

Twenty-nine patients met the criteria for inclusion. The average age was 70 years old [median: 73, range: 29-88]. Fifty-five percent were women and 58% were White. The most common diagnosis was AML (62%). The average time from admission to consult for all patients was 14 days but differed by age (<65: 22.2 days versus ≥ 65: 9 days). After palliative consultation 88% (21/24) of the patients who were full code elected for DNR/DNI. The average time from DNR to death for all patients was 8.3 days (Age <65 and ≥ 65 years old were 6.8 days and 9 days, respectively. Forty eight percent of the patients died in the PCU and 24% died in the ICU, whereas the remainder died on the leukemia or general medicine floors. Seventy-one percent of the

PCU deaths were patients greater than 65 years of age. The mean PCU length of stay was 6.2 days [median: 4.5 days].

Conclusion:

This study demonstrates significant PCU utilization in this cohort relative to previously published studies. Partnerships between palliative medicine and hematology teams can likely enhance symptom focused care delivery to patients who disproportionately die in the inpatient setting.

A103

Barriers in Telehealth Access in Senior Living Communities

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Background:

During the COVID-19 pandemic, older adults are missing routine care appointments despite increasing availability of telehealth video visits. We conducted a needs assessment of two Residential Care Facilities for the Elderly (RCFE) in Northern California as a first step to improving access to telehealth visits for older community dwelling individuals.

Methods:

We conducted voluntary surveys of the independent community dwelling adults of two RCFEs. Site A houses residents who are mostly Caucasian and middle and upper middle class. Site B provides subsidized senior housing and serves a large group of residents who are non-English speakers. Surveys ascertained residents' preferred devices as well as comfort level, support, and barriers regarding telephonic and video visits.

Results:

Of the 700 surveys distributed, 249 surveys were completed and returned (36%). The average age of participants was 84.6 (SD = 6.6) and 77% were female. At site A, 89% of participants had a bachelor's degree or beyond and 99% listed English as their preferred language. At Site B, 43% had a bachelor's degree or beyond, and 13% preferred English while 73% preferred Mandarin. Regarding remote visits, 37% of all participants felt comfortable connecting with their healthcare team through video visits with computer being the most preferred device (23%) followed by smartphone (19%) and iPad/tablet (11%). Regarding perceived barriers, there were substantial differences depending on the site. Participants at Site A reported not knowing how to connect to the platform (24%), not being familiar with the technology (22%), and difficulty hearing (14%) as the top three barriers, whereas for the participants at Site B, the top three barriers were not being able to speak English well (55%), lack of interest in seeing provider outside of clinic (35%), and not knowing how to connect to the platform (35%).

Conclusions:

Significant barriers exist for older adults in RCFEs with telehealth visits with their care team. The largest barriers include difficulty with technology or using the video visit platform, language barriers, and lack of desire to see provider outside of clinic. Due to site specific differences in reported telemedicine barriers, any intervention to improve access should be tailored to the specific needs of that site.

A104

Knowledge and Attitude of Older Adults Toward Getting the Seasonal Flu and the Novel COVID-19 Vaccines: A Cross-Sectional Study

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Background: Public adherence to preventive measures, including flu vaccination, can lower complications from the disease and ultimately conserve health care resources. This study investigated the factors associated with older adults' attitudes toward receiving the flu and the new COVID-19 vaccines, and the efficacy of an educational handout.

Methods: A cross sectional study targeting older adults (≥ 65 years) presenting to the Senior Health clinic at MetroHealth Medical Center, Cleveland, for their appointments, during the flu vaccination campaign from October 2020 to February 2021. Targeted participants (n=400) filled an anonymous questionnaire that included their attitudes toward receiving both vaccines and the reasons for their decisions. Those who declined or were uncertain about getting the flu vaccine were given an educational handout summarizing the CDC recommendations for flu vaccination during COVID-19 pandemic. They were called in 4 weeks to inquire if they had reconsidered receiving it.

Results: 72% of patients received or were planning to receive the flu shot. This is concordant with data from previous season. Among the identified factors for not receiving the vaccine, 90% never get their flu shot, 84% lacked knowledge of its necessity, while 68% think that the current preventive measures will protect them against both viruses. Only 6% attributed their hesitancy to co-existing COVID-19 virus. At 4 weeks follow up call, 20% reconsidered taking the flu vaccine.

Moreover, only 13% of all participants considered receiving the COVID-19 vaccine when it becomes available. Whereas, the majority (75%) were uncertain about getting it. Among them, 77% chose to watchfully wait, others had concerns of side effects (11%) or preferred to discuss it with their doctors (12%). Of those against the vaccine, 90% were dubious about its production.

Conclusion: The majority of patients queried were knowledgeable about the importance of the flu vaccination. However, data showed concerning hesitancy about receiving the novel COVID-19 vaccine. The COVID-19 pandemic does not seem to influence their decisions to receive both vaccines. Overall, our intervention was 8% effective in changing patients' choices to get the flu vaccine. More comprehensive health education strategies are needed to target this particularly vulnerable population.

A105

Mitigation of a COVID-19 outbreak in a VA LongTerm Care facility using daily planning huddles prior to the outbreak.

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Long Term Care (LTC) facilities represent highly vulnerable environments for respiratory disease outbreaks, such as COVID-19. We describe a COVID-19 outbreak in a Veterans Affairs nursing home that was mitigated and contained by using leadership team daily huddles for weeks prior to the first positive patient.

Nursing home leadership, which consisted of the Medical Director, the Nursing Home Administrator and the Quality Management Specialist, met daily including weekends for weeks prior to the first infected patient to develop a comprehensive plan for a potential COVID-19 outbreak. The plan included targeted discharging of veterans, social distancing policies, masking and isolation procedures, staffing, training, and staff and veteran testing strategies. Each action item was deemed an opportunity and placed as a separate line

item with columns for active date, estimated and actual completion date, and responsible party. Each item was then discussed in a larger leadership group comprised of nurse managers and leaders from social services, environmental services and food services. Each item was status-coded daily with green for on schedule, yellow for possible delay, red for not on schedule and blue for completed. This allowed the group to focus on what had been accomplished and what needed to be accomplished and pivot toward the most pressing action items as clinical scenarios changed.

We eventually had 27 Veterans became infected, with 23 recovering and 4 dying. All those who died were WWII Veterans, age 90 or above. The first Veteran tested positive on April 13, 2020 and the last new positive case was April 24.

We feel this multidisciplinary approach, using leadership-driven daily huddles with careful planning, allowed for mitigation and containment of our outbreak.

CMCVAMC ACTION PLAN	STATUS	Green = On Schedule	Last Review Date: 4/15/2020			
Service: CLC		Yellow = Possible Delay	Facilitator:	Medical Director		
Event: COVID Daily Huddle		Red = Action Scheduled/Delayed	Team Lead:	Nursing Home Administator		
		Blue = Completed				
		Black = Canceled				
Opportunity/ Issue	Actions Taken		Active Date	Estimated Completion Date	Actual Completion Date	Lead Responsible POC
Social Distancing Dining room	Residents on Aspiration Precautions to have meals in dining rooms 1 per table at 2 seating's, other residents to eat in their bedrooms. Each unit manager will communicate their individual plan to Nutrition and Food Service, and ensure consistency 7 days per week.		27-Mar-20	27-Mar-20	27-Mar-20	NH Administrator
Social Distancing Recreational Therapy	Only 1:1 for Recreational Therapy		27-Mar-20	27-Mar-20	27-Mar-20	RT Chief
Social Distancing PT/OT Rehab	Identify resident who best benefit from therapy, no more than 4-6 in the gym at a time.		27-Mar-20	27-Mar-20	27-Mar-20	Rehab Lead
Masks for All Staff	Basic surgical masks (Level 1) to be worn by all CLC staff beginning Monday 3/30. Masks can be obtained from either screening desk or Nurse Managers. Level 2&3 on order.		27-Mar-20	30-Mar-20	30-Mar-20	Medical Director
Offer Discharge for SS	Offer to all residents on Sports Complex (1C) and their families to be discharged. All possible discharges completed.		27-Mar-20	2-Apr-20	3-Apr-20	Nurse Practitioners
Hemodialysis Patients	Residents leaving CLC to community for appointments should wear masks when leaving the building.		30-Mar-20	30-Mar-20	30-Mar-20	NH Administrator
Onsite Covid Testing	30 tests per week began 3/31, 92 onsite tests per week began 4/6, providers trained		31-Mar-20	31-Mar-20	31-Mar-20	Medical Director
Food Delivery	Discontinue food delivery to the CLC from local restaurants.		6-Apr-20	7-Apr-20	7-Apr-20	NH Administrator
CPAP	Not considered a aerosolizing procedure.		30-Mar-20	10-Apr-20	10-Apr-20	Medical Director
Non-Nebulizer Facility	Convert to single dose inhalers with spacers, education/training may be needed. May be revisiting use of neb treatments if needed and COVID (-). Periodic intermittent use of nebs still used in CLC		30-Mar-20	30-Mar-20	30-Mar-20	Medical Director
Level 2&3 Masks	Level 3 masks available at Courage Court, additional Level 2 & 3 available as needed. PPE policy updated on SharePoint.		1-Apr-20	3-Apr-20	3-Apr-20	Nurse Manager
CLC Quarantine	All CLC veterans should be quarantined in their own rooms, at least own unit if wearing mask.		13-Apr-20	13-Apr-20	13-Apr-20	NH Administrator
Establish COVID19 unit for CLC Residents	Upon identification of second COVID (+) resident in the CLC, move hospice residents and supplemental staff to Sports Complex (1C130 & 131) to allow for 10-bed COVID CLC unit in former hospice footprint.		27-Mar-20	13-Apr-20	13-Apr-20	Medical Director
COVID19 CLC Flowsheet	Review and revise proposed worksheet. Provider workgroup to make further revisions.		27-Mar-20	1-Apr-20	1-Apr-20	Nurse Practitioners
Equipment	O2 concentrators - 5 on hand 5 more needed		27-Mar-20	13-Apr-20	13-Apr-20	NH Administrator
Supplies	Droplet PPE (reusable eye protection/face shield, single use: face mask, gown and gloves) door caddy for each room, disposable steth, bp cuffs, thermometers, pulse ox on order		27-Mar-20	13-Apr-20	13-Apr-20	NH Administrator
Space	5 bedrooms for 10 bed capacity, convert one additional room for soiled utility.		27-Mar-20	13-Apr-20	13-Apr-20	NH Administrator
Staff	Consistent staffing: Provider, Nursing (1RN, 1LPN, 1NA for census of 5; 1 additional RN for census above 5, LPN and NA will remain the same), SW , EMS, NPS		27-Mar-20	13-Apr-20	13-Apr-20	NH Administrator
Training	COVID19 PCS in TMS, Educator will perform COVID training for all shifts. Donning Doffing PPE, handwashing etc.		27-Mar-20	13-Apr-20	13-Apr-20	NH Administrator
Additional COVID Testing	Test all remaining CLC Veterans while proceeding with standing up unit.		11-Apr-20	13-Apr-20	13-Apr-20	Medical Director
N95 Fit Testing	CLC Staff need to be fit tested in COVID areas		13-Apr-20	14-Apr-20	14-Apr-20	Medical Director

A106

Trends in Hospital Delirium Rate During the COVID-19 Pandemic: A Comparative Study

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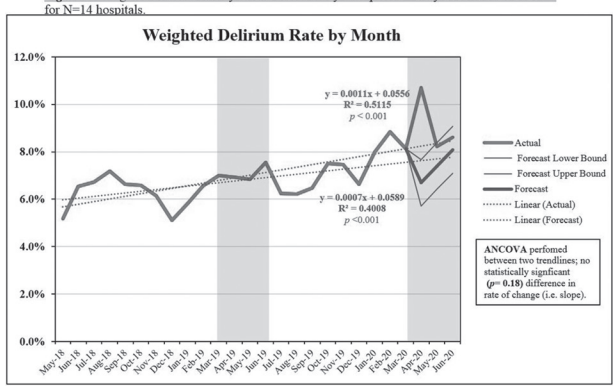
This study aimed to investigate the trends in the monthly delirium rate over past 2 years and compare the trend in the delirium rate prior to and during the COVID-19 pandemic in hospitalized older adults

Methods: Data was obtained from the Acute Care for Elders Tracker snapshot, an electronic health record tool from 05/2018 to 06/2020. Time periods of interests were 3/2019-6/2019 (pre-COVID) and 3/2020-6/2020 (during-COVID). A weighted rate was calculated for each month by combining data from all hospitals for the total number of inpatients ≥65 years of age. The overall trend in the delirium rate was assessed with simple linear regression models and an ANCOVA. A χ^2 Test for Independence and a Wilcoxon Signed-Rank Test were utilized to test for differences in the overall delirium rate between two time periods

Results: Overall median delirium rate was 6.8% in 70,562 encounters of 42,878 patients; mean age was 78 years; mean length of stay was 6.5 days. The median delirium rate increased by 2.1% from 6.6% to 8.6%, for pre-COVID vs. during-COVID, respectively (Z=-3.044, p<0.001). There were no statistically significant differences between actual weighted delirium rates and projected weighted delirium rates (p=0.18). However, the weighted delirium rate, for both the actual and projected trend lines, demonstrated significant changes over time (p<0.001)

Conclusion: The trend in delirium rate increased over the study time period regardless of the COVID-19 pandemic. Considering that the study period included the initial 4 months of the pandemic, further analysis with a longer time frame is crucial to understand the consequences of the pandemic on delirium rate

Figure 1. Weighted delirium rate by month across study time period—May 2018 to June 2020—for N=14 hospitals.



A107

Validation of Mayo Delirium prediction tool - "DERAIL" risk.

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Background: Delirium prediction can augment and optimize care of older adults. Mayo delirium prediction (MDP) tool is a robust tool, developed from a large retrospective data set. MDP tool predicts delirium risk for hospitalized patients' age 50 and greater, within 24 hours of hospital admission, based on risk factor information available from electronic record. We intend to prospectively validate the prediction performance of this tool.

Methods: A prospective study was designed which included all hospitalized older adults, age 50 and greater, at Mayo Clinic, Rochester following IRB approval from December 2019 to June 2020. Diagnosis of delirium was captured by ICD diagnosis of delirium or encephalopathy or nursing flowsheet documentation of CAM from medical record. Nursing floors where shortlisted based on consistent CAM performance and documentation. The MDP tool was modified to adjust for the fall risk variable as a categorical variable that will facilitate broader applicability of the tool across different fall risk models.

Results: 8055 patients were included in the study with a mean age of 71.8 years. The modified MDP tool delirium prediction compared to delirium occurrence was 4% in the low risk group, 17.8% in the medium risk group and 45.3% in the high risk group (AUROC of 0.80). Recalibration of the tool was attempted to further optimize the tool that resulted in both simplification and increased performance (AUROC 0.82). The simplified tool was able to predict delirium by "DERAIL" risk factor assessment in patients admitted to medical services and "DERAIL- ABC2" risk factor assessment in surgical patients.

Conclusions: Prospective validation of MDP tool revealed good prediction capabilities and further optimization resulted in simplification with increased performance of the tool in both medical and surgical patients. Given good validation results, clinical applicability would be reasonable to further assess its performance in other health care systems.

A108

In-basket Scrubbing to Improve Geriatrician Well-being

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Background

Our 2019 survey showed 50% of geriatricians had burnout by Maslach Burnout Inventory (MBI), 79% had electronic medical record (EMR) frustration, 54% spent >60 minutes on the EMR outside of workday and 32% spent >60 minutes/day on clerical work.

The COVID-19 pandemic added to the strain. In September 2020, 69% of our geriatricians reported in-basket management makes them feel "most overwhelmed." Prior research shows the benefit of non-physician staff reviewers for in-basket messages. We will improve geriatrician well-being and productivity with a new Patient Coordinator In-basket Scrubber Intervention.

Methods

We will target 21 geriatricians providing primary care to older adults at three outpatient sites. We will recruit and train two Patient Coordinators (PCs) who will lead a novel In-basket Scrubber intervention. Initially, the PCs will be the first contact to scrub (screen and send to correct team member) all in-basket messages from the call center. They will identify inefficient communication patterns, code messages by "team member" and "domain" and determine the destination and/or outcome of the messages. The PCs will train administrative assistants (AAs) to assess, complete and/or appropriately redirect providers' in-basket messages to team nurses, social workers or the physician. We will also target our telehealth workflow to improve scheduling and appointment confirmation, reduce no-shows and convert canceled visits to tele-visits, thereby increasing reimbursable visits.

Results

Results forthcoming.

At months 0, 6, 12, and 18, we will assess physician EMR burden, well-being, and productivity. Measures include: EMR burden (Number of Inbox Inputs per workday, Time in Inbox per workday, Work after Work 7pm to 7am); Well-being (Subjective Inbox Burden, Maslach Burnout Inventory); Productivity (In-person visits Tele-visits, Medicare Annual Wellness Visits, advance care planning bills, chronic care management bills, work relative value units).

We expect the intervention to reduce EMR burden and improve well-being and productivity. We also expect new revenue to offset costs. By reducing clerical burden and optimizing billable time for care coordination, we expect to double our Chronic Care Management billing (estimated $75,000/year).

Conclusions

We will improve geriatrician well-being through a new In-basket Scrubber Intervention.

A109

Enhancing Geriatrician Well-being through Remote Scribes

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Background

Geriatricians at a large urban academic health system have high rates of burnout. A 2019 survey showed 50% of geriatrics faculty had burnout by Maslach Burnout Inventory (MBI), 79% had electronic medical record (EMR) frustration, and 54% spent over 60 minutes on the EMR outside of their workday. The COVID-19 pandemic placed the added strain of increased use of telemedicine. Prior studies have shown that scribes improve clinician well-being and productivity. 50% of our geriatrics faculty selected scribes as an intervention most likely to help well-being (tied for most votes among a list of interventions.) The pandemic, along with pre-existing limitations on physical space, made remote (or "virtual") scribe services appealing. We aim to improve geriatrician well-being and productivity by enhancing team-based care through a new Remote Scribe Pilot Intervention.

Methods

The pilot will include 3 geriatricians providing primary care, consultative, and care coordination services at 3 outpatient sites. We will implement real-time remote scribe services in order to decrease physician time spent documenting encounters and placing orders. Scribes will listen remotely to in-person and tele-health patient encounters via a bluetooth-pairing listening device in the physician's office and will simultaneously document visits, as well as complete and pend orders to physician's specifications. Physicians will later review, edit, and sign notes and orders. Two of the scribes will be bilingual to accommodate the physicians English- and Spanish-speaking patient panels.

Results

At months 0, 6, 12, and 18, we will assess physician EMR burden, well-being, and productivity. EMR burden is measured via EMR-generated reports: Work after Work 7pm to 7am. Well-being is measured via survey: EMR frustration; Time on Documentation Outside of Workday; Maslach Burnout Inventory. Productivity is measured by provider: total in-person visits and tele-visits; advance care planning bills; chronic care management bills; work relative value units. We expect the remote scribing intervention will decrease EMR burden, improve well-being, and generate revenue to offset costs. We hypothesize that reduced EMR burden will be associated with increased productivity, on average one additional visit per day/physician (estimated $76,800/year).

Conclusions

Clinician well-being is an urgent priority. We aim to improve geriatrician well-being by enhancing team-based care through a new Remote Scribe Pilot Intervention.

A110

Osteoporosis Screening in Men

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Background:

Osteoporosis is a condition common in the geriatric population that can lead to increased risk of fragility fractures and it can be diagnosed by dual-energy X-ray absorptiometry (DEXA). Overall, 39% of the annual osteoporotic fractures occur in men, and mortality in men has been shown to be higher with fractures as compared to women. Yet, osteoporosis remains an underrecognized condition in men. The National Osteoporosis Foundation and American College of Preventative Medicine recommend screening for all men over age 70 regardless of risk factors, or men 50 or older with additional risk factors for fractures. Given the increased mortality and the economic burden of osteoporotic fractures, it is important to screen for osteoporosis in men at risk. By evaluating DEXA orders, we hope to gain valuable insight on clinicians' awareness of osteoporosis in men.

Methods:

This is a retrospective chart review of male patients between ages 50-85 years presenting to primary care clinic affiliated with Stony Brook University Hospital. Risk factors evaluated include age above 70, prednisone use, smoking, vitamin D deficiency, rheumatoid arthritis (RA), and hypogonadism based on ICD codes. For these patients, it was recorded whether or not a DEXA scan was ordered to screen for osteoporosis.

Results:

There were 696 subjects in the 70-85 age group and 280 in the 50-69 age group. In the 50-69 age group, 206 had Vitamin D deficiency, 44 were smokers, 23 had hypogonadism, 15 had RA, and 1 was on long term steroids. In the 70-85 age group, 19.7% had a DEXA scan and 70.8% of these tests showed osteoporosis or osteopenia. In the 50-69 age group, the risk factor with the highest percent of osteoporosis screening was RA (20%), followed by hypogonadism (13%), smoking (11.4%), vitamin D deficiency (7.8%), and lastly steroid use (0%). In this age group with risk factors, 8.9% had a DEXA scan overall and 68% of these showed osteoporosis or osteopenia.

Conclusions:

There is a low rate of osteoporosis screening in men noted in the primary care setting. Age and RA are the biggest risk factors that led to DEXA evaluation. This might indicate that some of the other common risk factors for osteoporosis are not well known. Future intervention will

include raising awareness of screening in men with risk factors among clinicians through Electronic Medical Records reminders, pre-visit patient questionnaires, and flyers in patient rooms regarding screening.

A111

Improving Controlled Substance Contract Compliance During a Pandemic at Stanford's Senior Care Clinic

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Background: Controlled substance contracts are an important tool to help with regulation of patients with chronic opiate use. We describe a quality improvement effort to improve contract compliance rate at Stanford's Senior Care Clinic through a stepwise intervention and during a global pandemic where telemedicine is a predominant modality for patient care.

Methods: Clinic providers were surveyed, and the preferred modalities chosen based on their responses were in-person visits, online messaging, mailed contracts, and individual chart reminders. An electronic medical records (EMR) dashboard generated a list of patients with chronic opiate use without an active contract. The following stepwise intervention was performed to improve compliance. Each provider and their medical assistant (MA) received a list indicating which patients had an upcoming in-clinic visit within the next month. For the remaining patients, the MA's were asked to send the contract electronically through online messaging. If after 30 days the contract was not returned online, the contract would be mailed. In addition, a manual chart reminder was placed in each patient's chart indicating the date of their last completed contract. After 2 months, the data was then evaluated through chart review.

Results: The EMR generated a list of 17 patients without contracts. Out of the 17 patients, 1 patient was hospitalized so 16 patients were included in the project. 5 out of 5 (100%) patients with in-person visits were able to complete their contract in the clinic. Of the 11 remaining, 7 were sent the contract electronically. 3 out of 7 (<50%) patients completed the contract electronically. After no online response, a cover letter and contract were mailed to the remaining 4 patients along with 4 patients who did not have online access. 4 out of 8 (50%) mailed back the contract. With these efforts, we achieved an increase of compliance from 5% to 76% with in-person visits being the most effective modality.

Conclusions: Our interventions of using electronic outreach and mailed contracts improved compliance rate during the pandemic. We found that electronic contracts were technically challenging for the senior population. Mailed contracts achieved better compliance. We suspect that a telephone reminder and pre-stamped return envelope along with the mailed contract may yield a 100% return rate during a time when in-person visits are not as accessible.

A112

Diagnosing Delirium: Do Geriatricians Do It Best?

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Delirium is a disturbance of consciousness, with reduced ability to focus, sustain, or shift attention (Bo et al., 2016). It is associated with increased length of stay, morbidity and mortality, cognitive impairment, functional decline, nursing time required, and institutionalization (Bo et al., 2016). Older adults are at increased risk with rates at 20-28.4% (Bo et al., 2016). A colleague found facility rates of delirium drastically lower at 0.03-0.11% based on Confusion Assessment Method (CAM). The difference in rates of positive CAM at this facility when compared to national rates, suggest either superb delirium prevention or missed delirium. This study seeks to answer the question, "Is there a difference between rates of diagnosed delirium between Geriatric Provider's diagnosis and nurses delirium screening with the CAM?"

This study is a retrospective chart review examining 768 older adults, 65 years or older under the care of a Geriatric provider at a community-based hospital from August-October 2019. This sample size provided adequate power. The patient's charts with diagnosed delirium by the Geriatric Provider were evaluated to determine the nurses' documentation of CAM. The two proportions of delirium rates were compared utilizing a two-tailed Z test. Secondary measures of the delirious patients including age, gender, and diagnosis of dementia were recorded to determine if there were any demographic trends in the delirious patients.

31% were found to be suffering from delirium according to the Geriatric Providers assessment. Just 11% of the same sample size had positive CAM on the nurses' assessment. A two-tailed Z-test was calculated and indicated there was a statistically significant difference with a p-value of 0. Demographic measures depicted 63% of the patients were male, 37% were female, average age was 77 years old, and 34% had a diagnosis of cognitive impairment or dementia.

This evidence indicates a large discrepancy between nurses delirium screening versus Geriatric provider's assessment. Further inquiry should be conducted to determine the barriers to application of the CAM to promote improved screening and early identification of delirium in the hospitalized older adult.

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A113

Optimal Health Weight and Lifestyle (OHWL) program for older adults with obesity

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Background: Obesity in older adults is common (Hales 2018) and presents greater challenges in management due to conditions that increase cardiovascular risk and musculoskeletal degenerative conditions, often leading to functional impairment. Weight loss programs in older adults are also more complicated because of concerns for muscle loss, considering sarcopenic obesity (Coker 2018). These programs tend to be designed for younger patients whose overall daily function, may not be impaired. Accordingly, and consistent with standard approaches to interdisciplinary geriatric care, we sought to develop an outpatient approach to optimize weight loss but also minimize comorbidity severity and enhance function, mobility in particular.

Methods: Older adult patients (n=29, mean [SD] age 75 [5]), range 61-85 years) with mean [SD] BMI 41 [7] (range 31-60), 83% female, were referred by primary care geriatricians to engage in the OHWL program designed to optimize comorbidity reduction, mobility and nutrition in older adults with obesity. Recruited patients included those in Class I (BMI 30-34.9, n=5), Class II (BMI 35-39.9, n=10), and Class III (BMI>40, n=14).

Results: While the correlation between age and BMI was modest (r=-0.3, p=NS), of the 14 with severe (Class III) obesity, ten were <75 years. Half of those aged ≥75 (6/13) had moderate (Class II) obesity. Essentially all of the cohort (97%) reported osteoarthritis involvement of the back and/or lower extremities. Most of the cohort had diabetes or pre-diabetes (86%) and hypertension (93%). The majority of the cohort (22/25) had an intermediate to high risk 10-yr ASCVD risk score. 48% of the cohort used an assistive device, and 48% were also already undergoing physical therapy; only five of the nine newly referred followed up with physical therapy. Referrals for nutrition consultation were initiated in nearly all (25 of the 29) although only 17 ultimately followed up.

Conclusions: Recruitment for primary care older adults with varying obesity levels to participate in a program to optimize health beyond weight loss is feasible. A broad range of interventions may be needed to mitigate the comorbidity and mobility disability. Among these interventions, nutrition and physical therapy have varying levels of acceptance. Data on further interventions and functional and weight outcomes are pending.

A114

The National Collaboratory to Address Elder Mistreatment: Elder Mistreatment Emergency Department Toolkit Feasibility Study

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Elder mistreatment (EM) is a prevalent public health problem in the US that has devastating consequences for victims, families, health and social systems. Emergency departments (ED) disproportionately care for older persons with known risk factors for EM and are well-positioned to identify and address EM. However, systems gaps including staff overload, absence of EM expertise, and a dearth of tools to support identification and response, have prevented widespread adoption of best practices that would improve rates of screening, intervention, and appropriate follow up for older adults experiencing or at risk for EM.

The National Collaboratory to Address Elder Mistreatment designed an integrated Elder Mistreatment Emergency Department Toolkit (the Toolkit) designed to help ED staff identify and respond to risk for EM. The Toolkit has now been implemented in five hospital EDs across the US as part of a feasibility study to determine whether the model is ready and right for use by answering three research questions: 1. Is the Toolkit feasible to implement in the ED? 2. Are EDs better able to identify and manage cases of elder mistreatment when they implement the Toolkit? 3. How does implementation of the Toolkit affect ED functioning?

To answer these questions, this study utilized a small-scale, mixed-methods approach collecting and analyzing data from multiple sources. Quantitative data included staff's baseline and follow-up assessments of ED practices related to EM; staff changes in knowledge before and after participation in training about screening for and responding to suspected cases of EM; aggregated hospital-level data on indicators of ED functioning; and patient-level data on screening rates and EM risk factors noted. ED staff provided rich qualitative information on the extent to which the Toolkit achieved seven feasibility criteria: practicality, acceptability, utility, implementation, integration, adaptability, and initial efficacy. Preliminary results show increases in screening for EM; improvements in staff knowledge about EM following training; variations in how the Toolkit was adapted, implemented and integrated into ED workflow; and agreement regarding Toolkit utility. Early results show that it is feasible to screen for and respond to cases of elder mistreatment in the ED if tools and guidance are provided to minimize disruption in workflow.

A115

Frailty in High-Need High-Risk Veterans

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Background: High-Need High-Risk (HNHR) patients are those at high risk for hospitalization and institutionalization. HNHR represents a heterogenous group of individuals which may also include those with multimorbidity, disability or frailty. The classification "HNHR" overlooks medical and mental health conditions which require specific assessment and management approaches. Frailty is a common condition in older adults characterized by a vulnerability to stressors caused by multisystem dysfunction. The purpose of this study was to determine clinical and prognostic differences between frail and non-frail HNHR Veterans.

Methods: This a cross-sectional study of HNHR Veterans identified through quarterly reports generated by the VA using predictive analytic models. We compared Veterans with and without frailty in terms of socio-demographic characteristics, service connection, substance or alcohol abuse, and high-risk prognostic scores: CAN (Care Assessment Needs- highest risk of hospitalization or mortality), JFI (Jen Frailty Index- risk of institutionalization), and NOSOS (cost and utilization). Frailty was determined using a 31-item VA Frailty Index (VA-FI) generated as a proportion based on the number of items (morbidity, function, sensory loss, cognition and mood, and others) present: non-frail (VA-FI<.21); and frail (VA-FI≥.21). Continuous and categorical variables were compared with Mann Whitney and Pearson Chi-Square tests respectively.

Results: 747 HNHR Veterans were included, mean age 65.61 (SD=11.69) years, 55.42% Caucasian and 93.71% male. Most HNHR Veterans were frail (n=556, 74.43%) rather than non-frail (n=191, 25.57%). As compared with non-frail Veterans, the frail group had higher mean age, CAN, JFI and NOSOS scores: 67.94 (SD=10.16) vs 59.39 (SD=13.51), p=0.001, 0.95 vs. 0.90, p=0.001, 0.07 vs. 0.06, p=0.001, and .05 vs .03, p=0.001 respectively. There were no group differences in other socio-demographic and clinical characteristics.

Conclusions: In this HNHR population, the majority of Veterans were frail and had worse high-risk prognostic scores than non-frail. Identifying and treating the HNHR patients with frailty may assist in targeting clinical interventions aimed at reducing healthcare utilization. The clinical trajectory of HNHR patients with and without frailty requires further clarification.

A116

An Age Friendly Program to Enhance Primary Care for an Older Population Experiencing Adverse Social Determinants of Health

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Background: The Virginia Geriatric Education Center (VGEC)'s GWEP partners with the Senior Strong clinic at Eastern Virginia Medical School in Norfolk, VA to support age-friendly initiatives. Senior Strong enhances primary care for older adults experiencing adverse social determinants of health by providing screening around the 4Ms pillars of age-friendly healthcare and connecting participants with healthcare and community-based organizations, while offering a rich learning environment for interprofessional trainees.

Methods: Senior Strong is collecting Merit-based Incentive Payment System (MIPS) data on age-friendly patient outcomes including advance care planning (ACP), falls screening, depression screening and high risk medication use.

Results: The age-friendly data is used to inform practice, both within Senior Strong Clinic and the family medicine practices as a whole. Also, the data help to inform education for the family medicine residents. Fifteen patients were served by Senior Strong between July 1 and October 31 2020. Depression screening occurred for 73.3% of Senior Strong patients versus 32% of patients age 65 and up practice-wide. Similar results were noted for documentation of advance care planning discussions and falls screening.

Conclusion: Depression and falls screening occur during routine clinical processes, though at lower rates than in the Senior Strong clinic. The most important age-friendly needs for Senior Strong include ACP completion and eliciting and documenting what matters to each patient. A resident project is in development to study current clinical processes and develop a resident educational intervention.

A117

NJGWEP and Wilmington Veteran's Administration Cognitive Clinic: A PDSA Model

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Background: The New Jersey Geriatrics Workforce Enhancement Program (NJGWEP) partnered with the Wilmington Veteran's Administration (VA) to develop a program for cognitive evaluation; serving veterans attributed to the VA Community-Based Outpatient Clinic (VA-CBOC) in Vineland, NJ. The VA-CBOC serves 2,431 veterans, 1737 of whom are older veterans age 60+. Prior to NJGWEP involvement, no specialized geriatric or cognitive assessment services were offered at this clinic location.

Methods: A 3-month pilot phase was designed using a plan do study act (PDSA) model; allowing an inter-disciplinary, inter-agency team to build an evidence-based cognitive clinic through an iterative, in-vivo experience. NJGWEP embedded physician and social work faculty in the VA-CBOC who were exposed to VA policies and procedures through direct clinical practice, allowing a feasible and sustainable geriatric practice to develop from the inside out.

Results: During the pilot phase, 15 veterans were identified for evaluation by their assigned VA primary care provider. Of those patients, 73% (11/15) were newly diagnosed with cognitive impairment, ranging from MCI to moderate dementia. Nearly half, (46%, 7/15) of the veteran's attended the appointment without a primary caregiver present; limiting the ability to provide caregiver education on normal aging, advanced care planning and dementia education when appropriate. High-risk medication use was reviewed for each veteran; only 1 patient had a current opioid prescription, but participated with de-prescribing efforts. Another patient attempted to obtain a new opioid prescription, but an alternative intervention was recommended following a thorough assessment.

Conclusion: A multi-disciplinary evaluation allowed for a comprehensive assessment addressing the multi-complexities of veterans with cognitive impairment. PDSA cycles will continue until a sustainable, replicable model is achieved.

A118

Who Is Your Special Agent?

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Physicians and at an urban Family Medicine Residency clinic formed a Quality Improvement work group to increase the number of patients age 50 years and older to document a health care agent. The team with a Doctor of Nursing Practice student created an educational tool and checklist about health care agents. The patients could read this information and checklist while they were waiting to see their doctor. The work group used the plan-do-study-act (PDSA) quality improvement design. Data analysis included descriptive statistics of outcome objectives. The team collected qualitative data via oral feedback and coded this data into themes.

425 patients (46% of eligible patients) were exposed to the intervention. Of these, 59 patients (14%) completed health care agent documentation. 124 (29%) reported they had already established a health care agent. 217 (51%) did not want to identify a health care agent or needed additional time. 25 (6%) had no response.

90 % of the physicians reported the intervention was helpful in broaching the health care agent conversation. 90% of the physicians said they recommend this intervention to other primary care clinics.

The intervention assisted patients to establish their health care agents in a primary care residency training clinic.

A119

Geriatric Surgical Comanagement and Social Work Frailty Evaluation Model

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Background: The number of older patients undergoing surgeries is rapidly increasing due to an aging population in the United States. Older adults who are frail have higher rates of postoperative adverse outcomes. Interventions that aim to optimize frail patients before surgery remains an understudied area. We propose a novel interprofessional comanagement model to evaluate frail older patients being considered for elective surgery in order to optimize their care and improve care coordination amongst the surgeon, geriatrician and social worker.

Methods: The Geriatric Surgical Comanagement Model (SCOM) is built upon a successfully implemented geriatric renal transplant referral pathway that emphasizes social work evaluation. In SCOM, the surgeon's role is to identify frail older patients during their surgical evaluation by using the FRAIL scale. Positive frailty screens trigger a referral for a social work evaluation in conjunction with a comprehensive geriatric assessment. The social worker performs a social determinant of health evaluation targeted towards postoperative discharge planning, and the geriatrician conducts a preoperative, medication, functional status, cognition, nutrition, and advanced care planning evaluation. Recommendations from the geriatrician and social worker are communicated with the surgeon and primary care physician for preoperative optimization, such as need for falls evaluation or increased home support. We will use the consolidated framework for implementation research and documentation analysis to evaluate our program. Patient and provider experience will be assessed using surveys. Postoperative clinical outcomes such as hospital length of stay and complications will be examined via chart review.

Results: The program was launched September 2020 and results are forthcoming.

Conclusions: Geriatric surgical outpatient comanagement is an emerging field which requires greater attention. We anticipate that the barriers and facilitators identified in our evaluation will aid the dissemination of similar interprofessional comanagement programs and ultimately improve outcomes and quality of life for older patients.

A120

Improving video visit capability among older adults in a geriatrics clinic

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Background: In the setting of the COVID-19 pandemic, many outpatient visits have been converted to telemedicine visits via telephone or video. While video visits offer many advantages over telephone, their use is consistently lower among older adults. Therefore, we designed a quality improvement project to increase video visit capability among older adults at a geriatrics primary care clinic.

Methods: Patients receiving care at the San Francisco Veterans Affairs geriatrics clinic were identified to determine the number of patients who completed a VA Video Connect (VVC) visit up until November 1, 2020. We identified the presence of a VVC visit by tracking a clinical reminder in the electronic health record and running a report that documents the last VVC visit date. We interviewed patients, staff, and providers to identify barriers to conducting video visits. Based on these barriers, we designed a multifaceted intervention aimed to increase participation in VVC visits. This included

sending letters notifying patients of VVC visits, encouraging providers to schedule VVC visits over telephone visits, and assessing video capability prior to and during scheduled telephone visits. Our primary aim was to increase the number of patients who have had a VVC visit by 15% within a three-month period.

Results: Of the 286 patients identified among seven geriatrics providers, 29% (84 patients) had previously had a VVC visit. Barriers to scheduling and completing a VVC visit included patient factors (e.g. access to video-capable devices, comfort level, sensory impairments), provider/support staff factors (e.g. time burden to train patients), systems factors (e.g. limited number of VVC scheduling slots), and technological barriers (e.g. internet connection stability). We will present data on the percent increase in the number of patients who have had a video visit within three months of our intervention.

Conclusions: Most older adults at our geriatrics clinic had not performed a video visit despite several months of reduced in person visit capacity due to the COVID-19 pandemic. Through our interventions, we hope to increase video visit capability to deliver high-quality care to this vulnerable population.

A121

Barriers to advance care planning in a house call program

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Background: Advance care planning (ACP) protects patient's autonomy and respects preferences at the end of life. However, one model of delivering ACP does not fit all and there are multiple barriers that can impact advance care planning. We sought to investigate the provider related barriers impacting ACP in a house call program associated with a safety net health care system.

Methods: We conducted a qualitive initiative to raise awareness about importance of ACP in the house call program. First, we asked the providers in the house call program (6 nurse practitioners and 3 physicians) to complete a pre-intervention survey in order to identify factors that they consider barriers to ACP. Surveys were conducted in December 2020. Out of all responders, 66.67% were familiar with advanced care planning, 62.5% felt comfortable talking about death and dying and 37.5% were waiting for patients to initiate ACP discussions. Among possible barriers to ACP, important factors identified were: low health literacy (50%), spiritual/religious values (50%), cultural values (50%), superstitious beliefs (62.5%), lack of awareness of prognosis (62.5%). Approximatively 62.5% of the providers believe that inability to speak the primary language of the patient sometimes interferes with delivery of ACP. Based on these findings, we will further develop an educational intervention to address these barriers. Moreover, we will review how to document the ACP in electronic medical records in order to ensure standardized documentation of ACP. Thus, we will increase the providers' knowledge and understanding of the importance of ACP and increase the rates of ACP completion in the medical charts. A post intervention survey will be performed to determine the impact of the educational intervention.

Conclusions: The project aims to describe the delivery of ACP in a house call program and the provider related challenges in performing ACP. This will help to address key challenges identified by the providers in the House Call Program, with the intention of educating and providing them effective tools to address some of the barriers that might impact ACP.

A122

Repurposing PACE Day Center in Response to the Novel Coronavirus Pandemic

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BACKGROUND: On March 10, 2020, the first two cases of COVID-19 were reported in Michigan. Gov. Gretchen Whitmer then declared a state of emergency to address the situation. (1) The US Surgeon General characterized the Detroit area as a national "hotspot" (2). As a domino effect, most subacute rehabilitation facilities were anticipated to fill as recovering patients were discharged from the hospital. It was also anticipated that most assisted living and group homes would be placing holds on any admissions due to fear of spreading the virus.

INTERVENTION: The impact of the COVID pandemic was significant on Huron Valley PACE, located in Ypsilanti, MI. In response to this situation, we created a multidisciplinary committee to prepare, plan and enact a response by repurposing our Day Center to be able to provide temporary 24/7 rehabilitation and respite care for participants who have no other options available for an alternate living situation.

Operation Safety Net is our attempt to mitigate the many overarching risks this pandemic poses. We anticipated multiple scenarios in which this plan would be needed:

1. Positive COVID 19 participants with mild symptoms, but not needing hospitalization.

2. Participants discharged from the hospital and in need of subacute rehab.

3. Respite Care for participants with caregivers at risk of burnout.

4. Respite Care for participants with caregivers hospitalized with COVID.

The Day Center at Huron Valley PACE is large and lends itself nicely to being divided into two separate but equal areas for participant care and oversight. With nursing/physician support scheduled onsite 24/7, this new model of care launched at Huron Valley PACE on April 10, 2020, and to date, Operation Safety Net has provided temporary subacute/respite care for 6 of our participants, one of whom had COVID. Response from participants and their families has been very positive.

SUMMARY: Operation Safety Net represents an innovative use of the PACE Day Center, given the lack of access to many traditional long-term care settings facilities during the current pandemic, and is a model for other PACE programs nationwide during this pandemic.

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A123

Evaluation of an Assessment Tool for Adults with Intellectual Disability and Dementia

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Background As the life expectancy for individuals with intellectual disability (ID) increased, so has the prevalence of those who have been diagnosed with dementia (Esbensen, 2010). Evidence shows that individuals with Down Syndrome (DS) are at an increased risk for developing Alzheimer's disease particularly as they age (Cipriani et al., 2018); e.g., dementia was associated with mortality in 70% of older adults with DS (Hithersay et al, 2019)

For individuals with ID and dementia, healthcare providers lack objective tools for identifying and monitoring functional decline which can inform, guide treatment and support decisions. The Serial Assessment of Function in Dementia (SAFD) is a new tool of a caregiver-report of functioning in this population. This tool was developed through an iterative development process, engaged stakeholders, and administered in an online format with eight subscales. The SAFD was based on prior work done with the National Task Group on Intellectual Disabilities and Dementia's screening tool, the Early Detection Screen for Dementia (Esralew et al., 2018).

Methods. A multi-site project using a mixed methods design was utilized for iterative item development and modifications with a total sample of 66 participants. Advisory panel focus groups (n = 6) and a survey with caregivers (n = 41) and healthcare providers (n = 19) contributed to the study of face and content validity, and repeated administrations of the SAFD contributed to the study of reliability.

Results The advisory panel reached 96% agreement in two rounds with a full review of construct and items. The usability survey agreement ranged from 70 to 88% for each subscale. Internal consistency for the SAFD as measured by Cronbach's alpha was excellent and ranged from 0.80 to 0.95. Test-retest reliability was excellent for the subscale scores and ranged from 0.70 to 0.96 between two timepoints. Standard error of measurement for the subscales ranged from 1.61 to 3.94 points.

The SAFD is a systematically developed caregiver-reported measure of function for adults with intellectual disability and dementia with excellent psychometric properties of face and content validity, internal consistency, and test-retest reliability and a useful tool for practicing clinicians.

A124

Call Me Maybe: An Intervention to Reduce Telehealth No-Show Rates in a Geriatric Primary Care Clinic

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Background: The COVID-19 pandemic has highlighted the importance of telehealth to maintain access to care. In our geriatric primary care clinic affiliated with an urban safety net hospital, we observed high rates of missed telehealth visits (no-shows). We undertook a quality improvement project to decrease the number of telehealth no-show visits by 25% in three months.

Methods: We interviewed stakeholders to understand the process of scheduling telehealth visits and providing appointment reminders. Patients received a reminder phone call a few days before all scheduled appointments, whereas they also received a reminder letter ahead of in-person visits. We called a representative sample of patients who had missed their telehealth visit to understand barriers to attendance and preferred method of visit reminders. One recurring theme was that patients preferred reminder letters. Therefore, for our first Plan-Do-Study Act (PDSA) cycle, we implemented a reminder system that standardized the use of letters for all telehealth visits two weeks prior to scheduled visit time.

Results: During the 8 weeks prior to our process change, chart review demonstrated that the practice's telehealth no-show rate was 13.6% (73 per 536 scheduled telehealth visits), compared with our in-person no-show rate of 7.8% (69 per 874 scheduled in-person visits). Post-intervention telehealth no-show rate was 9.1% (47 per 519 scheduled telehealth visits) over 6 weeks. The in-person no-show rate over the same time period was 7.3% (36 per 493 scheduled in-person visits). Our intervention was associated with a 33.1% reduction in telehealth no-show rate whereas the no-show rate for in-person visits decreased by 8% over the same time period.

Conclusions: Standardized letter reminders, such as those used for in-person visits, can help improve telehealth show rates in a primary care geriatric clinic. Future PDSA cycles will focus on addressing technological challenges and educating patients on the utility of telehealth visits.

A125

Improving COVID Preparedness in Assisted Living Facilities

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Methods:

The PAC team, an interdisciplinary team of 9 redeployed clinicians (nurse, PA/NP, OT) with hospital or home health expertise. The PAC team checklist was created from local and national practice guidelines for preventing COVID entry and spread. Training of PAC team members occurred via Zoom and email to ensure standardization of evaluation and recommendations. The checklist and a list of COVID-related resource links were shared prior to the site visit. Checklist review occurred during the site visits that occurred from May-September 2020. After each visit, a report was shared with the ALF. ALF administrative contacts were then surveyed to assess impact of the visits and identify ongoing needs.

Results:

36 of 71 ALFs within the MaineHealth geographic footprint offered a PAC team visit accepted. Reasons for declination were not tracked. The most common PAC team recommendations were in the areas of COVID preparedness and prevention. Recommendations included: development and "drills" of outbreak workflows (patient isolation plans, standardized communication procedures); creation of PPE infrastructure and policies (location of PPE; training/signage on how to don/doff; staff FIT testing; and processes for reuse of PPE). Other recommendations included social distancing strategies; the need for identification of a home health partner; the importance of accurate PCP designation; and cultivating telehealth capability.

14 of the 36 ALFs visited completed an anonymous survey via Surveymonkey. At the time of survey (November-December 2020), 90% had not had COVID in their buildings. 50% had identified and started using a PUI isolation room and 100% had asked staff to demonstrate correct donning/doffing of PPE. 67% had not done COVID drills but those who did used the appropriate staff (Nursing, CNA, Maintenance, housekeeping, rehab) with a focus on testing communication and flow patterns (100%).

Conclusions:

Due to significant heterogeneity, less regulation and lack medical directorship to assist with outbreak planning, ALFs are uniquely vulnerable COVID outbreaks. The PAC team through administration of a standardized checklist was able assist facilities in the development of individualized COVID prevention and preparedness plans.

A126

Characterizing Hypoglycemia induced Delirium in Older Adult

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Background: Hypoglycemia has been associated with negative neurologic outcomes including delirium, coma, and death. Little is known about characteristics of delirium associated with hypoglycemia among hospitalized older adults. We sought to characterize delirium types and risk factors associated with hypoglycemia induced delirium among hospitalized older adults.

Methods: Retrospective study of all diabetic patients admitted to the Acute Care for Elderly (ACE) Unit at Grady Hospital from January - December 2019. Participants were patients with a diagnosis of type 2 diabetes (DM), 65 years or older, with delirium occurring concomitantly with hypoglycemia, either in the Emergency Department (ED) or during hospitalization. The study excluded patients with delirium secondary to alcohol withdrawal or intoxication, polysubstance abuse, electrolyte abnormalities, hyperglycemia, uremia, sepsis, hepatic encephalopathy and symptomatic hypoglycemia without alteration in mental status (AMS).

Results: Of 139 patients with a history of DM admitted to the ACE unit within the study period, 22 patients had coexistent hypoglycemia and AMS. CKD Stage III to ESRD were co-morbidities in 14 patients while 8 had a history of dementia and 9, a prior history of delirium. 14 patients were on insulin, while 8 were on oral hypoglycemic agents. Among patients who presented with hypoglycemia and AMS in the ED, 1 patient presented with hyperactive delirium while 20 patients presented with hypoactive delirium with altered levels of consciousness that ranged from lethargy to coma. Among patients who presented with hypoglycemia and AMS while hospitalized, 1 patient had hyperactive delirium while 1 patient had mixed delirium and 20 patients had hypoactive delirium with altered levels of consciousness that ranged from lethargy to stupor. 1 patient did not recover to baseline and required nursing home placement due to significant cognitive decline. Falls occurred in 3 patients with cervical fracture in 1 patient.

Conclusion: Delirium is significantly associated with hypoglycemia with hypoactive delirium being the most common presentation. CKD, dementia and prior delirium are important risk factors. Important to monitor blood sugar levels in patients with these risk factors presenting with hypoactive delirium. Further studies are needed to determine the role of continuous glucose monitoring as a helpful strategy to prevent severe hypoglycemia and associated delirium.

A127

A Comparison of Cognitive Outcomes associated with Hypoglycemia among Younger and Older Adults

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Background: Delirium has been associated with increased mortality and length of stay (LOS). Fluctuations in blood glucose (BG) may contribute to delirium. We sought to determine the cognitive outcomes of hypoglycemia in hospitalized older adults in comparison with younger adults.

Methods: We conducted a secondary data analysis of an observational study of 256 hospitalized patients with diabetes and hypoglycemia (BG < 70 mg/dl), of whom 145 were aged between 20 – 59 years and 111 were between 60 – 79 at Grady and Emory University Hospitals from 9/2013 – 9/2016. Cognitive symptoms were ascertained from medical charts as confusion and concentration difficulty and classified from 0 (no symptoms) to 6 (severe symptoms). Cognitive symptoms were compared between patients aged 20 – 59 (n=145) vs ≥ 60 years (n=111).

Results: Confusion was noted in 37 (26%) patients younger than 60, compared to 18 (16%) patients >60 years. The incidence of confusion increased with age amongst patients younger than 60. Confusion was higher in in the 50 -59 group followed by in the 40 – 49 group. The between 20 - 39 presented with milder forms of confusion, mostly with scores of 1. Patients aged 60 – 79 had median confusion severity score of 5. Concentration difficulty was found in 32 (22%) patients <60, in comparison with18 (16%) patients > 60. Impaired concentration was higher in the 50 - 59 group followed by those 40 – 49. Patients 40 - 59 had higher severity scores compared to those 20 – 39. Among those 60 - 79, the concentration severity scores ranged from 1 – 6, mostly with higher scores of 5-6. LOS was higher among patients with confusion compared to those without confusion though not statistically significant (12.3 vs 11.1 days, p= 0.23). Among patients with confusion, LOS was significantly higher in < 60 compared > 60 (14.4 vs 7.9 days, p = .04), with highest LOS found among those 40 -59.

Conclusion: Cognitive changes associated with hypoglycemia are higher in younger compared to older adults, however the severity worsens with age. Future studies are needed to determine the long-term effect of cognitive changes and subsequent patient outcomes.

A128

Lessons learned from mental health programs for monolingual older Japanese-American and Korean-American immigrants

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Background: Japanese-American (JA) and Korean-American (KA) older immigrants with limited English proficiency and low socioeconomic status (SES) are often suffering with depression and anxiety with little understanding of their own conditions or emotional state. Therefore, they do not seek services and often remain untreated. County-funded services are available for mental health support for older Americans including older immigrants. However, in order for these monolingual older immigrants to even consider health services, they must have their own language spoken providers at the service. There has been lack of understanding of these older immigrants to effectively implement recommended mental health programs. The objectives of the project are to describe similarities and differences of these JA and KA immigrants in relation to mental health problems and to identify facilitators and challenges in the application of the mental health services, ultimately in order to develop culturally sensitive and monolingual older immigrant-centered mental health programs.

Methods: Evidence-based psychotherapies (EBP) were offered for monolingual low SES JA and KA in a non-profit community social service center in Southern California. Individualized EBP including case management was provided bi-weekly for 6 to 18 months at their home.

Results: The participants ranged in age from 58 to 80's with mental health necessities but no cognitive impairment. Approximately 60 Korean and 50 Japanese seniors participated in the last 8 years. The similarities between two groups included values, reactions to mental health related issues, and family relationships. The differences were history of immigration, interpersonal relationship, family support and impact of religious community.

A common facilitator was the approach of language specific and individualized case management. A major challenge was caused by strong cultural stigma producing hesitations to obtain the services. For the JA group, a particular challenge was the 'duality of self' in which a sharing of emotion is taboo.

Conclusions: Culturally sensitive and person-centered mental health support programs should be considered in monolingual older immigrants with low SES. Also, findings imply the necessity of greater community outreach efforts to enroll these vulnerable individuals in the mental health support services.

A129

Meeting Geriatrics Needs-Geriatrics TeleECHO Clinic

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Introduction

Due to limited access to Geriatrics specialty care in Western Massachusetts, Baystate Health's Geriatrics Workforce Enhancement Program launched a Geriatrics TeleECHO clinic for healthcare providers. Project ECHO (Extension for Community Healthcare Outcomes) is an evidence-based and innovative tele-mentoring program that creates a virtual community of healthcare providers and subject matter experts using video conference technology.

Methods

Baystate Geriatrics TeleECHO clinic launched in July 2020 and are held twice monthly. The 1hour session starts with a case presentation by a community clinician (spoke). This is followed by a group discussion, expert recommendations by an interprofessional geriatrics team of physicians, nurse practitioner, nurse, medical social workers and community partners (hub) and end with a didactic lecture. The lecture content and discussion focus on the 4Ms of the Age Friendly Health System (What Matters, Mentation, Mobility, Medications).

Results

In 6 months, we held 11 clinics for 9 spokes (1 physician, 5 advanced practitioners, 2 geriatrics fellows and 1 medical social worker) from five sites (3 Baystate community health centers, a PACE program and a federally qualified heath center). All spokes felt the program was valuable and improved their ability to care for older adults. We surveyed 6 spokes using a 5point scale of poor, fair, good, very good and excellent. Results revealed: All felt that objectives were met (very good), delivered evidence-based content was rated as good to very good, the ability to ask questions was very good to excellent, and pace of the clinic was very good. The didactics were rated as good to excellent and the presenters are very good to excellent. The hub experts also recognized a significant growth of the spokes in term of engagement, knowledge and application of the 4Ms principles.

Conclusion

We have enrolled an additional 4 spokes from two new sites in January 2021. The next phase will mentor spokes to carry out their own QI project. The goal is to create a life-long community of geriatrics experts, co-mentoring and supporting one another. Our Geriatrics TeleECHO clinic demonstrated the feasibility of using a virtual platform to train and mentor community clinicians in Geriatrics best practices so they can provide the right care, in the right place, at the right time.

A130

Needs Assessment Survey for Older Adult Participation in Telehealth Visits

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Background: The COVID-19 pandemic necessitated initiation of telehealth visits between patients and providers for the safety and convenience of both parties. RiverStone Health (RSH), a FQHC, had not performed telehealth visits prior to spring 2020. RSH is a community health center located in Billings, MT, with several rural satellite clinics. As the pandemic developed, a needs assessment was performed to determine the interest and needs of older adult patients to engage in telehealth.

Methods: RSH identified 1,140 patients age 65 or older, 817 in the main clinic and 323 in rural clinics. A 13-question survey was devised with a goal of completing it with 300 patients by phone in fall 2020. 716 calls produced 303 completed surveys, 257 from the main clinic and 46 from rural clinics. Six individuals made calls, recording the responses in a data base. Questions included interest in telehealth, capability to participate, need for training and equipment, and interest in Zoom sessions for education and socialization.

Results: Ten percent of patients surveyed had completed a telehealth visit and 41% were interested in doing so. Capability to participate in a visit included having internet access (35%) and either a computer (25%) or an iPad (29%). While 20% had participated in communication via an electronic platform (Skype, FaceTime or Zoom), 18% felt they would need training to participate in telehealth visits. Similarly, 18% indicated that they had someone to assist with such as visit, and 14% thought a close family member would need training. Only 14% were interested in the loan of an iPad. Interest in Zoom sessions for socialization (14%) and education (17%) was also determined.

Conclusion: When the percentages obtained in this survey are extrapolated to the patient population age 65 or older, almost 500 clinic patients were interested in a telehealth visit, and up to 160 patients would need the loan of an iPad. With funding from the CARES Act, RSH has been able to purchase 10 iPads and develop an infection control procedure. When a patient indicates interest in a telehealth visit and needs an equipment loan, this information is saved in the EMR for future visits. RSH is also planning to follow up with those patients interested in Zoom sessions for education or socialization.

A131

Feasibility of a Telephone-Based Frailty and Functional Assessment During COVID-19 Pandemic

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Background: Frailty and functional status assessment is seldom done due to time constraints and increased reliance on telehealth during COVID-19 pandemic. With the goal of increasing its clinical use, this quality improvement project aimed to determine feasibility of telephone-based frailty and functional status measurement.

Methods: In 9/2020-1/2021, we identified 85 patients with serious illness in an academic geriatrics clinic. A geriatric fellow assessed functional status and conducted the Mini Nutritional Assessment, telephone-MoCA and Geriatric Depression Scale by telephone. A deficit-accumulation frailty index (FI) was calculated using an electronic medical record (EMR)-based calculator (robust <0.15, pre-frail 0.15-0.24, mildly frail 0.25-0.34, moderately frail 0.35-0.44, and severely frail ≥0.45) and a standardized documentation was generated for providers. Primary outcome was feasibility defined as the proportion of assessments completed. Secondary outcomes included administration time and providers' perception of the assessment.

Results: Seventy-one (83.5%) patients were successfully assessed. There were 7 (9.9%) robust, 17 (23.9%) pre-frail, 22 (40.0%) mildly frail, 12 (16.9%) moderately frail, and 13 (18.3%) severely frail patients. Assessments of functional and nutritional domains were completed by all patients. Cognitive and mood domains were obtained from 37 patients (52.1%). Top 3 patient-level barriers to cognitive and mood assessments included advanced dementia (n=10), perception that the assessment was lengthy (n=9), and hearing impairment (n=4). Average administration time was 28 minutes (SD 7) for the complete assessment and 18 minutes (SD 8) when cognition and mood were not assessed. All five providers found the information from the assessment easy to understand, useful in understanding patient's current health status and prognosis, and useful in making clinical decisions.

Conclusion: Telephone-based frailty and functional status assessment is feasible in older adults with serious illness during COVID-19 pandemic. Use of templates and an FI calculator in EMR can improve its usability. Future research should investigate more feasible cognitive and mood assessment and the impact of the assessment on health outcomes, costs and resource utilization.

A132

Improving frequency of video-visits at a Veterans Affairs Long term care facility: Value of the effort and lessons learned

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Background

During the COVID-19 pandemic, telemedicine has been used increasingly. Video visits are superior to phone visits through the addition of visual cues. Recent evidence highlights there are challenges associated with the use of this technology especially with older adults with physical or cognitive limitations. Hence, residents with comorbidities followed by subspecialists may have delays in care during the pandemic. This pilot study tested the feasibility of streamlining video visits for veterans in long term care facilities (LTCFs)

Materials & Methods

We surveyed appointments during the period of July-Sept 2020 for over 100 veterans in a Veterans Affairs LTCF. Barriers to telemedicine were identified by surveying staff and providers and a viable model for streamlining video visits for veterans was developed.

Aiming to increase access to video visits, iPads were acquired through the VA. Staff were trained to set up and troubleshoot tele-visits. Subspecialists were notified of the video visit capability. The use of video visits is being tracked during the 2nd COVID surge. We will compare the number of video visits before and after our intervention and address challenges faced.

Results

During the first COVID surge in spring 2020 no video visits were conducted. Prior to our intervention and during the summer of 2020, we identified 121 in person visits to subspecialties, only 3 took place as video visits. After our intervention, we are assessing whether the number of video visits for nursing home residents is increasing. Detailed data will be presented during AGS 2021. Some of the challenges we are facing include suboptimal wi-fi reception, staff shortages and confidentiality issues. We are speculating that increasing the number of video visits will allow for decreased COVID exposure, decrease transportation expenses and improve appointment compliance.

Conclusions

Video visits are important during COVID surge to ensure veterans receive medical care in a safe and timely fashion. Results from this study will further inform the development of protocols for making video visits more accessible to this cohort.

A133

Transforming an orthopaedic unit into an "Age-Friendly" unit through implementation of the American Geriatrics Society's CoCare®: Ortho program

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Background: The Age Friendly Health System (AFHS) is a joint initiative of multiple national health and quality organizations, led by the Institute for Healthcare Improvement (IHI), to design systems of care that support the wellness of older adults and prevent avoidable harm. The initiative rests on four pillars, known as the "4M's": (1) knowing and acting on what **M**atters most to the older person; (2) applying knowledge of geriatric pharmacology to the choice and number of **M**edications; (3) improving **M**obility; and (4) improving **M**entation. AGS CoCare®: Ortho is a program developed by the American Geriatrics Society (AGS) to help health systems integrate geriatric and orthopaedic expertise for older adults hospitalized with hip fractures, regardless of whether there are geriatricians on site. The program provides tools, mentoring, and an evidenced-based on-line educational curriculum to implement a co-management program. The goal of the quality improvement effort was to transform an inpatient orthopaedic unit into an age-friendly unit for geriatric fracture center (GFC) patients utilizing the tools and resources made available through AGS CoCare®: Ortho.

Methods: A hospital medicine-orthopaedics co-management model for GFC was developed using the resources provided by the AGS CoCare®: Ortho program to support the age-friendly "4Ms" principles. Age 60 and above with fragility fracture of the native proximal femur hospitalized from July, 2017 to June, 2020 were the patient population where the intervention was applied. Various delirium reduction and early post-operative mobility interventions were implemented specifically on the inpatient orthopaedic unit. Frequency of weight bearing (WB) on post-operative day (POD) 1 and frequency of delirium among GFC patients on the orthopaedic unit were compared to concurrent GFC patients on other units.

Results: Frequency of delirium was 29% on the orthopaedic unit vs. 42% on other units (P=0.0213). Frequency of weight-bearing on POD 1 was 87% on the orthopaedic unit vs. 75% on other units (P=0.0101).

Conclusions: The AGS CoCare®: Ortho is an effective dissemination program for establishing a hospital medicine-orthopaedics co-management program and making an orthopaedic unit age-friendly in a hospital without onsite geriatricians or a dedicated geriatrics unit.

A134

Feasibility of administrating a cognitive screening tool by telephone prior to surgery in older adults-preliminary results

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Background: Preoperative cognitive assessment has been advocated for adults ≥ 65 years-old due to increased risk for post-operative complications such as postoperative delirium, postoperative cognitive decline, and increased mortality. Most screening tools for cognitive impairment require in-person evaluation. During the COVID-19 pandemic, most medical centers have changed their workflows to telemedicine platforms.

In this study we aim to assess the feasibility of a telephone-based cognitive assessment tool, the Mini-Montreal Cognitive Assessment (Mini-MOCA) prior to surgery and 30-day post surgery to evaluate any changes in cognitive function.

Methods: Patients age ≥70 year who were candidates for surgery and had a telemedicine visit in the preoperative clinic during December 2020 were included. Exclusion criteria included hearing impairment, day-surgery, inability to speak English and a prior diagnosis of Dementia. Eligible patients were asked to complete an attention test, the Mini-MOCA and function assessment using the Katz score for activities of daily living (ADL) and Lawton-Brody for instrumental activities of daily living (IADL). Anxiety was assessed using the Generalized Anxiety Disorder 2-item (GAD-2). Baseline demographics including medications and education level were collected. Anti-cholinergic effect was assessed using an anti-cholinergic score calculator (ACS).

Results: Overall 24 patients completed the preoperative assessment. The cohort was 50% female, white (96%), with a median age of 74 years (range: 71-82). The median number of medications was 8 (range:2-20), 16/24 (67%) taking medications with anti-cholinergic effects and a median ACS of 1 (range 1-13), and 4/24 (17%) on Benzodiazepines. The median Katz score was 6 (range: 4-6) and Lawton-Brody score 8 (range: 5-8). The mean time for completion of the phone assessment was 10 minutes and 4 minutes for the Mini-MOCA. The median Mini-MOCA score was 13.5 (range: 9-15).

Conclusions: In our preliminary results we show that a telephone-based cognitive assessment prior to surgery is well accepted and feasible among older adults who are candidates for surgery. Our study is ongoing, and will continue to conduct pre- and post-operative cognitive evaluations (updated results will be presented).

A135

Pharmacist roles in deprescribing anticholinergics in primary care older adults

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Background: Failures of computerized deprescribing interventions redirect solutions to human models. We evaluated two pharmacist-based advanced practice models in primary care.

Methods: We retrospectively reviewed records of a collaborative clinic-based pharmacist deprescribing intervention and a telephone-based pharmacist deprescribing intervention. Patients received primary care from either Eskenazi Health (clinic-based) or Indiana

University Health (telephone-based). Clinic-based patients were aged 55 years and older and referred for deprescribing at the Healthy Aging Brain Center (HABC) specialty clinic focusing on brain health. Telephone-based patients were aged 65 years and older and called by a clinical pharmacist for deprescribing without referral. All patients were taking a medication with an Anticholinergic Cognitive Burden scale score ≥ 2. Deprescribing was defined as a discontinuation or dose reduction reported either in clinical records or patient self-report. Anticholinergic exposure is reported as an annualized total standardized dose (TSD), calculated using medication use variables and standardized by minimum geriatric dose.

RESULTS: Eighteen patients using anticholinergics and receiving clinic-based deprescribing, and 24 patients using anticholinergics and receiving telephone-based deprescribing were included. The clinic-based group had a mean age of 68 years, 78% were female, and 44% were African American. Among 24 anticholinergics deemed eligible for deprescribing, 23 (96%) were deprescribed. Clinic-based deprescribing resulted in a 70% reduction in mean annualized TSD. The telephone-based group had a mean age of 73 years, 92% were female, and 4% were African American. Among 24 anticholinergic medications deemed eligible for deprescribing, 12 (50%) were deprescribed. The mean annualized TSD was reduced by 42%. Few withdrawal symptoms or adverse events were reported in both groups.

CONCLUSIONS: Collaborative pharmacist-based deprescribing interventions reduced exposure to high-risk anticholinergics in primary care older adults through both clinic and telephone-based models.

A136

Improving Fall Risk Assessment in the Geri PACT VA clinic: Quality Improvement project

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Introductions: Falls are a public health problem in the United States with at least one in four adults over 65 years falling each year and over 3 million are assessed and treated for falls in the emergency departments. Unfortunately, less than half of older adults inform their healthcare provider creating a gap in our ability to deliver age-friendly health care. In this project, we seek to improve the ability to screen and assess the risk of falls in our geriatric clinic by incorporating the "timed up and Go" evaluation for our patients.

Methods

The Geri PACT VA clinic is comprised of VA patients of age 65 and older. Using the IHI model for quality improvement, an appropriate AIM statement was developed which was SMART.

AIM: Increasing the objective assessment of Fall risk among VA patients in the Geriatric Pact Clinic from 0 to 80 % using timed up and Go (TUG) test in the next four months (End of February). A target team was identified and educated on proper assessment and documentation of the "Time up & GO" (TUG) evaluation, using the format outlined in CDC Stopping Elderly Accidents and Death Injury (STEADI) Initiatives. This QI project was based on process measures to incorporate TUG as part of the workflow for the clinic.

Results

We observed an initial increase in measurement and documentation of TUG from 0% to 50%. During the study period, various pitfalls/challenges were identified which included but not limited to staff forgetting to measure/document, difficulty workflow, team members falling sick to COVID 19, substitute staff who were not trained. Following a 1st PDSA cycle, we observed an increase of 67% (close to our target 80%). Other Data will be presented as subsequent PDSA cycles are ongoing.

Conclusion:

Assessing and evaluating fall risk is one of the several steps in addressing the public health challenge of fall in our elderly. By incorporating TUG assessments into the workflow of the clinic, we identify more patients who are at increased risk of falls while capturing those who may not be forthcoming. We also equip providers with information to inform interventions and reduce the falls in our elderly. Furthermore, the success of the QI project could serve as a model for other geriatrics practices across the country to incorporate such helpful tools into their practice.

A137

Mortality Outcomes in Hospitalized Older Adults with COVID-19 based on Baseline Physical Function

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Background:

COVID-19 a devastating disease has affected older adults disproportionately. Several models have been created to determine high risk factors for respiratory failure leading to mechanical ventilation and mortality. During the initial phase of the pandemic our geriatrics team evaluated an EHR based approach to classify hospitalized older adults based on their functional state prior to hospitalization and its association with adverse outcomes of COVID-19.

Methods:

The study included a retrospective analysis of 191 hospitalized adults older than 60 years with a positive PCR test for nCOV-2 at a large multicenter healthcare system between March to April 2020. Patients were classifieds into 3 physical dependence categories of: No dependence, (ND); Mild to Moderate dependence, (MD); and High dependence (HD) classified based on their functional state prior to hospitalization using the following variables documented in the EHR by case managers: ADL dependence, use of walking aids and living situation. Association of these risk categories with intubation and mortality was evaluated.

Results:

Of 191 patients reviewed, 86(45%) were classified as ND, 73(38%) as MD and 32(17%) as HD. The median age of the cohort was 74 years (IQR 67-81 years) and 106 (55.5%) were male. Patients in HD category had higher mortality (53%) as compared to MD (27%) and ND (19%) category (P=0.001). All patients in the HD group who were intubated died (n=6, 100%) as compared MD (n=9, 75%) and ND (n=11, 41%) category (P 0.011).

Conclusion:

An EHR tool classifying older adults based on baseline physical function using commonly available variables from nursing and case manager documentation can be useful for determining mortality risk on admission and prognostication. Further studies are needed to validate this tool with current prognostication tools.

A138

Dementia Care Navigators Provide Specific Caregiver Support and Coordination in Primary Care

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Background

Informal caregiving of a person with dementia (PWD) requires a myriad of skills and supports. The Care Ecosystem model involves telephonic caregiver support by a trained care team navigator (CTN). To understand the real-world needs of caregivers of PWD, we evaluated dementia care topics discussed and types of referrals for caregiver support.

Methods

In a geriatric primary care adaptation of Care Ecosystem where the CTN is an integrated primary care team member, we conducted a qualitative content analysis of CTN documentation of monthly caregiver calls from September 2018 to March 2020. Using a team-based, iterative deductive coding approach, two researchers identified the presence of eight dementia education or support topics and 57 subtopics. The frequency of dementia topic, type of primary care coordination (i.e., behavioral health, pharmacy, social worker, primary care provider), or type of community-based referrals were calculated.

Results

Sixty-six dyads enrolled in the dementia caregiver support program. For the PWD, mean age (SD) was 83.4 (7.0) years and 68% were women. For the caregivers, mean age (SD) was 68.6 (13.1) years and 71% were women. From 491 CTN clinical notes, the three most common dementia topics were caregiver wellbeing (present in 60% of CTN notes), behavior management (51%), and specific referral assistance (40%). Within caregiver wellbeing, the most common subtopics were emotional support/empathy (44%) and options to increase caregiver support (19%). Within behavior management, the most common subtopic was communication strategies (35%). Fifty-four of 66 dyads had at least one in-clinic or community referral, with a median of three referrals per dyad. The most frequent types of in-clinic care coordination were for social work (22%) and primary care provider (22%) input. Common community referrals were for skilled home health (9.6%), Alzheimer's Association (9.2%), and non-skilled home health (8.8%).

Conclusions

Caregiver support conversations within an integrated dementia caregiver support program discussed multiple needs with the most frequent topics addressing caregiver wellbeing and dementia behavior management. Interprofessional programs that include a dementia care navigator within geriatric primary care can support dyads with specific dementia education and coordination with other primary care and community-based needs.

A139

Lessons Learned from Implementing Age-Friendly Care in a Veterans Affairs-based clinic and a Safety-net Hospital-based Geriatrics Primary Care Clinic

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Background: The Institute for Healthcare Improvement's Age-Friendly Health Systems initiative is rapidly being adopted and implemented across the nation. Becoming an Age-Friendly Health System in the outpatient setting involves an applicant institution endorsing a commitment to delivering the 4Ms of high-quality older adult care: what Matters, Mobility, Mentation, and Medications. The way each clinic addresses the 4Ms depends upon their unique health system characteristics.

We sought to identify lessons learned from achieving Age-Friendly status in geriatrics-staffed, primary care clinics in two different health systems, a Veterans Affairs-based clinic (VA) and a safety-net hospital-based primary care clinic (PCC).

Methods: We retrospectively analyzed barriers and facilitators to achieving Age-Friendly Level 1 status using field notes and qualitative constant comparative methods. We also surveyed clinic staff and providers using a pre/post survey design to assess knowledge and awareness of the 4Ms and implementation.

Results: Both clinics succeeded in achieving Age-Friendly Participant Status (Level 1). Facilitators essential to achieving Level 1 status included buy-in of clinic directors and staff as well as adequate staffing. A key barrier identified at one site was limited staffing, which resulted in task delegation being centralized around the provider. A key facilitator was distribution of assessment of the 4Ms across interprofessional team members such as psychological testing and medication review. Results of the pre/post survey are currently pending.

Conclusions: Achieving even Age-Friendly Health System Level 1 status is not straightforward and hinges upon multiple factors. At the two sites, important factors were leadership buy-in, a physician champion, collaborative robust interprofessional teams, and clear distribution of tasks. Health system factors may favorably or unfavorably influence the ability of a health system to achieve Level 1 status. Understanding these key barriers and facilitators may assist other clinics applying for this recognition and ultimately enhance awareness of how the 4Ms can help guide care of older adults.

A140

Adapting a Transitional of Care Model from a Large Academic Hospital for a Community Hospital

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Background: Errors are common in transitions from acute care to skilled nursing facility (SNF). The Health Optimization Program for Elders (HOPE) addresses errors in the transition from a large academic hospital to SNF, and decreased 30-day readmission rates. In the original HOPE model, a nurse practitioner performs an inpatient consult and an in-person post-discharge visit, where she interacts with SNF nurses to coordinate care. We describe the adaptation and implementation of HOPE at a community hospital with existing consulting geriatricians.

Methods: We use the RE-AIM (reach, efficacy, adoption, implementation, maintenance) framework to describe the process.

REACH: Our population is patients aged 65+, being discharged to SNF

EFFICACY: Patient-level outcomes: readmission rates and mortality rates, compared to patients aged 65+ discharged to SNF without HOPE consult. Provider-level outcome: satisfaction among hospital providers, consulting geriatricians, and SNF providers.

ADOPTION: We engaged stakeholders from geriatrics, hospital medicine, surgery, case management, nursing, hospital leadership, and SNFs. We met with each of these groups to introduce HOPE and obtain feedback prior to implementation.

IMPLEMENTATION: Modifications to the original HOPE program included: 1) both inpatient and follow-up visits were performed by the inpatient geriatric consulting physician; 2) follow-up was performed with SNF providers via telephone.

MAINTENANCE: Stakeholder engagement and education continues through email, flyers, and meetings. New geriatricians have been trained on the HOPE process.

Results: Patient outcomes for the first four months of implementation are reported in Table 1, compared to patients over 65 discharged to SNF without a HOPE consult. Provider feedback will be obtained and reported.

Conclusion: Our description of adapting HOPE for a community hospital with a different provider structure will help others by providing a road map for building a team and executing a new model. Interprofessional communication throughout the process was critical to success.

Patient outcomes

	HOPE	Non-HOPE
# of patients	14	4989
Average age	79.4	75.8
7-day readmissions	0	48
14-day readmissions	0	82
30-day readmissions	1	138
Mortality	0	26

A141

Documentation of Opioid Indications and Stop Dates in a Skilled Nursing Facility

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Background: Optimization of opioid use in skilled nursing facilities (SNFs) is important as opioids can cause a multitude of side effects. We developed a quality improvement project to optimize use, through initiation of stop dates and documentation of the indication for use.

Methods: Chart review revealed that 23 of 100 patients were on opioids. Only 3 had stop dates listed for the opioids and 21 of them had an indication listed. This was shared with the SNF team including MDs, Nurse Practitioners (NPs), nursing staff, and physical and occupational therapists (PT/OT) to modify clinical practice around pain assessment to optimize management of opioid use. These stakeholders were able to highlight obstacles and lack of consistency in the documentation of pain assessment, and titration of opioids based on pain assessment. More recently, reconciliation of medications has been done remotely because of restrictions placed due to COVID-19 adding to the challenges to ensure appropriate use. We discussed with the director of nursing about educating the stakeholders on consistent documentation of pain assessment. We discussed with our consultant pharmacy about possibly inquiring about a stop date and indication before approving the opioid order on new admissions to our SNF. Once we educate the stakeholders, we will make small changes using Plan-Do-Study-Act (PDSA) cycles until we improve our processes to consistently document stop dates and indications for opioids. We will track opioid stop dates and changes in dosage to measure the effectiveness of the process changes we are making.

Results: Prior to this quality improvement project, stop dates for opioids were documented on a low percentage of our SNF patients. We mapped our current process with several stakeholders and identified areas for improvement in documenting pain and opioid stop dates. While we are implementing process changes through PDSA cycles we will track pain assessment documentation, opioid stop dates, and dose changes to opioids. Data gathered on these measures will guide us in making further changes to our current processes until a better level of compliance is achieved.

Conclusions: Documentation of indication and stop dates for opioid use will guide our care team in avoiding unnecessary and prolonged use of opioids for acute and chronic pain.

A142

Harnessing Remote Patient Monitoring Technology to Improve Transitions of Care

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BACKGROUND: Virginia Commonwealth University developed a Transitional Remote Patient Monitoring (tRPM) program in April 2020 with the goal of leveraging remote patient monitoring technology alongside enhanced care coordination support to improve transitions of care.

METHODS: Patients deemed to be at high risk of readmission are referred to the tRPM program and provided a cellular-enabled tablet along with a Bluetooth-enabled pulse oximeter, blood pressure cuff and thermometer prior to discharge. Vital signs are monitored over a 16-day period post-discharge by nursing staff based in VCU's Continuum Integration Center (CIC). CIC nurses are in close communication with tRPM patients and receive real time alerts if vital signs fall outside of individualized parameters. Patients typically participate in virtual transitional care visits with a tRPM provider and are also invited to participate in a virtual Advance Care Planning session. CIC staff also provide care coordination and social work support. Thirty-day hospital readmission rates and length of stay for tRPM graduates were examined and compared to a group of patients with similar diagnoses and LACE scores. Telephone surveys were conducted to gauge patient satisfaction.

RESULTS: From April to December 2020, 357 patients were enrolled in VCU's tRPM program. Approximately one third of these patients were COVID positive. Patients enrolled in tRPM over this period had an average LACE score of 11.5 and average age of 58.8. The top three diagnosis-related groups (DRGs) for patients enrolled in tRPM were sepsis, congestive heart failure and respiratory infections. Patients assigned to these top three DRGs who were enrolled in tRPM had a 24.6% reduction in 30-day readmissions and a 12.9% reduction in hospital length of stay when compared to patients assigned to these DRGs with similar LACE scores. 97.5% of surveyed tRPM participants reported they were satisfied with the telemedicine device and its use during their evaluation.

CONCLUSIONS: VCU's tRPM program has demonstrated that telehealth and remote patient monitoring technology can be harnessed in conjunction with enhanced care coordination support to improve transitions of care, reduce length of stay and hospital readmissions.

A143

Improving Telehealth in a Nursing Facility in Hawaii during the SARS-CoV-2 Pandemic

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Background: Telehealth's rapid implementation during the COVID-19 pandemic has met significant challenges in many nursing facilities. We aimed to identify and overcome these challenges through a quality assurance and performance improvement (QAPI) project.

Methods: This QAPI project is being conducted at a 187-bed nursing facility from September 2020 to identify telehealth stakeholders, goals, barriers, and helpful interventions. Phase 1: We administered a Needs Assessment free-response survey to all telehealth service providers (attending physicians, geriatrics fellows and nurses, N=23). Phase 2: Following a Plan-Do-Study-Act (PDSA) model, responses were coded into themes for which interventions were designed and implemented. Phase 3: We will conduct a retrospective pre-post survey on all 23 initial respondents to assess improvements in telehealth due to the interventions. Outcome measures will be ER transfer rate, telehealth numbers, and satisfaction with the process. Analysis will include paired t-tests for pre-post differences.

Results: Needs data suggested barriers in the main domains of scheduling, equipment, and visit protocols (history and physical exam). Top respondent themes within each domain were collected: 57% reported that visit times interfered with routine medication administration times; 57% reported weak wifi connectivity and 44% reported concerns about equipment sanitization between patients; 48% requested more detailed clinical data during patient visits (vital signs, recent bowel movements, oral intake, labs, and recently administered prn medications); 35% reported difficulty visualizing skin and 39% reported variability in staff physical exam skills. Before intervention means (± SD) of satisfaction with telehealth using a 1-10 point Likert scale for attendings, fellows and nurses were 5.8±1.5, 7.3±0.5 and 7.7±1.7, respectively. Interventions developed from the above themes included a scheduling protocol, technological improvements and a visit preparation protocol and training. Outcomes data will be gathered.

Conclusions: In this QAPI project, needs data led to the identification of top barriers to telehealth that helped inform interventions. If favorable outcomes result, it would support the application of greater resources to improve efficacy of telehealth and patient outcomes in nursing facilities, even after the pandemic ends.

A144

Increasing Advance Care Planning in Post-Acute Rehab - A Quality Improvement Study

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Background:

Post-acute rehab (PAR) patients are often medically fragile and at risk for decompensation. Many patients use the PAR benefit during the last year of life, and a significant number of seriously ill patients die in PAR, suggesting urgent need for advance care planning (ACP) in this setting.[1,2] However, evidence is lacking on the value and prevalence of ACP for this population. This study aims to increase ACP in a PAR population by using QI strategies to improving the existing palliative care referral process.

Methods:

The study was conducted at a community skilled nursing facility (SNF) with 164 PAR beds. Electronic medical records for 34 recently admitted PAR patients were reviewed to quantify ACP prevalence. This facility has a palliative care (PC) screening tool as part of the admission process. We focused on the referral process to palliative care as it was the most modifiable component with the most potential to increase ACP completion. The first PDSA cycle focused on improving the rate of PC referrals for admissions who screened positive. Referrals were tracked with reminders to providers if referrals were not completed.

Results:

At baseline 23% of admissions had a Medical Order for Life Sustaining Treatment (MOLST) and 12% had a health care proxy. The palliative care screening tool identified 6 patients for referral to PC, but 0% of referrals were completed. After the PDSA was implemented 100% (9 of 9) of PC were completed. Secondary outcomes showed that the palliative care referral lead to additional ACP in 3/9 of the patients.

Conclusions:

This QI initiative increased the PC referral rate for PAR patients with identified PC needs. The low number of patients identified by the PC tool suggest that the tool is not sensitive enough. Future PDSAs will focus revising the screening tool to more accurately identify those who would benefit from specialty PC, with the goal of developing a more reliable PC screening tool for PAR settings.

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A145

The effect of clinical pharmacy intervention on polypharmacy and the use of high-risk medications in patients with perioperative delirium and pre-existing cognitive impairment undergoing elective surgery

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Background: Neurocognitive disorders (NCD) are common perioperative complications in older adults undergoing surgery. Postoperative delirium and delayed neurocognitive recovery can result in delayed recovery, higher readmission rates and reduced quality of life. To identify those at higher risk for NCD, the Pre-Operative Clinic at Keck Medical Center of USC established routine cognitive screening for older patients. Approximately 25% of patients have preoperative cognitive impairment, and 5-50% of those report difficulty with concentration and memory ("brain fog") after surgery of which up to 40% may be preventable. Polypharmacy and inappropriate perioperative medications are risk factors.

Methods: Patients 65 years and older were screened using a Mini-Cog© before surgery in the Pre-Operative Clinic. Those scoring 3 or less (out of 5) were seen virtually by a clinical pharmacist and a geriatrician for medication review and perioperative recommendations. Handouts detailing high-risk medications were provided to patients. Patients were flagged as high risk to providers and staff. A retrospective chart review established polypharmacy risk (5 or more medications), the use of multimodal pain management and the number of high-risk medications administered perioperatively and on discharge. Medication lists were collected from pre-operative clinic notes, MAR Summary, and discharge instructions provided to patients.

Results: A chart review was performed for 93 patients of which 4 were evaluated by a pharmacist. Of those not seen by the pharmacist, 73.0% were at risk for polypharmacy and 23.7% were taking one or more high-risk medications preoperatively, with a similar trend seen postoperatively. None of the four patients seen by a pharmacist took high-risk meds perioperatively, and only 25% were at risk for polypharmacy after review.

Conclusions: Preliminary data suggests that a clinical pharmacy review prior to elective surgery decreases the incidence of polypharmacy and use of high-risk medications. Complete results on 50 patients with intervention will be presented.

A146

Improving Access of Advance Directives in a Skilled Nursing Facility

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Background: Skilled nursing facility (SNF) patients should have good quality Advance Care Planning (ACP) to ensure that their wishes are respected. However, SNF patients often lack advance directives (AD) due to barriers including multiple care transitions and poor document accessibility. Baseline review of patient charts in our facility revealed that 24% (8/33) patients did not have ADs upon their discharge from their short stay. We decided to implement a Quality Improvement (QI) project to improve AD documentation which will impact of our residents' quality of life, hospitalizations, and healthcare expediture.

QI Methods: Stakeholders (patients, admission director, medical providers, social work, electronic registry representatives) were engaged to understand local barriers to AD documentation. Patients had AD documents that were not within the SNF medical record system. A significant number of ADs were held in the discharging hospital electronic medical record that were not transmitted to the SNF. The admission director was engaged to develop a new workflow that electronically downloads all ADs from the discharging hospital into the SNF EMR. This new process was implemented through small PDSA cycles to measure the transfer of ADs from hospital to SNF EMR.

Results: An exploratory baseline analysis of SNF discharges over 1 month showed prevalence of any ADs of 25/33 (76%) patients. Lone code status order represented 7/25 (28%) of those ADs. Duke EMR housed ADs for 3/8 (38%) of patients who did not have SNF ADs. After intervention, the prevalence upon discharge of ADs was 11/21 (53%), lone code status order represented 7/21 (33%), and the Duke EMR housed ADs of 4/10 (40%) patients who did not have SNF ADs. Further discussion showed the proposed workflow was not utilized due to medicolegal liabilities that the Duke EMR may not store the most recent ADs.

Conclusions: Our work has highlighted the unmet need and clear benefit to AD prevalence. Implementation of process models to gather current and quality ADs in SNF continues to be challenging. Further collaboration is needed overcome medicolegal concerns.

A147

Improving Advance Care Planning and Completion of Advance Directives: A Role for Virtual Peer Training

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BACKGROUND: Advance care planning (ACP) interventions can result in increased completion rates of advance directives (AD), concordance between care preferences and care delivery, and improved end of life care. During the COVID-19 pandemic, we have seen the critical importance of up-to-date and situation-specific ACP. The goals of this study were to (a) assess faculty baseline comfort with and knowledge of ACP and AD, and (b) determine the impact of virtual peer training on ACP and AD completion among residency faculty.

METHODS: This Plan-Do-Study-Act (PDSA) style project includes 9 family medicine faculty in a large urban setting. Faculty were given a pre-training Likert Scale survey concerning ACP and AD before and 1-3 months following a virtual training session. The training session included a presentation and practical examples within the electronic health record (EHR). The primary outcome was (a) correlation of faculty knowledge and comfort of ACP and AD with training using Spearman Rank Correlation, and (b) rate of AD completion in the EHR for faculty at 1-3 months following educational intervention.

RESULTS: All 9 faculty completed the surveys and participated in the training session. The comparison of pre- and post-intervention data provides us with a Spearman Rank Correlation value of 0.969 (strong positive correlation). AD completion in the electronic health record for faculty was unchanged 1-month post-training (37.76% and 37.50% completion, respectively) and the 3-month analysis will be completed by the end of January 2020. Using median and mode, the survey shows improvement in self-reported understanding and comfort with ACP knowledge, documentation, and appropriateness.

CONCLUSIONS: Preliminary results suggest that a brief virtual training session has a strong positive correlation with self-reported comfort and understanding with ACP discussions, documentation, and AD completion among faculty. Further, the results advocate that self-reported comfort and understanding of ACP and AD increases following the intervention at least 1 month following the session. While rates of AD completion among faculty did not show a change after 1 month following intervention, further data collected at 3 months will be reported. As the next step in this PDSA project, we are providing virtual training to family medicine residents and will complete training by the end of February 2020.

A148

Does the use of a beta blocker cause a delay in testing for COVID-19?

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Background: COronoVIrusDisease-19 (COVID-19)-related mortality in nursing home (NH) residents in the US is rising. Peak temperature (T) is used as a trigger to test for COVID-19 but as a single modality this lacks sensitivity. It is unknown whether exposure to BBs delays testing for COVID-19.

Methods: We retrospectively compared residents in 134 NHs screened for COVID-19 between March and August 2020 based on BBs use. We included residents receiving BBs at the time of COVID-19 testing and for at least 7 days (3 days prior to and 3 days after the test). We evaluated baseline characteristics, average baseline T and heart rate (HR) of the residents who tested positive for COVID-19 and the average difference to maximum HR (maxHR) and T (maxT). Baseline HR and T were the mean of 5 first values. We modeled measures (using pulse/temperature cutoffs) for triggering a COVID-19 test and compared the two groups to assess impact of the number of tests done on the days lost to diagnosis.

Results: Of the 10,761 infected patients, 2,441 were on BBs. The average baseline T was found to be similar in both groups (36.5 degree celsius) while the HR was lower in the BB group (73.9 vs 75.8). The average of peak HRs were 91.03 (no BB) and 89.05 (on BB) while average of peak Ts were 37.29 and 37.23 respectively. The average maximum difference from baseline HR was found to be similar among the 2 groups. However, when hypothetical cutoffs (20/min. rise in HR and 0.4 degree celsius change from baseline) were used, there was an 8% and 11% increase in detection of cases in the BBs group, respectively.

Conclusions: BB use alone did not affect HR or T. If a threshold of 0.4 degree celsius or 20/min. rise in T and HR are respectively used, earlier detection of COVID-19 is possible. It is possible that the incidence of COVID-19 alters the mechanism of action of BBs, causing a sharp rise in T and HR aiding earlier detection. Further research needs to be pursued to determine if HR can be used as a measure for trigger testing in comparison to T in COVID-19 and other infectious diseases.

A149

Analyzing Barriers to Mini-Cog Screening in Primary Care

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Cognitive impairment is often under-recognized in the primary care setting and may progress to clinical dementia before being noticed. The Mini-Cog is a screening tool for cognitive impairment that has proven useful in the primary care setting. Despite its simplicity and relatively short time to administer, the Mini-Cog is often under-utilized. The Cleveland Clinic Center for Geriatric Medicine previously implemented a cognitive screening program using the Mini-Cog at Family Health Centers across Northeast Ohio. In the 8 months following implementation, completion rates for the Mini-Cog improved from 27% to 37%. Despite this, only 15% of abnormal Mini-Cogs resulted in a referral to Geriatrics. A quality improvement project was implemented to understand the barriers to completing Mini-Cog screening and subsequently act on an abnormal test. Interviews of nursing leadership and physicians were conducted at 4 clinical sites, and responses were combined and compared. Mini-Cog training commonly occurred only during orientation. Screening occurred during Medicare Annual Wellness Visits, and a Best Practice Advisory could be triggered for other reasons. In general, the high-utilization sites had more clear guidelines for screening. Common barriers to completing screening were a lack of time, priority, and accountability, as well as inconsistent guidelines or expectations from leadership. Results were communicated to the provider using direct handoff of results, but often not communicated at all in low-utilization sites. Common practices for abnormal results included further discussion/work-up by the provider, or referral to Geriatrics or Neurology. Common barriers to acting on abnormal results included patient preference, lack of time, or not knowing when to refer. The analysis of the interview responses identified several possible interventions. Examples include providing annual training with clear screening criteria and guidelines, creation of a reporting dashboard to increase accountability, establishing a standardized system for communication of results, and adding Best Practice Advisory's as reminders to complete screening and consider referral. Physicians may additionally benefit from more guidance and education regarding the role of Geriatrics. The possible interventions identified through our analysis could be used to improve the process of acting on a positive Mini-Cog screen result.

A150

Addressing Social Isolation in Long-Term Care Facilities Amidst the COVID-19 Pandemic

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Background: Isolation during the COVID-19 pandemic could result in feelings of loneliness and depression among long-term care (LTC) residents, as well as increased burnout among staff. Weight loss is another concern, given limited communal dining. Socially distanced group activities may have a positive impact on both residents and staff. This project aims to reduce consequences of social isolation among LTC residents, as well as burnout among staff.

Methods: LTC residents were surveyed to identify meaningful group activities. Baseline resident data was collected using the Geriatric Depression Scale (GDS), Social Isolation Scale (SIS), and Loneliness Scale (LS), as well as the Abbreviated Maslach Burnout Inventory (BI) with staff. Weights before and during isolation were compared. Socially distanced activities, based on resident preferences, were then implemented, including working with a new artist-in-residence. Five months after implementation of activities, updated weights and repeat depression, social isolation, loneliness, and burnout scales will be collected to evaluate for any significant change.

Results: Preliminary results from a convenience sample of ten residents revealed reading (70%) and listening to music (40%) were the two most popular activities. GDS scores ranged 1-14, with a mean of 5.5 (SD 3.7), indicating 60% of residents met criteria for depression. SIS scores ranged 17-29, with a mean of 21.9 (SD 3.7), indicating 50% of residents met criteria for average-high social isolation. LS scores ranged 20-49, with a mean of 37 (SD 8.1), indicating 60% of residents met criteria for loneliness. Regarding residents' weights (n=52), 26.9% experienced weight loss, while 17.3% experienced weight gain. Results of the BI given to staff (n=36) revealed moderate to severe burnout in 11.4% within the domain of personal accomplishment, 34.3% within the domain of emotional exhaustion, and 2.9% within the domain of depersonalization.

Conclusion: Understanding the impact of social isolation on LTC residents during the COVID-19 pandemic is critical in addressing safety and quality of life. Early findings suggest frequent feelings of loneliness, social isolation, depression, and weight loss among residents, as well as emotional exhaustion among staff. We hope results obtained after implementation of group activities with a larger cohort of residents will add to the current knowledge on addressing social isolation within the LTC environment.

A151

Approach to early detection of SARS-CoV2 in nursing homes

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Background

Current nursing home (NH) guidelines for SARS-CoV2 screening using a temperature threshold such as 38°C. More than 70% of SAR-CoV-2 infected NH residents do not meet this criterion. A rate of rise of temperature and change from baseline temperature may improve sensitivity for earlier detection of COVID-19.

Methods

The study was done in the Veterans Administration NHs. SARS-CoV2 screening includes daily temperature checks. We calculated baseline temperatures by averaging the first 5 daily temperatures recorded before SARS-CoV2 was detected.

Results

Of 11,050 VA NH residents tested, SARS-CoV-2 was identified in 1199 (11%). The average maximum temperature in those with SARS-CoV-2 (SARS+) was 38.1 compared with 37.3 in those without SARS-CoV-2 (SARS-) infection. Temperatures in SARS+ began rising 7 days before testing and remained elevated during the 14-day follow-up. Among SARS+ only 50% met the fever threshold of 38°C. Most SARS+ residents (91.55%) experienced 2 or more 0.4°C elevations above their baseline values. One cohort of SARS+ residents (4.23%) temperatures never deviated >0.4°C from baseline.

Temperature elevation >0.4°C from baseline identifies 89% of the SARS+ NH residents; persistent elevation improves detection to 95% of SARS+ residents.

Conclusions

A single screening criterion for temperature is inefficient or insensitive for detecting SARS-CoV-2 in nursing home residents. A patient-derived baseline temperature, persistent rise in temperature can increase sensitivity and lead to early detection of SARS-CoV2 infection in nursing home patients. These results indicate the value of incorporating temperature variation from baseline for early detection and containment of COVID-19.

Change of Temperature Definition	Cumulative Days Earlier Detected	Mean Days Earlier Detected	Measure-triggered COVID tests (Actual=94,649)	Number of COVID cases missed of 1199 detected
Persistent rise OR TMAX >37.2	1488	1.22	207,537	53 (4%)
Persistent rise OR TMAX >38	1468	1.24	206,897	58 (5%)
0.4 Change from Baseline	870	0.73	107,345	137 (11%)
TMAX >37.2	209	0.17	38,402	273 (23%)
TMAX >38	-253	-0.21	5,612	689 (57%)

A152

Identifying and Addressing Malnutrition In Older Adults With Neuropsychiatric Disorders Is Possible: A Performance Improvement (PI) Project

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Background

Prevalence of malnutrition is high in older adults, including neuropsychiatric disorders. Simplified Nutritional Appetite Questionnaire (SNAQ), a screening tool, predict weight loss. SNAQ score ≤ 14 indicates risk of at least 5% weight loss within 6 months and ≥ 15 indicates better appetite; it detects risk of malnutrition when albumin and BMI are normal.

Methods

As a PI project in Geriatric Medicine fellowship, fellows assessed nutritional status and collected data in patients with neuropsychiatric disorders at nursing homes, clinic and hospital (in Bronx) under faculty supervision, October 2020 to January 2021.

Results

91 patients with neuropsychiatric disorders, 4 excluded; 41.38% of 87 patients at risk of malnutrition (SNAQ ≤14), mean SNAQ 12.24. In those at risk of malnutrition, 81.3% from NH, 58.3% demented. During study period 19.4% increased their weights, 44.4% did not change.

Interventions (SNAQ ≤14)

Counseling (N=34) No diet restriction; encourage to eat; allow home food; taste enhancers; assist feed

Medications (N=10) Deprescribe drugs causing weight loss; mirtazipine

Supplements (N=28) Nutritional supplements; milk shakes; vitamins

Nutrition consult (N=32) Regular dietician consult (monitor weights / intakes)

Miscellaneous (N=10) Facetime chat (caregiver); preferred meals; snacks; provide time to eat; oral care

Conclusions

Malnutrition is common in older adults with neuropsychiatric disorders, often underrecognized

Interventions to address nutritional disorders in dementia are possible and yield rewarding results

Results

	Patients 87	SNAQ ≥ 15 (N 51)	SNAQ ≤14 (N 36)
Age years, Mean, SD	77.94 ± 12.61	76.31 ± 10.81	80.89 ± 13.89
Females	33/54	26/25	9/27
BMI	25.9 ± 7.24	27.23 ± 7.42	24.5 ± 6.87
SNAQ, Mean, SD	14.43 ± 2.23	16 ± 0.969	12.24 ± 1.49
Dementia	45	24	21
Depression	37	23	14
Psychosis	5	4	1
Weight Increased	18	11	7
Weight decreased	29	15	13
Weight no change	40	25	16

A153

Identifying Malnutrition in Older Adults Is the Only Way for Multidisciplinary Interventions to Follow! A Performance Improvement (PI) Project

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Background

Both under and over nutrition are common in older adults and a predictor of outcomes, hence expedient to identify and address. The Simplified Nutritional Appetite Questionnaire (SNAQ) is a reliable, validated screening tool; it reports a score of ≤ 14 as indicating reduced appetite and predicts a >5% risk of weight loss in 6 months.

Methods

From September 2020 to January 2021, as requirements of a geriatric fellowship program, our PI project aimed at identifying and addressing malnutrition in hospital (H), nursing home (NH) and outpatient clinic (C) in the Bronx under supervision of attending geriatricians. Data was collected with a designed tool and SNAQ; interventions followed.

Results

273 participants, 264 analyzed, mean age 76 years (NH: 79, H:70, C:76). 5.6% (n 15) underweight, mean age and SNAQ score 76.3 years and 11.79. Proportion of overweight and obesity 64.8% (n 171); 39% (n 103) undernourished (SNAQ ≤ 14); 10% underweight.

Conclusions

Under and overnutrition are highly prevalent in older adults across settings, often underrecognized.

Nutritional assessment helps identify disorders and offers the opportunity for interventions, aided by nursing, nutritionists, pharmacists and physical therapists.

Results

Interventions		NH 111 Mean SNAQ 13.99 Mean BMI 27.64	H 45 Mean SNAQ 14.2 Mean BMI 25.08	C 108 Mean SNAQ 15.32 Mean BMI 29.73
Counseling		106(95.5%)	45(100%)	101(93.5%)
Medications		15(13.5%)	2(4.4%)	9(8.3%)
Supplements		75(67.6%)	10(22.2%)	23(21.3%)
Nutrition consult		97(87.4%)	26(57.8%)	7(6.5%)
Physical activity		49(44.1%)	11(24.4%)	62(57.4%)
	SNAQ ≤ 14	NH 55	H 20	C 28
Counseling	No diet restriction; allow home food;encourage to eat;taste enhancers;assist feed	53	30	22
Medications	Deprescribe weight loss drugs	12	2	2
Supplements	Vitamins, milk shakes	40	7	11
Nutrition consult	Weekly, quarterly; weights, calories	49	1	1
Physical activity	Stay fit	27	1	6
Miscellaneous	Dementia: assist feed	18	3	5
	BMI ≥ 25	63	20	88
Counseling	Diet: low fat, non-concentrated carbs, DASH, no added salt	59	20	82
Medications	Deprescribed steroids, antipsychotics, antidepressants	7	0	8
Supplements	Low calorie products	35	2	14
Nutrition consult	Diet, monitor weight	53	10	6
Physical activity	Tailor as tolerated	26	7	40

A154

A Model to Increase Faculty Competency in Teaching QI to Geriatric and Palliative Care Fellows

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Background: A major barrier to the expansion of Quality Improvement (QI) and Patient Safety (PS) in medical education has been the lack of faculty development (FD) in quality and safety. Our geriatric and palliative medicine fellows participate in a 9-month project-based QI curriculum coached by volunteer faculty. Year 6 survey of faculty coaches revealed 43% never completed formal QI curriculum, 43% felt very comfortable being a QI mentor, and 86% would welcome further QI FD. Our project aims to improve faculty QI knowledge and teaching skills to increase trainees' engagement in QI/PS.

Methods: 8 QI projects with 16 coaches were offered to 35 fellows to rank. All faculty coaches participated in the QI FD curriculum that included a web-based training to teach QI principles and the Train-the-Trainer Model to coach faculty on teaching and facilitating QI team projects during faculty-fellow "co-learning" QI curriculum. A mid-year "check-in" with faculty explored team project challenges.

Evaluation consisted of a prospective pre-post survey with demographics; 6-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 2 question open-ended course evaluation for faculty and fellows.

Results: 56% were 1st time coaches. 43% had no prior QI training. Only 8% felt very comfortable while 46% felt neutral or uncomfortable being a QI mentor. 87% completed both pre- and post-surveys. Post curriculum, 1st year coaches demonstrated improved comfort in being a mentor and utilizing 4 key QI tools ($p<0.05$) as well as improved QI knowledge (pre 22.6; post 24.5 $p<0.05$). Similarly, 1st year fellows demonstrated improved comfort with 4 key QI concept/tools ($p<0.05$) and improved QI knowledge (pre 20.7; post 23.0 $p< 0.05$). Fellows' course evaluations were positive with recommendations to include more protected time, stronger faculty facilitation, and more equitable group participation.

Conclusions: Use of asynchronous web-based training with the Train-the-Trainer Model to coach faculty on how to teach and facilitate the QI team projects is an effective method to improve faculty comfort and competency in teaching QI skills to fellows.

A155

Halted by COVID: Pandemic Impact on Quality Improvement Learning for Geriatric and Palliative Medicine Fellows

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Background: The ACGME requires that fellows receive QI training. A nine-month QI curriculum for the 2019-2020 Geriatric and Palliative Medicine fellowship at a large NYC hospital was prematurely halted by the pandemic. We aim to assess the affect of the pandemic on our QI curriculum.

Methods: The QI curriculum employed a "flipped" classroom model using Institute for Healthcare Improvement online modules to teach basic QI concepts and four protected 1-2 hour sessions to reinforce knowledge application of QI concepts through active learning methods. Fellow's QI roadmap with resources, accountability contracts, and presentation templates were created to guide project workflow. Fellows worked on departmental prioritized team-based QI projects, scheduled for presentation at midterm and end-of-year. Program evaluation consisted of a prospective pre-post survey with demographics; 6-item questionnaire on comfort with QI concepts

with Likert Scale (5=Very Comfortable, 1=Very Uncomfortable); 3 cases from the Quality Improvement Knowledge Application Tool (QIKAT); and a 2 question open ended course evaluation (What are the strength and weaknesses of this course? Do you have any recommendations to improve this course?)

Results: 35 geriatric and palliative medicine fellows worked on 8 departmental quality initiatives. But during the pandemic surge, all projects were halted due to learner stress, redeployment and time management issues. Despite these significant barriers, 100% of QI teams submitted abstract proposals with 75% acceptance for national and regional presentations. 80% of fellows completed PRE and POST surveys. Post curriculum, 1st year fellows demonstrated improved comfort with utilizing the 4 QI concept/tools ($p<0.05$) and improved QI knowledge via QIKAT (PRE 20.7; POST 23 Paired t test $p < 0.01$). Course evaluations were positive with recommendations to include more protected work time with QI concept refreshers, education on data collection and analysis, stronger faculty facilitation, and advice to improve equitable group participation.

Conclusions: Even during a pandemic, a structured QI curriculum that employs a flipped classroom and engages fellows on prioritized departmental QI projects was proven an effective method for teaching quality improvement skills to fellows.

A156

Geriatrician Led Interdisciplinary Team to Improve Older Adults Hospital Care using The 4Ms Framework

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Background: Hospital care for older adults comes with risks of functional decline and iatrogenic complications [1]. Replicating positive results made with ACE (Acute Care of Elders) units seems challenging [2]. Our goal was to use the Age-Friendly Health System Framework (4Ms) [3] in a 10 bed unit without adding costs. We called it the Age Friendly Model (AFM). **Methods:** Retrospective study comparing subsequent admissions of persons ≥70 admitted to a Community Hospital under AFM vs usual care (UC) from March-December 2019. Primary outcome: 30-day readmission rate. Secondary outcomes: Length of stay (LOS), fall rate, discharge disposition and patient satisfaction. Psychiatric disease or needing a higher level of care were excluded from AFM. The Geriatric led team consisted of a Pharmacist, Occupational Therapist, Social Worker, Case Manager and Nurse. Censensus was the goal to generate a Geriatric Consult note within 24 hours except on weekends. Mobility, mentation, medications and what matters most to patient and family were clearly addressed. All patients were discussed during rounds with formal visits as needed. Hospitalist remained closely involved in the acute care of all subjects. **Results:** Of total of 1,799 subjects, 781 were under AFM care. Average age was 86 (AFM) vs 84. Population was predominantly white. The average LOS was 4.6 days for UC Vs 3.9. Rehabilitation discharges were higher under UC 20 % vs 15%, as well as 30-day readmission rates 16.2% vs 7.2%. No mortality in either group. **Conclusion:** The Geriatrician driven AFM unit seems to promote better outcomes in older adults admitted to the Hospital without increasing costs. This model of care will not be possible without full support from the Hospital Medicine team. Reference: 1 Fox MT, Persaud M, Maimets I, et al. Effectiveness of acute geriatric unit care using acute care for elders components: a systematic review and meta analysis. J Am Geriatr Soc. 2012;60(12):2237-2245. 2 Wald HL, Glasheen JJ, Guerrasio J, et al. Hospitalist Run Acute Care for Elderly. J. Hosp. Med 2011;6;313-321. 3 Pelton LJ, Fulmer T, Hendrich A, Mate K. Creating age-friendly health systems. Healthcare Executive. 2017 Nov;32(6):62-63.

A157

Getting to know our patients through the lens of Trauma Informed Care

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Background: It was not mandatory for Skilled Nursing Facilities (SNF) to screen patients for trauma before November 2019, when CMS initiated Trauma-Informed Care (TIC). With this requirement; however, CMS did not provide specific guidance for implementation. The purpose of TIC was to obtain traumatic experiences, identify approaches to manage reoccurrences of certain triggers, and to prevent re-traumatization thus providing a safer environment and more effective care. Here we communicate the accumulated experiences of the first-year implementation of TIC in one SNF.

Methods: Budd Terrace at Wesley Woods, a non-profit, 250 bed long-term care and SNF, providing short-term rehabilitation and long-term placement. Without implementation guidance for TIC, our Interdisciplinary Team (IDT) added TIC questionnaires in the Baseline Care Plan, which is within 48 hours of admission. The admission nurse developed a process to guide the collection upon admission including the creation of a system encompassing a 6-part approach emphasizing the sensitive nature of trauma - Trust, Readiness, safe Atmosphere, Understanding, Minimize exposure, and Accommodation

Results: We collected data from 473 new admissions from November 2019 to November 2020. Of these, 4.9% (n=23) reported experiencing trauma. Survivors ranged in age from 25 to 97 years old and reported a broad range of trauma experiences including: sexual assault (43%, all women); complicated grief (13%); COVID-19 (13%); combat-related PTSD (8.7%); intimate partner violence; racial discrimination; emotional abuse; other medical trauma; and accidents (all at 4.3%). The IDT was informed of the survivors' experiences. The social worker created a comprehensive person-centered care plan for the patient, addressing the trauma, goals, and interventions. Based on information gathered from this process we engaged in therapeutic approaches and take measures to prevent re-traumatization while in our care.

Conclusions: During this implementation and ongoing pandemic, we recognized the profound importance of TIC in the SNF setting. Our process enabled us to connect better with our patients as their own self, with their own distinct experiences and needs that are often overlooked in medical charts. It has equipped us with a unique and valuable lens to view our patients, through which we can strive to provide a holistic, personalized, and a compassionate based care.

A158

Robotic Technology During the COVID 19 Pandemic: Bridging a Gap In Healthcare at Nursing Homes

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Background

The COVID-19 pandemic presents significant challenges to face-to-face communication with residents in long-term care (LTC) settings. Telemedicine is an alternative, but facility staff may be over-burdened with the management of the equipment. We introduce the use of a mobile HIPPA compliant telepresence robot to help bridge this barrier. Clinicians can control the robot from any location and any device over Wi-Fi so facility staff do not need to transport the device to/ from resident rooms.

Methods

We deployed OhmniLabs Robot (purchased via Geriatric Workforce Enhancement Program COVID) in a stepwise fashion using rapid plan-do-study-act (PDSA) cycles. We piloted the robot in a single level 63-bed facility in August 2020. After a successful initial

pilot, the Geriatrics Division purchased two additional robots for use in other University affiliated nursing homes (both single level facilities ranging from 64-183 beds). A managing user sent other providers an access web-link for the robot. In January 2021, we sent a user survey based on the System Usability Scale (SUS) along with open-ended response options to obtain feedback on the user experience.

Results

14 people used the robot (2 medical directors; 3 physicians; 1 nurse practitioner; 2 geriatric fellows; 1 palliative care fellow; 1 facility staff member (MDS nurse); 2 hospice social workers and 1 hospice chaplain (via a single login); and 1 family member. 9 people had not accessed their robot web-link invitations. Of the 14 users, 8 responded to the survey. Most respondents found the robot easy to use (n=6) and were satisfied with the experience (n=6). The primary dislikes mentioned by respondents were issues with Wi-Fi connectivity and sound volume. One respondent reported the robot's presence was distressing to residents and too impersonal.

Conclusion

Robotic technology can improve LTC residents' access to care providers, especially during a pandemic. The issues with connectivity and volume can be addressed with add-on technology such as hot-spots and blue-tooth speakers. Robotic telemedicine cannot replace human interaction but is valuable when health care providers cannot be physically present. There is existing but limited literature regarding psychosocial/ethical implications of robotic telepresence in the LTC setting and this topic warrants future consideration.

A159 Student Presentation

Integration of a smart adherence device by older adults with chronic diseases - An ethnographic study

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Background:

Older adults with complex medication regimens often face challenges in medication management. Numerous smart products are being developed to assist with in-home medication-administration as well as provide real-time monitoring of medication intake. However, the integration of these products by older adults is not well investigated. The purpose of this study is to explore factors impacting the integration of a prototype smart multidose blister pack (SMBP) by older adults.

Methods:

A qualitative ethnographic study was conducted for eight weeks, where participants used the SMBP for their medication administration. Multiple methods were used to collect data including in-home observations, photo-elicitation, semi-structured interviews, field notes and the system usability scale (SUS). The interview guide was developed based on the Technology Acceptance Model, Theory of Planned Behaviour and Capability, Opportunity, Motivation, Behaviour Model. Themes and sub-themes were generated using the Qualitative Analysis Guide of Leuven framework.

Results:

Ten participants were recruited, of whom 80% were female and the average age was 76 years (range=57-88). The average number of medications used was 11.1 (range=5-20). Nine participants used a medication adherence aid prior to the study. Themes and sub-themes generated include medication intake related factors (sub-themes: health literacy, age-related changes, social support and mental and physical workload), and product use-related factors (sub-themes: device factors, technology factors, patient factors and integration factors). The average SUS score was 75.5 (range=37.5-92.5)

Conclusion:

Smart adherence products can help older adults manage their medications; however, ease of use, access to technology, product features, and cost should be considered. Additionally, health knowledge, feedback from others, the workload involved in managing medications, and age-related changes can impact medication intake behaviour. Clinicians should consider assessing patient and device-related factors prior to recommending adherence technologies as they may impact their use.

A160

Use of RTLS to obtain accurate estimates of individuals' movement in-hospital

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Background: Multiple RCTs and observation studies demonstrate that successful implementation of programs to promote early and progressive ambulation of older hospitalized patients helps to prevent deconditioning and functional decline and results in better clinical outcomes. However, efforts to change the culture of care within hospitals to place more emphasis on patient ambulation are hard to sustain. Contributing to the problem, obtaining consistently reliable measures of patient ambulation is difficult. Staff estimates are not easily verified, are often not recorded, and/or are inaccurate. The purpose of this project was to develop and test an automated system to measure the time and distance an individual ambulated while on a hospital ward.

Methods: A high-resolution real time locating system (hr-RTLS) was installed on one wing of the hospital. Project personnel wore RTLS tags while they moved (either walking, being pushed in or self-propelling a wheelchair) along predetermined paths within the wing. Multiple personnel conducted multiple segments of each movement type. The start & end time, distance traveled, and mode of movement were accurately measured for each segment. To determine the accuracy of the RTLS, the time and distance of each movement segment as determined by the RTLS was compared to the actual time and distance for the corresponding movement segment. Descriptive statistics were used to describe the results. The IRB gave a determination of non-research.

Results: RTLS estimates of the distance and time moving for each segment were generated by built in report and verified using interactive historical movement trail display. These distance and time estimates differed from the actual measurements by a median of -2.3 (IQR -5.9 to 0.0) percent and median of 1.7 (IQR 0.5 to 2.5) percent, respectively. Accuracy did not differ by movement type.

Conclusions: The hr-RTLS provided highly accurate estimates of the distance and time tagged individuals moved while in the hospital. However, RTLS could not differentiate ambulation from other types of movement.

A161

Temperature change following acetaminophen in nursing home residents with and without SARS-CoV-2 infection

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Background: Acetaminophen (APAP) is known to decrease temperature (T). At this time, it is unknown whether APAP affects T differently among those with or without SARS-CoV2 infection (SARS). We aimed to compare temperatures in nursing home residents after APAP in the setting of SARS.

Methods: The study was done in the Veterans Administration nursing homes (NH). Our sample includes residents tested for SARS. We created a subset of patients who have a pair of Ts before and after APAP administration, where the change in T for each pair is defined as ΔT. We only included residents who received APAP as needed for fever or those who had a fever of at least 38°C prior to APAP administration. We used SARS- patients as a control group.

Results: Of 11709 NH residents assessed for SARS between March and September of 2020, 1109 were SARS+. Out of 577,994 vital readings collected, we created 1,355 pairs of Ts, which belong to 708 residents.

Conclusion: A similar reduction in T by 2.27% in SARS+ and by 1.79% in SARS- febrile residents follows APAP administration. This difference was not statistically significant. Therefore, APAP appears to have a similar antipyretic effect in the setting of SARS. A limitation from this study is that the time of T collection and of APAP administration may differ from the time of documentation in the EMR, adding to underlying variance of our assessment. Future studies could use devices measuring continuous T data to further analyse antipyretic trends.

Pre-APAP T	<37.2		37.2-37.5		37.5-38		>38	
SARS status	+	-	+	-	+	-	+	-
N	144	58	130	91	222	111	339	118
Mean ΔT (SD) %	1.55 (2.08)	1.79 (2.17)	-.08 (1.53)	-.29 (1.36)	-.048 (1.79)	-.064 (1.58)	-2.27 (2.36)	-1.79 (2.24)
P-value (95% CI)*	.51 (-.009,.004)		.52 (-.004,.005)		.58 (-.004,.007)		.06 (-.010,.0002)	

***Simple 2-sided z-tests on the mean % change in T**

A162

Sitter Reduction intervention during COVID-19 Pandemic. A Virtual interdisciplinary approach in a large tertiary medical center

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Background:

Caring for hospitalized older adults with dementia, with or without behavioral and psychological symptoms, can be challenging. Sitters are frequently assigned to these patients to prevent behaviors deemed unsafe.

Methods:

Patients 65 and older admitted to our hospital and who have a sitter ordered were included. This QIP evaluated the prompt identification of geriatrics syndromes with the intent to assist nursing staff in deploying delirium prevention strategies and acute care for elders principles virtually.

The geriatric nurse practitioner communicated to nursing staff via secure chat strategies to address specific risks such as elimination issues, sleep/wake cycle disturbances, mobility, nutrition, and high risk medications. GNP also requested a delirium care plan if appropriate, and if the patient was clinically complex or was beyond the expertise of the geriatric nurse practitioner, a geriatric consultation was suggested.

Results:

139 patients' charts were reviewed by the GNP between April-October 2020. 63 patients received no intervention, either because specific risks were appropriately addressed by nursing staff or the complexity of the medical problems was beyond this virtual intervention.

76 patients received an intervention generated by the geriatric nurse practitioner and communicated to nursing staff via secure chat. The most common recommendation addressed was elimination issues (urinary retention/constipation) 55/72%, followed by identification of high-risk medication 41/54%, strategies to improve sleep/wake cycle disturbances 32/42%, and deployment of delirium risk care plan 31/41%. Interventions that addressed mobility issues and encouraged mobility were suggested in 25 patients (33%). Nutrition and hydration interventions were suggested to nursing staff in 13 patients (17%).

ACE Consultation was deemed necessary in 35 patients (46%). The most common geriatric syndrome diagnosed was Delirium in 26 patients/71%, and the second most common syndrome was Cognitive Impairment in 11 patients/31%.

Conclusions:

ACE and HELP programs can be adapted for virtual deployment, allowing for collaboration with nursing staff and dissemination of strategies to address specific patient risks and to prevent adverse consequences in hospitalized older adults. The effect of this intervention on sitter reduction deserves further study.

A163

Healthcare Cost Reduction Using an Age Friendly Health System 4M Framework Model

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Background

Models of care in geriatric medicine have had several challenges in demonstrating return on investment and financial value, based on traditionally used risk stratification scores in healthcare systems across the US. We utilized a risk stratification tool demonstrating length of stay (LOS) and financial impact of care modeled on the 4M framework (Mentation, Mobility, Medications and What Matters) of Age Friendly Health Systems (AFHS) Initiative as compared to the usual model (UM) of palliative care primarily focused on patient centered goals of care.

Methods

The study included a retrospective analysis of 392 hospitalized adults older than 60 years with a Severity of Illness of Extreme (as defined by 3M APR DRG Classification System) managed by geriatricians and palliative care physicians at a large academic healthcare system between July to December 2020. Patients were classified into 3 levels of risk: low (LR), moderate (MR) and high (HR) based on case manager assessment of discharge needs determined by age, home medications, previous admissions and living situation. Association of these risk categories with LOS and cost of care (COC) was evaluated.

Results

Of the 392 patients reviewed, 125 (32%) were classified as LR, 150 (38%) as MR and 117 (30%) as HR. The median age of the cohort was 74 years (IQR 65-83 years). 93 (24%) patients were managed under the 4M framework and 299 (76%) were managed with UM. Patients in 4M care had lower LOS (14 Days) as compared to UM (18 Days) (P=0.014). 4M care also had lower COC per patient as compared to UM ($41,855 vs $74,855) (P<0.0001). Similar trends were observed across all risk categories. In the LR category, LOS and COC was lower for 4M care as compared to UM care (14 vs 20 Days; $43,358 vs $90,854). In the MR category, LOS and COC was lower for 4M care compared to UM care (15 vs 17 Days; $40,127 vs $69,430). In the HR category, LOS and COC was lower for 4M care compared to UM care (14 vs 16 Days; $42,361 vs $64,436).

Conclusion

Our risk stratification system demonstrates that the 4M model of age friendly care compared to usual model of palliative care focused primarily on goals of care shows improvement in LOS and substantial cost savings. Further studies are needed to check the impact of this risk tool in measuring health outcomes and financial value of the 4M framework in Age Friendly Health Systems.

A164

Effectiveness of Nurse-Led Multidisciplinary Intervention vs Usual Care on Advance Care Planning for Multimorbid Older Adults with Cognitive Impairment

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Background: Persons living with mild cognitive impairment or dementia are at high risk for poor outcomes with respect to disability, mortality, and poor concordance with end-of-life care wishes. While advance care planning (ACP) discussions can help facilitate goal-concordant care, such discussions are under-utilized and not consistently documented, particularly as part of outpatient primary care.

Objective: To determine whether a nurse navigator led ACP pathway improves ACP discussions and documentation within the electronic health record (EHR) among multimorbid older adults with cognitive impairment.

Design: Subgroup analysis of a randomized effectiveness trial using Zelen's design, in which participants are randomized prior to informed consent. Participants from 8 primary care practices within an affiliated accountable care organization, aged 65 years or older, who had multimorbidity and documented diagnosis of cognitive impairment were identified using the EHR. Eligible patients were randomized to either a nurse navigator led ACP pathway (n=91) or usual care (n=76). The primary outcome was documentation of ACP discussions within the EHR. Secondary outcomes included a broad range of ACP actions (e.g. usage of ACP billing codes, choosing a surrogate decision maker, and advance directive documentation).

Results: Among 167 patients randomized (mean age 78.8 years, 96 women [57.5%]), the rate of EHR ACP documentation was 41.8% in the nurse navigator ACP pathway group, as compared to 1.3% in the usual care group ($p<0.001$). There was also higher documentation of a medical decision maker (64.8% vs 30.3%, $p<0.001$), higher use of ACP billing codes (25.3% vs 0.0%, $p<0.001$) along with higher completion of ACP legal forms (30.8% vs 17.1%, $p<0.04$).

Conclusion: A nurse navigator led ACP pathway integrated with a provider facing EHR interface increased the frequency of ACP discussions and their documentation among multimorbid older adults with cognitive impairment. Additional follow-up is ongoing to evaluate whether increased EHR documentation leads to improvements in goal-concordant care.

A165

Improving Quality Patient Care: A Team Approach

J. Freimund. *Internal Medicine, Geriatrics, Yale University School of Medicine, New Haven, CT.*

Evaluating patients in a timely manner in the outpatient Geriatric fellow consult clinic setting is crucial. The clinic received feedback that visits were too long causing patients to miss other appointments. Additionally, some patients became lost finding their cars in the dark. The objective of this work was to decrease total new Geriatric fellow clinic time to 60 minutes and follow-up clinic time to 30 minutes. Discrete times were measured including arrival time to clinic, time in the room, time when fellow spoke with attending, and time of total visit. Data regarding barriers to shorter visits was analyzed. The team used strategies including a team huddle with the receptionist, nurse, and medical assistant before and after clinic, having the nurse to call patients before the visits to review medication reconciliation, and use of time tracker sheets. Additional strategies were a notification system for when the patient was checked in and vitals were complete, use of Skype to notify the fellow when the patient was in the room, and a huddle with the attending prior to the visit. Quality Improvement tools used included a Plan-Do-Study-Act (PDSA) process, a Pareto chart, and a Run chart. Due to COVID-19 restructuring the clinic, only 7 weeks of data were collected. However, average new clinic visits were reduced to 88 minutes from 100 minutes, and follow-up clinic visits reduced to an average of 45 minutes. A long Geriatric fellow clinic time was improved with team effort and communication.

A166 Encore Presentation

In Beers We Trust: Use of Deprescribing Tools to Reduce Inappropriate Polypharmacy in Older Adults

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Background: Adverse drug events (ADEs) are a significant cause of morbidity and mortality in older adults (age ≥ 65). Polypharmacy and potentially inappropriate medications (PIMs) are a notable contributing factor to this risk and are likewise especially prevalent in the older adult population. Research demonstrates that comprehensive medication reconciliation—to include the assessment of a medication's risks and/or benefits—in conjunction with deprescribing practices, can reduce PIMs; therefore, reducing adverse drug events.

Methods: A detailed, educational program that incorporated evidence-based resources on the American Geriatrics Society (AGS) 2019 Beers Criteria®, PIMs, and the practice of deprescribing was introduced to 88 clinicians in a large academic, urban-based general internal medicine primary care clinic by using a multi-modal approach. Data was collected through a pre-post intervention survey to assess provider knowledge, prescribing practices, and self-efficacy in deprescribing. A retrospective medication chart review then assessed actual trends of prescribed PIMs in the aforementioned clinic.

Results: The 34 clinicians who completed each survey demonstrated an overall increased knowledge of AGS Beers Criteria® medications and reported a greater frequency in medication reconciliation performance. Notably, a paired t-test was performed to measure 13 providers' reported self-efficacy deprescribing; each individual's response improved post-intervention.

Conclusion: Proper medication safety standards in older adults is a complex issue that requires significant instruction in order for clinicians to adopt prudent and informed prescribing standards. It is for this reason ongoing education and evaluation are recommended.

Deprescribing Self-Efficacy Score Results (N=13)

For a patient 65 years of age or older, I am able to deprescribe a medication:	Pre (Mean, SD)	Post (Mean, SD)	Effect Size (d)
1. When I am concerned about adverse drug withdrawal events	(65.69, 23.12)	(74.92, 22.45)	.4
2. When I am concerned about exacerbations of the underlying condition the drug is being used to treat	(62.23, 22.36)	(70.69, 19.55)	.2
3. When disease-specific clinical guidelines recommend the use of a medication	(53.38, 23.96)	(63.62, 21.03)	.4
4. When the medication is coupled to performance indicators	(53.23, 24.17)	(62.08, 18.32)	.4
5. When I receive little support from colleagues for stopping or reducing medications	(47.92, 22.04)	(60.08, 17.11)	.9**
6. When I have too much work to do	(49.08, 28.04)	(60.00, 19.72)	.3
7. When I am concerned about damage to my provider-patient relationship	(52.92, 22.50)	(61.78, 17.83)	.4
8. When the patient is resistant to change	(46.08, 18.09)	(66.23, 11.20)	1.0**
9. When the patient's family/ caregivers are resistant to change	(47.69, 17.75)	(64.69, 12.84)	.8**
10. When there is no literature describing the effects of medication tapering or discontinuation	(48.31, 21.48)	(48.85, 16.96)	0
11. When there is no guidance on how to taper or stop a medication	(47.08, 22.70)	(52.54, 16.72)	.3
12. When I am not the original prescriber of the medication	(51.38, 21.07)	(58.46, 24.98)	.5†
13. When the medication was prescribed by a specialist	(40.23, 22.54)	(49.38, 19.05)	.4
14. When I am unsure why the medication was started originally	(46.54, 19.46)	(57.08, 16.96)	.6†
15. When the medication is being used to treat an adverse effect of another medication	(58.31, 25.14)	(59.00, 24.67)	.0
Overall Self-Efficacy Mean	Pre: 51.34	Post: 60.63	

*p ≤ .10, †p<.05, **p<.01, ***p<.001

A167

Validation of the Medication Review in Cognitive Impairment and Dementia Checklist (MedRevCiD): A Delphi Consensus

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Background:

Persons with cognitive impairment are more likely to encounter a multitude of drug related problems. Clinicians do not have standardized, validated tools to comprehensively assess medication-related problems in this population. To address this gap, the MedRevCiD was developed by two clinicians and modified by a panel of researchers with expertise in geriatrics, pharmacy and family medicine. It contained 7 domains: "Medication Management and Adherence", "Drug Induced Cognitive Impairment or Worsening", "Reversible Causes of Cognitive Impairment and Dementia", "Identifying and Managing Vascular Risk Factors", "Treatment Options for Dementia", "Behavioral and Psychological Symptoms of Dementia" and "Optimizing Medication Use". The purpose of this study was to complete face validation of the MedRevCiD, a checklist for conducting medication reviews in persons with cognitive impairment.

Methods:

A modified two-round Delphi technique was used to validate the content of the MedRevCiD. In each round, participants, with at least 5 years of expertise in the care of older adults, were invited to rate the importance of items on a Likert scale from 1 *(not important)* to 4 *(very important)* and provide feedback on each item. A pre-determined threshold of 70% was set for agreement to retain or remove an item.

Results:

Twelve pharmacists and 4 physicians were recruited (mean age: 50 years (range=36-69); mean number of years of practice with persons with cognitive impairment: 16.8 (range=6-37)). In round 1, 26 of the 90 items achieved consensus, 5 did not, 59 were edited and 2 new items were added. In the second round, 59 of the 61 items reached consensus, 3 did not; of these, 2 were minimally adjusted and 1 was eliminated. Two domains were merged to create "Conditions Associated with Cognitive Impairment and Dementia". The final tool contains 86 items in 6 domains.

Conclusions:

The MedRevCiD was validated for content and will be tested for feasibility in future studies.

A168

Bringing memory clinic to a Federally Qualified Health Center (FQHC)

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5.5 million Americans have dementia, a growing number as the population ages. The wait time for specialist referral averages in months which adds to the societal, economic, and caregiver impact. A portion of this impact can be mitigated by early identification of neurocognitive deficits in the primary care setting. We established a weekly cognitive assessment clinic at our FQHC led by 2 geriatricians. The clinic caters to patients aged 55 years and above (36% of IM/FM patients) with a special focus on the immigrant population and those with language or other social barriers in order to improve access to dementia care for underserved patients.

Phase I of the setup was planning and training requiring 5 hours (1 session) per week for 3 months (Oct-Dec 2020). We shadowed at an academic memory clinic to learn about the workflow and memory testing tools. We established a liaison with the Alzheimer's Association. We trained 2 medical assistants, 2 Vietnamese interpreters, and 1 Spanish interpreter. The providers and interpreters acquired MOCA certification. A registry created using pertinent ICD10 codes was shared with colleagues for referrals. Phase II: implementation (Jan 2021-Aug 2021) was modified in light of the Covid-19 pandemic. The memory clinic format consists of 2-3 visits; a telemedicine visit for history, an office visit for in-person memory testing and physical exam, and a 3rd visit to discuss results and treatment plan if warranted. The memory clinic is set up with 1 session per week alternating between two providers. There are six 30-minutes appointments per session.

Phase I and the MOCA certification was the primary cost of setting up the clinic funded by the Massachusetts League of Community Health Centers. 76 patients (48 females and 28 males) were selected from 256 patients in the primary registry. Among them, 70% were non-English speaking (42 Vietnamese, 6 Spanish, 6 other). Most patients had income status below 200% of the federal poverty level and many were immigrants.

We were able to recruit more vulnerable and non-English speaking patients for our clinic. Certified interpreters can administer memory testing in patients' preferred language to better support our immigrant population. Our clinic improves access to dementia care and reduces long referral times. As an FQHC, there is no substantial difference between reimbursement rates for higher complexity codes, and seeing 6 patients per session may decrease revenue which can be a limitation of this clinic.

A169

Effect of Daylight-Saving Time on falls in the elderly: Every hours counts

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Background: Falls are multifactorial events that occur frequently in the elderly. Correctly identifying the factors contributing to falls helps guide preventive measures and interventions, to avoid injury, disability, and death. One such contributing factor is daylight saving time (DST). DST changes result in a shift in the circadian rhythm that leads to sleep deprivation, decreased alertness, and increased accidents. This is especially true of nursing home residents who must conform to fixed schedules resulting in decreased adaptability to DST changes.

In a prior study, we had looked retrospectively at falls in a nursing home with respect to time of day, day of the week, daylight saving time, and got mixed results. For that reason, we analyzed the incidence of falls at different time points before and after clock changes.

Methods: We studied the incident reports of a single nursing home facility in Pittsburgh, Pennsylvania by reviewing its fall registry. We evaluated the number of falls as weekly number of events and compared the number of falls in one, two- and four-week interval periods before and after clock changes from January 2019 to December 2020. Spring and fall transitions were calculated separately and combined over 3 interval periods- 1 week, 2 weeks, and 4 weeks prior and after DST changes.

Results: A total of 418 falls were documented in 2019 (251) and 2020 (167). We found that there was a statistically significant increase in the number of falls only at one time point- 1 week after DST transition (n =11) compared to 1 week before transition (n=1) in spring 2020 (p= 0.003). There was no statistically significant difference 2 weeks before a DST transition (n=38) when compared to falls 2 weeks after DST transition (n=40) (p=0.81) in both years collectively. Similar results were seen at 4 weeks before a DST transition (n=66) when compared to falls 4 weeks after DST transition (n=59) (p=0.48). Additionally, there was no statistically significant difference when events were compared and analyzed in the spring and fall separately.

Conclusion: DST changes adversely affect sleep in older adults and increase the number of falls. From our data, these falls increase in the first week following DST transition in the spring. This ongoing study increases the scope of targeted interventions to decrease falls 1 week after DST changes.

A170

Multi-targeted Approach to Improving Transfers to a Community Nursing Facility

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Background: Errors in transition of care are common and can result in adverse events, near misses, and re-hospitalizations. An inter-facility transfer order (IFTO) from inpatient discharge serves as an admission order for skilled nursing facilities (SNF). The objective of this Quality improvement (QI) project is to improve the IFTO by targeting all pre-identified stakeholders responsible from inpatient discharge to SNF admission.

Methods: IFTOs from two major university medical centers in Los Angeles and Santa Monica, California to a community SNF between 9/1/2020 to 11/30/2020 in pre-intervention and 2/1/2021 to 4/30/2021 in post-intervention phase will be evaluated for transition of care errors. Multi-target intervention includes education for healthcare providers and care-coordinators regarding transfer errors and working with Electronic Health Record to improve error identification. Descriptive statistics, 2-sample t-test, and paired t-test will be performed.

Results: There were 73 admissions to the community SNF from two medical centers in pre-intervention phase. Majority were females (67.12%) and >65 years age (91.78%). 3 patients were discharged by ER, 11 by surgical specialties, and 59 by medicine or its subspecialties, including 23 by geriatric medicine service. 8 patients (10.99%) did not have an IFTO and there were >50% deficiencies in each 7 out of 22 parameters evaluated. 2-sample t-test from pre-intervention phase showed statistically significant difference in errors between hospital discharges from the geriatric (M=2.96, SD=1.33) and non-geriatric services (M=5.26, SD=1.94) with $t(63) = -5.08$, $p < 0.001$. Results of the same statistics in post-intervention phase, including paired t-test comparing pre- and post-intervention phase, will be discussed.

Conclusions: There are significant deficiencies in care transitions from inpatient discharges to SNF. The lower IFTO deficiencies by the geriatric medicine service vs. other specialities can be attributed to the use of a discharge checklist and IFTO reviewed by the nurse practitioner (NP). Recommendations supporting education of house-staff/residents about IFTOs during inpatient service rotation orientation, a policy change to use NPs or other ancillary staff as SNF discharge navigators, and further QI initiatives at resident and nursing levels will be discussed.

A171

Artificial Intelligence to Stratify Risk Factors in Older Patients with COVID-19

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Background: Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2), a novel virus that causes Coronavirus disease (COVID-19) infection, has recently emerged, and caused a deadly pandemic. Studies have shown that this virus causes worse outcomes and a higher mortality rate in older adults. To combat this pandemic, both health-care providers and governments around the world have been forced to accelerate the development of artificial intelligence (AI) tools and scale up their use in medicine. **Objective:** We aim to identify the impact of common co-morbidities in elderly patients with COVID-19 utilizing artificial intelligence software in predicting hospital length of stay, ICU admission, and death. **Methods:** A retrospective cohort study, where data of 439 patients with laboratory confirmed COVID-19 test who were admitted to Sparrow hospital in Lansing, MI between March 2020 - October 2020, was collected. Inclusion Criteria: 60 years or more with one or more of the following conditions: Diabetes (DM), Obesity, chronic kidney disease (CKD), Vitamin D deficiency, and shock. **Results:** Outcomes measures included admission to ICU, hospital length of stay and death. Predictors included patient demographics such as age, gender, multiple co-morbidities, and laboratory results. Multivariable logistic regression has been used to identify risk factors for adverse outcomes and competing risk survival analysis for mortality. **Conclusion:** Covid-19 patients age over 60 with co-morbidities such as DM, Obesity, CKD, and shock are at a greater risk of hospital admissions, prolonged hospital-stay, admission to the ICU and mortality. A significant percentage of older American adults have these diseases, putting them at a higher risk of infection. We propose the use of AI in older patients with COVID 19 infection to stratify common risk factors. By using big datasets, we hope AI will help in using available resources effectively during this pandemic. Other data will be presented.

A172

Optimizing Hypertension Management in an Academic Hospital-Based Geriatric Clinic

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Background: Hypertension (HTN) is more prevalent and challenging to control among geriatric patients. As per our healthcare system's Primary Care Institute (PCI) guidelines, the HTN management goal is blood pressure (BP) of <140/90 mmHg in at least 75% of a geriatric clinic's population. Our primary objective was to identify factors associated with poorly controlled BP in order to meet our institution's PCI benchmark.

Methods: A retrospective chart review was performed for patients aged 65-85 years seen from 1/1/2020-present at a large, urban, academic hospital-based geriatric clinic. Of these patients, 91 had uncontrolled hypertension (systolic BP >160 mmHg), of which 41 were randomly selected for review to identify comorbidities, number of anti-hypertensive agents, presence of social support, type of initial visit (clinic or televisit) and BP outcomes. We then compared patients between 2 groups - those who achieved BP control (<140/90 mmHg) and those who did not achieve BP control on ≥2 subsequent visits.

Results: In our patient cohort, mean (+/- SD) age was 79.1 +/- 4.4 years, 73% were women, 31.7% were White, 19.5% were Hispanics and 17% were African-American. All 41 patients were ambulatory, 85.4% had hyperlipidemia, 46.3% had diabetes, 26.8% had coronary artery disease, 24.4% had chronic kidney disease and 19.5% had dementia. Polypharmacy (> 5 medications) was present in 78.1% of patients and 87.8% were already on antihypertensives. Hypertension persisted in 58.5% (24/41) of patients while 41.5% (17/41) achieved BP control. In the persistently elevated BP group, mean age was 78.6 +/- 4.6 years, 83.3% were women, 45.8% were seen during the COVID pandemic, 45.8% had social support and 33.3% were seen initially via televisit. In the controlled BP group, mean age was 79.8 +/- 4.2 years, 58.8% were women, 47.1% were seen during the COVID pandemic, 64.7% had social support and 11.8% were first seen via televisit.

Conclusions: The characteristics of our cohort are similar in terms of comorbidities irrespective of whether target BP was achieved during follow-up. An inverse association may exist between hard-to-control HTN and social support and televisits, which may reflect challenges in medication adherence. An interdisciplinary team focused on patient education, social support and closer follow-up may help achieve BP control in such cases.

A173 Encore Presentation

Implementation of an Opioid and Benzodiazepine Deprescribing Program for Older Adults in an Outpatient Setting

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Background: In the US, falls in adults 65 and older result in 2.8 million injuries and 800,000 hospitalizations at a cost of $50 billion each year. Chronic use of opioid and/or benzodiazepine (BZD) medications increases the risk of falls and related injuries in this population.

Methods: The primary aim of this ongoing Centers for Disease Control and Prevention (CDC)-funded randomized control trial is to use electronic health record (EHR) data to identify older adult patients in primary care practices at risk for falls due to chronic opioid or BZD use. Licensed clinical pharmacists review patients' medical records weekly and make recommendations through the EHR to primary care providers for opioid or BZD dose adjustments, alternate medications, and/or adjunctive therapies. Intervention clinics also receive access to a web-based deprescribing toolkit (A-TAPER website) and coaching sessions. The efficacy of a targeted consultant pharmacist service and resources to reduce the dose burden of these medications will be evaluated. Outcome measures include reduction or discontinuation of opioids and BZDs and falls risk reduction as measured by the Stop Elderly Accidents, Death and Injuries (STEADI) Questionnaire. Primary care provider adoption of pharmacists' recommendations and satisfaction with the consult service will also be reported.

Results: The 12 month intervention has been rolled out in 4 phases to primary care clinics in North Carolina: phase 1 (June 2020), phase 2 (September 2020), phase 3 (January 2021) and phase 4 (February 2021). To date there are 8 intervention clinics, including 38 providers and 1694 patients. Thus far, 516 unique patients have been seen and pharmacist recommendations have been completed for 813. To date there are 7 control clinics receiving usual care, including 50 providers and 1664 patients. Data on BZD and opioid prescribing changes, falls risk reduction, and incorporation of pharmacist recommendations is pending.

Conclusions: Use of a deprescribing algorithm and targeted consultant pharmacist review to facilitate deprescribing of BZD and opioids in older adults, is successfully being implemented in intervention clinics. The efficacy of the intervention and impact on falls will be assessed as the trial continues.

A174

Cardiovascular Risk Factors in COVID-19 and Artificial Intelligence – An innovative Approach to Current Pandemic.

S. Dey, M. Ombada, A. Mohamed, K. Osman, K. Abdelgadir, O. Amir, A. Abu Bakr, L. Dahab, R. Mohamed, T. Obeid, R. Lungba, W. Alsafi, M. Salih, O. Hamid, M. Ahmed, N. Abdelrahman. *Department of Family Medicine, Michigan State University College of Human Medicine, East Lansing, MI.*

Background: Coronavirus 2019 (COVID-19), also known as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), infection is a pandemic that causes acute respiratory injury, hospital admission and death. Older adults are at a higher risk of serious illness and death from this pandemic. Many COVID-19 patients have a pre-existing cardiovascular disease (CVD). We aim to develop a risk factor stratification tool, using Artificial Intelligence (AI) method, to predict mortality, ICU admission, and length of hospital stay, in patients with CVD during this pandemic. **Methods:** This is a retrospective cohort study. An IRB approval was obtained. Patients with confirmed (SARS-Cov-2) test, age more than 60 and older, who were admitted to the Sparrow hospital between March 2020 and October 2020 were included. CV risk factors including Hypertension (HTN), Chronic Ischemic Heart Disease (CHD), Heart Failure (HF), and Cardiac Arrhythmia (CA) were used. R**esults:** Of the 426 patients with COVID-19(mean age:74.5 years), at least 1 CVD was identified in most patients. HTN being the most common (55%), followed by CHD (22%), HF (20%) and CA (3%). Multivariable logistic regression has been conducted to identify risk factors for adverse outcomes and competing risk survival analysis for mortality. Outcomes measures included hospital stay > 7 days, ICU admission, and death. **Discussion:** Our data suggests patients with HTN required longer hospital stay, had higher ICU admissions and death rate. **Conclusion:** CV risk factors are common in older adults. HTN is the commonest CVD in this population. Several CV risk factors may contribute to the severity of COVID19 and its impact on older adults. Our study suggests that CV risk factors including HTN, HF, CHD, and CA have major impact on COVID-19 infection in hospitalized geriatric populations - see graph 1. Patients with HTN, had longer hospital stay, ICU admission, and mortality. Based on this work, we suggest that a large data sample might be required to develop an AI software that can help predict outcomes and the need for certain resources for older patients.

A175

Preoperative Cognitive Impairment Increases Odds of Postoperative Delirium Events

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Background: Postoperative delirium (POD) is the most common postoperative complication in older adults. Delirium has been shown to increase length of stay, mortality risk, and healthcare cost. Keck Medical Center of USC established routine preoperative cognitive screening with MiniCog to identify at risk patients. Those with an abnormal screen were referred to an interprofessional virtual assessment with a geriatrician and pharmacist prior to surgery for risk mitigation.

Methods: The Keck Brain Health interprofessional team conducted a retrospective chart review of a sample of elective, surgical patients aged 65 or older who were screened with MiniCog preoperatively between January 2019 through March 2020. We noted preoperative cognitive diagnoses, postoperative complications, delirium diagnoses, and surrogates up to 7 days post-surgery. Delirium surrogates included abnormal brief Confusion Assessment Method (bCAM), mental status changes, inappropriate removal of tethers, restraint orders, and administration of anti-psychotic medications.

Results: Among the 99 patients in this review, 37.3% screened positive for preoperative cognitive impairment There was no difference in the presence of preoperative cognitive diagnoses or postoperative complications rates in those screened. No patients had documentation of a diagnosis of POD. However, 40.6% of patients with an abnormal screen had a delirium surrogate compared to 17.5 % of patients with a normal screen. The odds of a POD event within 7 days in patients with an abnormal MiniCog was 3.2 times that of patients with a normal MiniCog (p=0.02). After controlling for age and sex, the odds remained high at 2.8 times (p=0.04).

Conclusions: POD is often underrecognized and insufficiently documented. Our preliminary data suggests that screening for preoperative cognitive impairment can identify those at increased risk of POD. We hypothesize that preoperative education and risk mitigation, as well as, documentation of risk to the inpatient perioperative care team to guide clinical decisions and resource allocation will reduce the incidence of POD in high risk patients. We anticipate additional patients this spring and a larger sample of results including the intervention group will be presented.

A176

Improving Advance Care Planning in an Age Friendly Health System.

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Background: Advanced Care Planning (ACP) is a complicated process that allows patients to make decisions about their future medical care that are consistent with their values. Documentation of patient's values should be done routinely and revised with change in the medical condition, this allows for their voice to be heard when they are no longer able to choose. We recently instituted addressing elements known as 4Ms (What matters, medication, mentation, and mobility) into our daily clinic flow as part of our certification to become an Age Friendly Health System[1]. This clinic-based QI project aims to assess the effect of the 4Ms process on ACP completion.

Methods: We used a retrospective chart review and an electronic health record (EHR) generated report that compared patients seen in our office in 2 six-month periods; before (Jan-Jun, 2020) and after (Jul -Dec, 2020) instituting 4M care into our practice to assess its effects on our ACP completion rate. This QI project was conducted at our Geriatric Care Clinic, an outpatient clinic with a multidisciplinary team including physicians, pharmacists, nurses, and medical assistants. Our clinic used a checklist form as part of the rooming process that included all elements of the 4Ms. This project looked at the effect of addressing what matters most on ACP completion and documentation rates. We reviewed ACP documentation in the EHR that includes: Living Will, Advance Directive, Power of Attorney, Five Wishes, to populate a completion rate.

Results: We anticipate an increase in our ACP completion rate.

Conclusions: We anticipate that there should be an improvement in our ACP completion rates after instituting 4M screening procedures. We recognize that our results may be complicated by changes in ACP discussion practices as they relate to differences in care during the COVID-19 pandemic. instituting 4M screening practices may be a useful process to improve ACP discussion and documentation.

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A177

Improving Geriatric Trauma Care by Identification of Potentially Inappropriate Medications to Reduce Adverse Drug Events

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Background: Adverse drug events (ADEs) are common in older adults. Use of the Beers criteria in evaluating prescribing patterns has become widely used as a measure of quality of care for older adults. The aim of this QI project is to: 1) assess for correlation between polypharmacy (medications on admission) and risk of falls, readmission, ED visits, mortality and discharge to skilled nursing facilities (SNF), and 2) identify the most commonly associated medications with the above-mentioned adverse outcomes.

Methods

Adults of age 65 years and above admitted under the trauma service at Stanford Hospital were included in our analysis. With chart review, we screened for potentially inappropriate medications (PIMs) (according to 2019 Beers criteria) on admission and discharge and analyzed discharge destinations, readmissions, ED visits, and mortality.

Results

We reviewed 98 patients admitted between June 1, and Aug 31, 2020. The average number of medications in our studied cohort was 6.54 (minimum 0, to maximum 21) ± 8.75 and with 16% of the patients taking 1 or more PIMs which included analgesics, Z-drugs, and benzodiazepines and tricyclic antidepressants. Patients taking PIMs had an greater average number of medications (10.7 vs. 5.7), and 80% of patients (12 of 16) were admitted for fall- related injuries (ground level (GLF) and other falls), as compared to 58% (49 of 82) in patients who were not taking PIMs at baseline. 13 patients had ED visits of which 11 resulted in readmissions. 1 of 16 (6.25%) patient who was prescribed a PIM at baseline died. 1 patient was started on a PIM (tramadol) inpatient and sustained a GLF. In 3 patients, PIMs were discontinued upon discharge. Discharges to skilled nursing facilities (SNF) were nearly double (40%) in the PIMs group compared to those who were not on PIMs (19%).

Conclusions

In our geriatric trauma patient cohort, we found that patients on PIMs were on greater number of medications on average, and were most commonly admitted for GLF, and were more likely to be discharged to SNFs. Given this preliminary result, pharmacy-driven interventions including discharge medication review and post-discharge follow-up may be beneficial in the high-risk cohorts to help prevent future ADEs including recurrent falls.

A178

Creation of a Diversity, Equity, and Inclusion Initiative to Address Systemic Racism

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Background: Catalyzed by the horrific death of George Floyd, a Black man, significant concrete efforts to engage workplaces in Diversity, Equity, & Inclusion (DEI) initiatives has gained prominence and administrative backing among workplaces in the United States.

A diverse academic geriatrics & palliative medicine department in New York City began meeting weekly in Town Hall sessions to debrief & discuss workplace, local, & national concerns. Discussions focused on COVID19, the Black Lives Matter movement, structural racism, & patient care inequities. These events ignited greater DEI initiatives to meet departmental needs.

This report serves to highlight key program components & lessons learned in launching a structured DEI initiative in the academic medicine setting.

Methods: First, a new DEI core & department administration met 2-4 times/month to plan & review DEI program activities, vision, & mission. Confidential roundtable discussions about DEI issues & 1:1 interviews were conducted to assess needs. A monthly Humanities, Arts, & Books (HAB) Initiative provided a safe space for discussion & l earning. The HAB platform supported a longitudinal curriculum emphasizing (1) group discussion & self-reflection on DEI topics, (2) knowledge dissemination including a "Learning Pathway" series, & (3) skill-based workshops. With each event, we collected anonymous feedback via survey. Comments were systematically recorded & engagement evaluation was conducted in order to iteratively shape future sessions. Departmental administration was engaged to track

DEI-focused measures of recruitment, career advancement, & retention. Finally, we centralized DEI activities on a departmental website, including an anonymous online feedback box.

Results: Quantitative & qualitative assessment of DEI initiatives are forthcoming. Metrics include DEI & professional development surveys, departmental demographic & diversity measures, increase in DEI-related projects and grants, & individual participation DEI programs.

Conclusions: Creating a strong and sustainable DEI initiative within an academic medical setting requires a passionate and diverse core to centralize efforts, deliberate backing by administration, & thoughtful dissemination of sensitive content in the midst of a highly charged social justice landscape.

A179

Comparing goal attainment scaling versus PROMs for measuring patient goals

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Background: Patient-reported outcome measures (PROM) and goal attainment scaling (GAS) are both ways to set and monitor patient goals. To date, no studies have compared use of the two methods in clinical care nor understood why clinicians select one method over the other.

Methods: Three-site implementation study using PROMs and GAS to measure achievement of individually identified goals. Clinicians entered goal data in a tablet-based application. After identifying a goal, the clinician and patient could either select a PROM to measure progress, or use GAS, a structured approach for setting outcomes along a 5-point scale from "better than expected" to "worse than expected". We present data for each site on approach used. We also report on semi-structured interviews with 15 of the 18 participating clinicians. We coded interview transcripts using an existing coding scheme that was updated throughout the analysis.

Results: One site with two clinicians used GAS only; a second (11 clinicians) used PROMs with 68.6 percent of patients, and the third (5 clinicians), 74.7 percent. Of the 15 clinicians interviewed, nine had used both methods, four used only PROMs, and two used only GAS. Clinicians who used only GAS noted issues with using the tablet, which was required to administer the PROMs. Clinicians reported that PROMs were short, familiar, and easy to understand, and facilitated in sites where existing workflows supported PROMs. Clinicians described GAS as a helpful visual aid that was more flexible and a less intimidating way for patients to track and celebrate progress on their goal. However, clinicians felt GAS presented challenges for patients and themselves, particularly with the "What would be worse than where you are now?" required field of the tool. Clinicians described PROMs as easier to use for complex patients because the structured items were simpler and faster to administer and GAS as better with less medically complex patients who were "extremely engaged" in their care.

Conclusions: While PROMs and GAS each had merit, clinicians selected a goal-setting approach based existing site workflows, clinician preferences, and patient factors. Both PROMs and GAS offer promising methods for goal setting, and implementation should consider ways to target approaches to meet patient needs.

A180

Adjudication of Veterans Affairs medication classes within the electronic medical record to support the future study of polypharmacy and prescribing trends

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Background:

Polypharmacy has been associated with medication-related adverse outcomes, such as disability, mortality, hospitalization, functional and cognitive decline, malnutrition and increased healthcare cost. Polypharmacy has historically been defined as 5 or more medications. However, the field is moving toward defining polypharmacy in new ways. One way is to classify the number of unique medication classes that a patient takes. In the Veteran Affairs (VA) electronic medical records (EMR), some medications are classified incorrectly or are classified into two or more classes. The use of EMR reports to classify medications according to the pharmacologic category used can help assess prescribing patterns and polypharmacy prevalence which is essential to support safe prescribing or practice changes. At VA Boston Medical Center, we aimed to adjudicate all medication drug files according to correct pharmacologic categories to enable the use of our EMR for future studies assessing polypharmacy and prescribing trends.

Methods:

All existing medication drug files and VA classification codes within the VA EMR were extracted using a clinical data report. Existing VA classification codes that designate pharmacologic categories were reviewed and adjudicated to reconcile any inappropriate classification codes (i.e., those representing supply items such as a glucometer were deleted given these are not medications). Each medication drug file was systematically reviewed by at least two independent reviewers. Reviewer 1 was a clinical pharmacist and reviewer 2 was a geriatrician, each performed adjudication of VA classification codes and medication drug files according to pharmacologic category. Reviewer 1 then reconciled any discrepancies among reviewer 1 and 2 and determined if discussion or a third reviewer was required.

Results:

We extracted a total of 448,067 medication drug files and 482 VA classification codes representing various pharmacologic categories. Of the 482 VA classification codes, 309 were clinically relevant and used for further classification. Data collection remains in process.

Conclusions:

Results pending.

A181

A Novel Geriatric-Trauma Co-Management Program

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Trauma in the elderly accounts for 12 billion dollars in annual medical expenditure. Falls alone account for 34 million dollars in direct medical costs. Numerous studies show that an interdisciplinary team caring for an older adult is beneficial. It improves trauma care because associated co morbidities, geriatric syndromes, additional diagnosis, poly-pharmacy, pain management, advance care planning etc to name a few are addressed(1,2).

Given the national initiatives to improve geriatric outcomes for our trauma and surgical patients, the Hospital Medicine Division and the Trauma Surgery Division initiated a geriatric trauma co-management service this academic year. Focusing on these measures help improve quality of care, reduce length of stay, reduce number of discharges to long term care and reduce the number of unplanned admissions to the intensive care units.

At Strong Memorial Hospital, from July 2018 to June 2019, there were 266 patients aged 65 years and older admitted with trauma, of which 112 were aged 75 and older. The average length of stay was 9.5 days. Additional data from 11/24/2018 to 11/24/2019, show 236 people aged 75 years and older admitted to the trauma service. While on the trauma service, only 42% of this population received medicine consults. The average length of stay was 8-9 days and 30-day readmission rate of 10%. 7% were screened for delirium.

Results will be discussed.

The goal is to provide interdisciplinary education for, and implement quality improvement process with, for the interdisciplinary team caring for this population. My aim is to focus care on the four "M's": what Matters, Medication, Mentation and Mobility, which aligns with our institutional goal of developing an age- friendly health care system.

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GOAL	PROCESS	IMPLEMENTATION	OUTCOMES
Medications	Pharm tech to collect BPML Deprescribe medications Avoid toxic meds (deliriogenic)	Hire pharmacy tech	# patients with BPML # meds deprescribed # tox meds avoided or withdrawal avoided
Mind	Sleep protocols Increase CAM screening	Institute CAM awareness and education, track data, reinforce education	% of patients with CAM screening % who develop incident delirium
Mobility	Early PT/OT consults	In place	% of falls
What Matters	Obtain MOLST/ADs	Collaborate with Social work	% patients with MOLST/ADs

A182

Quality Improvement for Management of End of Life Care

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Background: According to the CDC, in 2010, about 1/3 of deaths in the United States occurred in the hospital, and of these, 3/4 occurred in patients over the age of 65[1]. Several studies have evaluated the utility of a comfort care order set (CCOS) in treating patients at the end of life in the hospital. One study showed an increase in palliative medications and decrease in non-palliative medications used at the end of life[2]. The goal of this project was to evaluate the effect of updating the CCOS on improving medication ordering practices at the end of life. Updates to our CCOS includes evidence-based doses for medications at the end of life based on age and renal function (factors that contribute to medication side effects and toxicity).

Methods: This is a quality improvement evaluation, comparing outcomes in two different groups of end-of-life patients who were similar in age and gender. We reviewed the charts of 50 patients at WFBMC (Winston-Salem, NC), a tertiary academic medical institution, prior to the initiation of the new CCOS and 50 patients after. All patients were either DNR comfort care or were transitioned to hospice in place and had the CCOS used as part of their care.

Results: The data from a single reviewer showed that there were 73 opioid orders for the pre-intervention cohort and 77 from the post-intervention cohort. Of these, 56.2% and 68.8%, respectively, were determined to be appropriate orders based on the patient's age and renal function (p=0.18).

Conclusions: These data suggest that our updated CCOS is a tool that can help with improving appropriate orders of palliative medications at the end of life; however, larger studies with more patients will have more power to detect significant improvements. We hope to further look at age and opioid orders to determine if the changes to the CCOS helped with improved ordering practices. In addition, we plan to look at whether the CCOS changed ordering practices in the ICU for ventilator withdrawal and opioid infusions.

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A183

Disparities in Rural and Urban Veterans in a Home-based Physical Activity Program

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Background: Gerofit-Geriatric walking clinic is a home-based program that helps older veterans engage in regular walking via different platforms to improve access. The objective was to study the disparities between the urban and rural Veterans in the demographics and outcomes in this home-based program.

Methods: Sedentary older Veterans age ≥60 years were enrolled in the program. The primary intervention, pedometer feedback and motivational phone calls, were delivered remotely. Outcomes were assessed at 2, 6 and 12 months. Data were analyzed from 2013 to January 2020.

Results: A total of 564 older Veterans participated in the program of whom 46% (259) were rural. Mean age was 68.2 years (± 6.8) and did not differ based on rurality. Compared to the urban counterparts, the rural Veterans were more likely to be male (92% vs. 97%, p=0.027), White (63% vs. 78%, p<0.001), and were more likely to have walking buddies (20% vs. 28%, p=0.038). Rural participants reported more barriers than their urban counterparts (median 2 vs. 1, p=0.023), specifically more reported a lack of safe place to walk and higher rates of tiredness (p=0.015 and 0.036, respectively). Adherence to the walking clinic intervention and gait and balance outcomes in the subset providing outcomes did not differ based on rurality.

Conclusion: Although there are demographic differences between urban and rural participants in a walking clinic, outcomes in both settings were similar when tailored interventions were provided.

A184

Questioning the Requirement for a Head CT after Head Trauma in all Geriatric Patients

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Background

Current guidelines recommend that all patients who are 65 years and older with head trauma should undergo a head CT regardless of clinical symptoms. Recently, it has been suggested that a head CT is not required in all cases. The purpose of our study is twofold. First, to determine if a head CT truly is indicated in patients greater than 65 with head trauma and second, if independent predictors exist that would mandate a head CT.

Methods

We conducted a retrospective cohort study using a dataset from a large urban level 1 trauma center from 1/1/2018 to 12/31/2020. The clinical characteristics of patients with positive CT findings were compared with those of geriatric patients with a normal head CT. Variables included were age, gender, race, ethnicity, Glasgow coma scale, Injury severity score, time from injury to head CT, the height

of the fall, clinical symptoms, neurological deficits, anticoagulant use, and previous history of stroke. Patients with missing data were excluded. Bivariate and multiple logistic regression were computed using SPSS version 27.

Results

The results will be discussed.

Conclusion

We hypothesize that there is a subset of geriatric patients who sustain head trauma that do not require CT imaging. Furthermore, we hypothesize that clinical indicators can predict the need for head CT in this group of geriatric patients. The development of more specific guidelines will result in the decreased ordering of unnecessary tests and significant cost savings.

A185

Improved Discharge Communication with PCP after SNF Care

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Background: Skilled Nursing Facilities (SNF) admissions are common after Geriatric hospitalizations and transition of care points that include medication adjustments and changes in the clinical status of acute and chronic conditions. Differences in medical record platforms can make discerning these changes difficult for primary care physicians (PCP). Quality communication is important for safe SNF discharges. There are no CMS requirements for a discharge summary following SNF admission.

Methods: As a quality improvement initiative, single-page, handwritten, discharge forms were developed to include key information from SNF stay such as medication changes, follow-up labs, and changes to management of clinical problems, based on feedback from a focus group of 6 PCPs. Forms were initiated at the start of patient admissions to a SNF in Cincinnati, OH during the COVID pandemic. These forms were updated throughout the stay and patients were included in structured interdisciplinary bedside rounds (SIBR) the day prior to discharge. Forms were faxed to the patient's PCP. A short, anonymous, online survey was sent to PCPs receiving these summaries to gauge their satisfaction and perception of care transitions. Free response and Likert scale questions were utilized.

Results: 17 surveys were sent to patient-identified PCPs at time of patient's discharge out of 32 recognized discharges during the intervention period. Zero surveys were collected in response to patient discharges. Data collection is ongoing. During the intervention, we noted both phone calls and fax weren't effective means of communication. Barriers included time constraints and phone coordination. Key takeaways from the QI process will be presented. Ongoing steps will include staff feedback of the discharge process and qualitative interviews with PCPs.

Conclusion: Limitations of this study include the timing with the COVID pandemic and inability to effectively reach PCPs for feedback. A focus group of community PCPs found a brief, one-page discharge summary a helpful vehicle for communicating medical care changes that occurred during patient admissions to a SNF. As a next step we will implement alternate communication strategies for soliciting formalized feedback for this tool.

A186

Use of RTLS to obtain accurate estimates of ambulation distance of individuals while in hospital

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Background: As we previously reported, a high-resolution real time locating system (hr-RTLS) is capable of providing a highly accurate estimate of the time and distance a patient is out of bed and moving while on a hr-RLS equipped hospital ward. However, the hr-RTLS alone does not provide the capability to differentiate patient ambulation from other forms of movement such as riding in a wheelchair or on a stretcher. The purpose of this project was to determine if merging data from a hr-RTLS (Ubisense, Cambridge) and a simultaneously worn actigraph would allow us to differentiate time when walking in the hospital from time when moving by other means.

Methods: A hr-RTLS was installed on one wing of the hospital. Project personnel wore RTLS tags while moving (either walking, being pushed in or self-propelling a wheelchair) along predetermined paths within the wing. Multiple movement segments of each movement type were conducted by multiple personnel. The start & end time, distance traveled, and mode of movement were accurately measured for each segment. The combined actigraph and RTLS data (8 measures/sec) along with the actual measurements were analyzed using machine learning to develop a formulation to predict mode of movement based on the RTLS and actigraph data alone. The accuracy of the resulting formulation was then determined.

Results: Using the formulation developed based on analysis of the combined RTLS and actigraph data, we are able to differentiate the time periods of ambulation from periods of movement by other means (e.g., wheelchair) with an accuracy of 99.5% (sensitivity 99.5%, specificity 98.4%, PPV=95.8%, NPV=99.8%). Estimates of distance ambulated were within an average of 2.3% of actual.

Conclusions: Based on analysis of the combined actigraph and hr-RTLS raw data, it was possible to determine when an individual was ambulating (as opposed to moving by other means such as riding in a wheelchair) to high degree of accuracy. This makes it possible to determine the time and distance an individual ambulates while in the hospital.

A187

Attitudes Toward Cannabis Use Among Older Adult Patients In a Geriatric Medicine Clinic

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Background: California passed Proposition 64, the Adult Use Marijuana Act, legalizing the recreational use of cannabis. With this came a steady increase in cannabis use in older adults to self-treat a variety of medical issues. Despite this, studies are lacking which confirm cannabis' effect on cognition, other geriatric syndromes, and the potential for medication-cannabis interactions.

Objective: To determine older adult patients use patterns and attitudes toward the use of Cannabis to treat medical issues.

Methods: Patients of the UC Irvine Senior Health Center (a geriatric medicine clinic at an academic center) at the University of California, Irvine were randomly selected to participate in an anonymous survey evaluating the prevalence and attitudes of older adults toward the use of cannabis containing products. Patients checking in for routine appointments were offered an anonymous survey.

Respondents ranged between the ages of 56-92 (107 completed surveys received). Of those completing the survey, 67% were female and of the total number of people completing the tool, only 14% had used cannabis. Of the 15 respondents who had used a cannabis containing compound: 10 used it for chronic pain, 2 for neuropathy, 2 for arthritis, and 1 for weight loss. The most common formulation was oil/lotion (used by 12 of the 15) and 3 had tried an edible version of cannabis. No one had used the compound by pills, tinctures, or via inhaling/smoking. Only 2 of the 15 (13%) felt that cannabis had improved the condition they were using it for. For those survey takers who had not tried a cannabis containing compound, 25% were open to using it as a treatment option, and 87% felt comfortable sharing this information with their healthcare provider.

Conclusion: Despite the recent legalization of cannabis containing compounds in the state of California and the significant media/commercial attention this received, only a minority of older adult patients had used the compound for medicinal purposes with only a very few deriving a perceived benefit to the condition for which they tried the drug.

A188

The 3Ms: Medication Management for Medi(s)

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Background: Adverse drug events from unintended and undesired effects of medication are a major cause of preventable hospital admissions in the elderly. Medication reconciliation can help by reducing discrepancies. Studies have shown that there is a high correlation between the presence of medications and the number of medication discrepancies. Prevention of adverse drug events is a top patient safety priority across the continuum of care. The high incidence of polypharmacy, cognitive impairment, and transitions in care in the elderly create significant barriers to completing an accurate medication reconciliation.

Methods: We provided elderly patients with cognitive impairment (n = 59) with a medication bag one week prior to their appointment from October 1, 2019 to December 2, 2019. Patients were instructed to bring their medicines in the bag to the visit, where they were also provided a printed medication list. A pharmacist met with the patient at the beginning of their visit; the medicine bag and list were reviewed and used to complete a medication reconciliation in the electronic medical record (EMR). The pharmacist provided medication education, helped with pharmacy-related issues, and answered patients' questions. The number of medication discrepancies was recorded. Patient and provider experience outcomes were measured with surveys. We used SPC and Pareto charts to analyze the data.

Results: 83.1% of patients brought in their medications or an up-to-date list compared to 30.9% prior to the intervention. The average rate of identifying medication discrepancies increased from 45.4% to 88.1%. Medication discrepancies found included unrecorded medications (41%), discontinued medications (38%), and change in dosage/frequency (21%).

Conclusions: We were able to conduct an accurate medication reconciliation at the point of care and identify an increased number of discrepancies in the EMR with the help of a pharmacist. Patients reported feeling more knowledgeable about their medications after the intervention. Providers also felt that having a pharmacist in clinic was helpful and didn't impact the work flow. Future analysis may be conducted to identify potential correlations between additional factors, such as the number of prescribing physicians, patient adherence rate, medication classification, and adverse drug events.

A189

Impact of Chronic Disease Self- Management Program on Self-Reported Health of Older Adults after the COVID-19 Pandemic

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Background: Many older adults struggle with management of chronic disease. Chronic Disease Self-Management Programs (CDSMP) empower participants by increasing confidence, teaching self-management, improving interactions between patients and doctors. Prior studies showed positive impact of CDSMP on the Triple Aim of better health, better care, and better value. A community-based hospital in rural Maryland partnered with local Area Agency on Aging to implement CDSMP. We initially surveyed participants 6-12 months after completing CDSMP to assess health-related quality of life. During the COVID-19 pandemic, we developed a follow up survey to assess the impact of CDSMP skills on new challenges faced during this time.

Methods: We performed a pre-pandemic phone survey of CDSMP completers during 2017-19. Health behavior was evaluated using validated measures of exercise frequency, perceived interference of health on social activities, self-efficacy to manage medications and communicate with physicians. In late 2020, we performed a follow up phone survey with additional questions pertaining to social isolation, fear of COVID-19, and whether skills learned during CDSMP workshop helped them cope during the pandemic.

Results: Twenty participants completed the second survey; 17 women and 3 men, mean age 69. Some reported feeling lonely (7/20), experiencing social isolation (9/20) and fear of catching COVID-19 (11/20). Most (19/20) reported being engaged in moderate physical activity, (8 reported no physical activity in pre-pandemic survey). They ranked mental health problems higher (12/20) as compare to the pre-pandemic survey (7/20). Participants reported using following skills from the CDSMP: healthy eating, action plan, problem solving, weight management, and exercise skills.

Conclusion: Prior community-based CDSMP studies have shown improvement in quality of life and health behaviors. The COVID-19 pandemic has changed the lives of many adults with chronic conditions. In our survey of a limited number of CDSMP participants, reports of physical activity and healthy eating were common, as well as reports of mental health problems during the pandemic. Our small study suggests that CDSMP workshops may impact and sustain self-rated health and improved coping skills even during the pandemic.

A190

Cancer patient outcomes following frailty evaluations at the newly established FAIR Clinic

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Introduction:

Frailty is an important health measure and predictor of poor outcomes in older adults. In older adults receiving chemotherapy, surgery or radiation therapy, it is associated with increased risk of treatment toxicity, hospitalizations, loss of independence, cachexia measures, and death.

Methods:

The recently created FAIR Clinic evaluated older adults undergoing potentially high-risk interventions. Utilizing a 10 item risk score card, patients underwent a multidisciplinary evaluation consisting of 5 frailty criteria and comprehensive geriatric assessments. Over 8 months, 20 patients were evaluated within 2 weeks of a planned intervention. Predominant diagnoses were pulmonary and hematologic malignancies. Based on the 10 item risk score card, 1 patient was low, 3 patients were low-moderate, 7 patients were moderate,

2 were high-moderate and 5 patients were considered high risk. Individualized treatment plans were made based on identified impairments, with referrals to supportive services of nutrition, social work, physical and occupational therapy.

Results:

Based on Fried's Frailty criteria, 14 patients diagnosed with pre-frailty and 1 patient diagnosed as non-frail received treatment for their malignancies. Only 2 patients met criteria for malnutrition, defined by weight loss of >10% over 12 months and BMI <22. Frail patients had a trend toward lower albumin levels when compared to non-frail patients (albumin 3.0 vs 3.6) and body mass index (BMI 24.4 vs 27.3). Out of the 5 patients deemed high risk and diagnosed with frailty syndrome, at a median follow up of 6 months, 3 are deceased, while 2 are no longer receiving treatment.

Conclusions:

All patients identified as frail by a multidisciplinary approach that included markers of cancer cachexia were either deceased or did not go on to receive cancer therapy, highlighting the potential utility of the model to aid in appropriate cancer treatment decision guidance. Further study and data collection on the role of markers of nutrition and cachexia are needed to aid in frailty-based risk assessments for cancer patients. Short time constraints between evaluation and the planned intervention left little time to mitigate affects of pre-frailty and frailty syndromes. Earlier assessments could offer an opportunity to improve frailty status potentially improving functional status, mortality and the ability to receive anti-neoplastic therapy.

A191

Improving Geriatric Telehealth Support for Older, Rural Veterans at Risk of Diabetic Foot Complications

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Background. Diabetic foot complications are costly and common with a higher prevalence in patients aged 65 years and older.[1] Access problems are barriers for rural older adults with history of diabetic foot conditions and contribute to higher risk of hospitalizations, emergency room visits, and complications such as ulcers and amputations.[2] To prevent these complications, guidelines recommend diabetes self-management education and support (DSMES) with motivational interviewing to promote enhanced self-management for high risk individuals.[3] Provider delivery of DSMES has been challenged due to the novel coronavirus (COVID-19) pandemic.[4] Therefore, new interventions are needed for improving rural geriatric DSMES access and providing rural primary care providers with geriatric diabetic foot education support. We developed and implemented a novel geriatric high-risk foot DSMES telehealth program at the Atlanta VA Healthcare System to deliver evidence-based structured intensive high risk foot diabetes education for rural older Veterans along with consultation and education for rural primary care providers.

Methods: This telehealth program was developed using evidence-based guidelines and is being implemented currently at the Atlanta VA Healthcare System using a plan–do-study-act cycle. Rural Veterans aged 65 and older with diabetes, at risk for diabetes related foot complications and receiving VA primary care are eligible for this three-month consultation program. Initial program effectiveness outcomes include self-efficacy and self-management behaviors reported at baseline and after the three-month intervention.

Results/Conclusion: The implementation of this high-risk foot DSMES program will improve rural older Veteran access to evidenced-based structured diabetic foot focused DSMES consultation to enhance participant self-management behaviors and self-efficacy as well as improve support for primary care provider high risk foot education. Veteran enrollment is currently underway with evaluation outcomes forthcoming. We anticipate initial results will be available in at least 30 Veterans.

A192

Telehealth Survey for Older Adults and Geriatricians During the COVID-19 Pandemic

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Background: Older adults face restrictions to care during the COVID-19 pandemic, and telehealth is an innovative option. Current literature notes bias against recommending technologies to older adults due to perceived sensory abnormalities. Existing telehealth studies are limited in the ambulatory setting, especially those including cognitive and sensory impairment. We surveyed providers and patients during the COVID-19 pandemic to assess barriers and satisfaction with telehealth.

Methods: A mixed-methods approach was chosen to analyze perspectives from both providers and patient/caregivers. Telehealth visits analyzed in this study originated at Wake Forest Baptist Medical Center in Winston-Salem, NC. 20 patients and 7 providers participated. Of the 20 patients, 13 had prior diagnosis of cognitive impairment or dementia, 6 had hearing loss, and 2 had vision loss. Average age of patient/caregivers was 87. Audio and video outpatient telehealth visits occurred between May – July 2020. Two structured interview guides were created and manually transcribed verbatim. A general inductive approach was used for analysis of qualitative evaluation data.

Results: 19 (95%) patients/caregivers used cellular or landline phones for visits. Most participants reported difficulty with video due to technical, sensory, or cognitive issues. No patient/caregivers completed training prior to visits, though most providers did. 12 (60%) patients/caregivers denied barriers to telehealth. Reported barriers included lack of nonverbal interaction and emotional connection. Logistics was most commonly identified as a benefit. 18 (90%) patients/caregivers would recommend the use of telehealth to others. 14 (70%) of patients/caregivers trusted telehealth the same as in-person, though 6 (85%) of providers did not. All providers wished to continue telehealth visits.

Conclusions: Our survey provides evidence caregivers and patients perceive overall benefit from telehealth. Though telehealth was initiated as a substitute for in-person care due to COVID-19 restrictions, our findings warrant further research for implementation beyond the pandemic. Cognitive, sensory, and technical barriers were reported, citing a need for more well-designed studies evaluating in-home technology and virtual platforms adapted to older adults with advanced age and cognitive or sensory impairments.

A193

Maintaining 4M Age Friendly Care Standards in a House Calls Program, it Takes a Team!

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Background: Older adults (65+) in Springfield face more health disparities than average in the commonwealth as demonstrated by 41 health indicators with some of the highest statewide rates for obesity, multimorbidity, depression, dementia, and functional impairment. The Massachusetts "Healthy Aging" community report reveals the greatest challenges in neighborhoods surrounding the three Baystate Health Community Health Centers (CHCs.) House Calls (HC), the primary clinical initiative of Baystate Health's Geriatrics Workforce Enhancement Program provides home-based geriatric specialty care to CHC patients.

Methods: The interprofessional team (IPT) identified need to standardize and improve processes to build capacity. NP, RN, SW, and two CHWs attend twice monthly process improvement meetings to ensure 4Ms (What Matters, Medications, Mentation, Mobility) Age Friendly Care remains consistent. Successful PDSA (Plan, Do, Study, Act) cycles incude: increased flow of referrals, RN role refinement,

identification of training needs, improved documentation with new care plan, and visit flow chart to ensure all patients are assessed for common geriatrics syndromes and provided with educaton and resources.

Results: Enrollments increased by 30% from prior year. Of the 167 patients enrolled, 73% had >=1 prescribed Potentially Inappropriate Medication (PIM), 49% had >=2 PIMs and 92% have >=4 medications. IPT made medication recommendations for 68% of patients and saw 19% with a reduction in total number of meds. In addition:

Conclusions: The most pressing needs of older adults in Springfield include: need for coordinated care; patient education; skilled management of drugs/care planning; interprofessional home-based services; and clarifying prognosis for frail patients and those with dementia to help them and their families understand the trajectory of their illnesses and define goals within limits. Continuous process improvement is essential to ensure IPT works at top of their licenses in a coordinated way to ensure efficient, safe, quality care is provided to older adults in a way that **M**atters Most to them.

Measure	Baseline	Current
What Matters: Health Care Proxy	57%	88%
What Matters: MOLST	10%	25%
Mentation: Accurate dementia diagnosis	33%	63%
Mobility: Falls Risk diagnosis	5%	88%

A194

Planned Cessation of Potentially Inappropriate Medications - Leveraging Informatics, High Reliability Organization Concepts and a Clinical Project VIONE Across 99 Medical Centers

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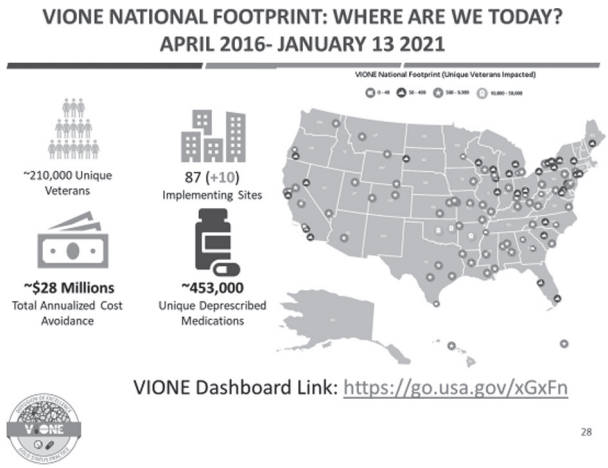
Background: Successful implementation of VIONE methodology Prevalence and adverse outcomes from polypharmacy is a global concern. VIONE is a pneumonic of the criteria that are applied when reviewing patient medication lists. Prescribed medicines are categorized as: Vital (V), Important (I), Optional (O), Not indicated (N), and Every medication has an indication (E). VIONE project won the Veterans Health Affairs Shark Tank competition with subsequent selection for national dissemination in 2018.

Methods: Systematic, strategic, end user friendly implementation science models were sequentially deployed that included: provider and pharmacist education, creation of electronic health record templates, national, automated dashboard that allowed daily data capture accessible through a link, deployment of a crosswalk between basic pillars of High Reliability Organizations and VIONE.

Results: VIONE has been launched in 99 programs, impacted ≥ 210,000 Veterans, 453,000 medications deprescribed, an annualized cost avoidance of >28 million dollars over a span of 4.5 years. **Conclusions:** VIONE is the first national deprescribing project with successful and sustainable outcomes.



VIONE National Footprint April 2016 thru January 13, 2021.

A195

Impact of Unplanned ICU Readmission on Code Status in Injured Older Adults

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Background: Injured older adults are more likely to be admitted to the ICU compared to younger counterparts matched for injury severity. Prior research has found that injured older adults with high frailty scores are more likely to have in-hospital complications, and that individuals with do not resuscitate (DNR) orders are more likely to be readmitted to the ICU. The objective of this study is to examine whether ICU readmission impacts code status in injured older adults.

Methods: In this retrospective study, we reviewed data for patients aged 65 and older admitted to a Level I trauma ICU who received a geriatric medicine consultation from January 1, 2018 to October 13, 2020. Patients with more than one unplanned ICU readmission were excluded due to unique circumstances associated with multiple ICU readmissions. Frailty was assessed using Clinical Frailty Scale (CFS9) by the geriatric medicine consult team. Code status change was determined by comparing code status on admission with code status after first ICU readmission.

Results: 11% (n=105) of patients admitted to the trauma ICU had an unplanned ICU readmission. Average age was 79, with 65% (n=68) male, and mean CFS of 3.92 (95% CI 3.59-4.24). 23.8% (n=25, 95% CI 7.11-40.51%) were DNR on admission, with mean CFS of 4.64 (95% CI 4.02-5.26). 23.8% (n=25, 95% CI 7.11-40.51%) of patients who were full code on admission had a change in code status to DNR after ICU readmission, with mean CFS of 4.36 (95% CI 3.73-4.99). The number of patients with DNR status doubled after ICU readmission, with OR 2.91 (95% CI 1.61-5.25).

Conclusions: In our study, we found that the number of patients with DNR status doubled after the first ICU readmission. Patients whose code status changed from full code to DNR had higher frailty scores than those whose code status did not change. These results demonstrate the significant impact that an unplanned ICU readmission can have on goals of care. These findings suggest that goals of care conversations for injured older adults in the ICU may not be sufficient in scope and should address preferences on repeat ICU transfers.

A196

Slipping Through The Cracks: Suboptimal Immunization Rates in a Rural ALF Population

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Background

Higher immunization rates are associated with reduced incidence of vaccine-preventable diseases (VPDs) such as influenza, pneumonia, and herpes zoster. Immunizations have been shown to reduce morbidity and mortality, direct and indirect healthcare costs, and necessity for increasing levels of care.[1] Limited knowledge is available regarding vaccine hesitancy and additional factors influencing immunization rates for rural older adults residing in assisted living facilities (ALFs). This prospective study aimed to quantify immunization rates for rural adults aged ≥ 65 years residing in ALFs. A secondary objective included identifying barriers and facilitators to vaccine administration in this setting.

Methods

A geriatric primary care clinic with an expanding number of patients in ALFs reviewed data pertaining to the following: 1) immunization status for influenza, pneumococcal, zoster, and tetanus vaccines extracted from the clinic and state-wide electronic health record systems, ALFs, and pharmacies; 2) vaccine hesitancy or refusal; 3) documentation workflows pertaining to patients residing in ALFs. Immunization rates for each vaccine were quantified and compared to national targets. Barriers and facilitators to vaccine administration were qualified.

Results

The study cohort included 130 rural adults aged ≥ 65 years living in ten ALFs in Maine. Only three out of ten facilities documented immunization administration beyond the influenza vaccine. Standardized communication pathways among the clinic, ALFs, and pharmacies were lacking. Other data pertaining to immunization rates, vaccine hesitancy or refusal, as well as documentation workflows and corresponding process improvements will be presented.

Conclusion

Inconsistent immunization tracking systems, charting processes, and communication pathways among care settings may contribute to suboptimal immunization rates for rural older adults living in ALFs. This valuable information could provide guidance for future development and implementation of models to improve immunization rates and reduce risk of VPDs in this at-risk population.

References

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A197

Implementing 4Ms into primary care by leveraging the EHR

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Background

Implementing the Institute for Healthcare Improvement's (IHI) 4Ms Age-Friendly principles into primary care is challenging because there is no best practice to identify documentation of delivery. Leveraging the EHR is a potential way to automate this process.

Methods

IHI Age-Friendly principles for primary care were discussed at peer coaching webinars. PDSA cycles were employed among clinic staff to define each of the 4Ms for the Vanderbilt Geriatric Practice: 1) Mentation - Mini-COG and PHQ2 (nursing intake), 2) Medication - Medication review, provider reconciliation, 3) Mobility - ADL mobility questions (nursing intake), and 4) What Matters Most - Patient portal messages, utilization of the CollaboRATE Tool. Developers were engaged for an Epic™ radar dashboard build based on these identified fields.

This work is supported in part by the Geriatric Workforce Enhancement Program, HRSA Grant: T1MHP39068-01-00.

Results

PDSA cycles with stakeholder clinicians reviewing dashboard-derived data refined the searches with improvement in accuracy. Optimization of time frames for data collection as well as development of population graphics and patient-level data displays are progressing.

Conclusions

Leveraging the EHR to display simultaneous documentation of 4Ms for a primary care population may facilitate improved provider-driven interventions to provide 4Ms care to older adults.

A198

Improving the quality of care in patients with COVID-19

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Background

During the COVID-19 pandemic, the urgent need for advance care planning (ACP) and cognitive evaluations in older adults intensified. As reports of cognitive changes in younger adults also emerged, it became evident that efforts to complete ACPs and cognitive assessments were important regardless of age. In response, the South Texas Veterans Health Care System, enacted a clinical initiative with the aim of completing these evaluations in all enrolled Veterans with COVID-19 prior to potential admission.

Method

In this initiative, geriatricians, palliative care physicians, and fellows attempted to call all Veterans diagnosed with COVID-19 to discuss ACP and perform cognitive screening. ACP was documented in Life Sustaining Treatment (LST) notes, and Veterans without Advance Directives (AD) on file were sent AD forms to complete by mail. Cognitive screenings included the Telephone Executive ASessment (TEXAS) and AD8 that were documented in a COVID-19 Mental Status Note (CMSN). Programmatic evaluation is being conducted via chart review for presence of LST notes, AD, and CMSN for all Veterans before and after COVID-19 diagnosis.

Results

Between the dates of March 22 and July 20, 2020, there were 500 veterans diagnosed with COVID-19, all of whom were included in this initiative. Before the initiative, 11 had LST notes and 86 had Advanced Directives (AD). After the initiative, 359 veterans completed LST notes

(increase of 3163%), and 118 had AD completed. A total of 182 cognitive screenings were completed. Of those, 28 screened positive for cognitive impairment.

Discussion

This program greatly increased the number of COVID-19 positive veterans who had ACP discussions and baseline cognitive assessments. It's limitations include patient availability and willingness to participate, clinician time, and ability to follow-up on AD paperwork and repeat cognitive screens. Ongoing analysis and future directions include program continuation, determining the number of Veterans admitted following ACP completion and following-up on AD paperwork and repeat cognitive screening. By increasing ACP and cognitive screening prior to admission this program has the potential to positively impact Veterans and care teams throughout the pandemic.

A199

Using tthe 4M Model of Age-Friendly Healthcare to Improve Patient Outcomes

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Background

Age-friendly health care is an urgent need to be able to provide quality healthcare to more than 46 million Americans age 65 and older, with that number projected to double to more than 98 million by 2060. Through our four Geriatric Workforce Enhancement Programs (GWEP), our universities have worked to champion innovative ways to incorporate the 4M Model of Age-Friendly Health Care systems in our patient care and outcomes.

Methods

Each of our GWEPs have aligned our assessment tools with the primary principles of the 4M Mode which includes : 1) What Matters; 2) Medications ; 3) Mentation and 4) Mobility.

While the measures vary among our GWEPs, we have identified ways to connect with our patients via face-to-face or tele-health modalities to understand what matters most to our patients. Imbedded within the FlourishCare model (UofL GWEP), Senior Strong (VCU GWEP), and the UNTHSC GWEP, our interdisciplinary teams focuses on building rapport with patients and asking them what matters most. Similarly, using Patient Priorities Care (PPC), the SeTx GWEP, trained facilitators work with patients to identify primarily values and set specific goals. At VAGeriPact (Middle TN GWEP), there is a focus on using a patient portal to assess what matters most to the patient. Additionally, each of our programs have instituted screenings such as the PHQ- 9, medication reconciliations, ADL/ mobility screenings to address the other areas of the 4M model.

Results

We have been able to foster quality patient engagement, that prioritizes what matters most to them. Across all of our GWEPs, we have found that the infusion of age-friendly healthcare into our work has led to stronger patient outcomes including a focus on the priorities and goals of the patient.

Conclusions

While the work done at each our GWEPs is unique to the communities that we serve, incorporating the principles of the 4M Model in assessments and interventions, has helped us establish age-friendly healthcare systems. Additionally, we will share lessons learned from our teams and provide an overview of how to infuse age-friendly healthcare principals into primary care settings.

A200

Using Telehealth to Mentor Community-Based Interprofessional Care

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Background: Older adults are commonly diagnosed with multiple chronic illnesses and geriatric syndromes. Traditional medical care accounts for 10% of health outcomes, where as social determinants of health account for more than 60%. Effective care for older adults requires meaningful collaboration between medical and community based care providers. Mentoring opportunities that model effective team care are often limited due to shortages of training providers and other logistic scheduling issues.

Methods: Our community based health system has worked collaboratively with the local Area Agency on Aging (AAoA) to run a Care Management Interdisciplinary Team (CMIT) that integrates medicine and social determinants of health. AAoA care managers present cases with complex interactions between medical illness, medications, social and behavioral health issues. The team, which includes nursing, social work, geriatric medicine, and geriatric pharmacy, meets weekly for case presentations and interprofessional care planning. The team can normally accommodate 1-2 learners at a time. Changes to telemedicine necessitated by COVID-19 had the unforeseen benefit of allowing large groups of learners simultaneously.

Results: Common issues addressed by the CMIT team include fall prevention (19% of consumers), medication changes for (71% of consumers), safety interventions for (61% of consumers), and behavioral health interventions for (24% of consumers). The use of telemedicine allows us to expand the number of learners we can mentor at one time from 1-2 to over 10. Learners included medical and pharmacy students, medical residents, geriatric and palliative care fellows, pharmacy students and residents and practicing professionals across disciplines.

Conclusion: The care of older adults requires a multifaceted, interprofessional approach in order to address both medical and social determinants of health. The CMIT approach incorporates medical and community-based providers and has improved care for community-based consumers. Mentoring learners in this team approach is often limited by space constraints and scheduling conflicts. The use of telemedicine allows mentoring on a much larger scale. This is one way to stretch the limited teaching resources of geriatricians and geriatric pharmacists.

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A201

Patient and Family Perceptions of Perioperative Neurocognitive Disorder: A Telephone Survey of Older Surgical Patients

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Background: Risk for perioperative neurocognitive disorder (PNCD) increases with age and pre-existing cognitive decline in geriatric populations. In this light, Keck Medicine of USC's Brain Health Initiative established a pre-surgical multidisciplinary approach to mitigate such factors. Team members conduct cognitive baseline assessments via the MiniCog, complete formal occupational therapy neurocognitive evaluation when indicated, and refer those with suboptimal results for a virtual geriatric assessment by a geriatrician/ PharmD. The purpose of this study is to establish our patient population's baseline perceptions and experiences with PNCD.

Methods: A telephone survey was completed using a sample of elective surgical patients aged 65+ who were preoperatively screened via MiniCog between January 2019 through March 2020. Patients and families were called 1-2 years post-operatively with questions that examined perceptions regarding cognitive changes at various times postoperatively.

Results: Of the 32 patients called, 16 completed the survey. Most patients reported that they received information about perioperative brain health (80%) and were glad that they were proactively screened for cognitive impairment (92.3%). More than 30% of respondents reported memory and focus deficits in the 30 days post procedure. Of these patients, 40% reported preoperative cognitive concerns, 60% had baseline cognitive impairment, 40% noted cognitive decline during admission, and 80% failed to fully regain their preoperative cognitive baseline.

Conclusions: Older adult surgical patients are at risk for PNCD. Patients and families recall cognitive changes before, during, and after surgery, even up to 1-2 years later. We anticipate additional surveys and updated larger sample size will be available for presentation.

A202

Rough Seas or Smooth Sailing–Improving Handoffs

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Background:

Every patient transferred to the CLC from acute care needs a safe and accurate handoff. The current process of patient handoff is inconsistent, with patient information from many sources and locations. Receiving staff often contact acute care teams for further information and clarification. Suboptimal handoff directly impacts patient safety, particularly in older populations.

This project aims to improve patient transition of care and patient safety by implementing a standardized handoff template. Successful implementation will decrease potential medical errors and further reduce the rate of rehospitalization/ ED visit after CLC discharge.

Research shows that optimal transition communication, coordination amongst interdisciplinary teams and skilled discharge planning reduces medical errors and 30-day hospital readmission.

Method:

We will develop and implement a standardized EMR template to be completed as part of the transition of care from acute care to the CLC. The new template will be used by all care team members who are involved in the transition of care from acute care to the CLC.

Tool Design: The EMR template will be developed by 2 geriatric fellows under the supervision of faculty; input from interdisciplinary team members will be solicited.

Study design: We will use Plan-Do-Study-Act (PDSA) to implement and evaluate our process change of a new EMR template and improved handoff. Pre-Post comparison of 30-day readmission rates and compliance by stakeholders will be analyzed.

Data Collection: We will observe the acute care patient handoff process. Data for the template will be collected by intradisciplinary team members. Data will be de-identified according to HIPAA standards, reported in aggregate, and stored behind the VA firewall on a secure server. Data collected will include Patient Identifiers, Insurance coverage, AD/DPOA/LST, Reason for admission, Hospital course, Complications, Reasons for transition.

Results:

The QI project is in progress and results are pending at this time.

Conclusion:

Our hypothesis is that our unified transition of care template will accomplish: Reduced rate of readmission after discharge, Completeness of information transfer and enhanced communication during intradisciplinary team handoffs, Reduced redundancy of team members involved, Improved staff satisfaction.

A203

Point of Care Ultrasound Training for Clinicians caring for Home Bound or Institutional-dwelling Older Adults: A national survey and needs assessment

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Home-bound older adults and those in long-term or subacute care often have limited access to imaging to inform clinical decision making. Point-Of-Care Ultrasound (POCUS) can help span this gap. However, little is known about POCUS training among clinicians who work in these settings. We conducted a national needs-assessment survey for the development of a POCUS curriculum in the subacute, long-term, and home-based care settings, among clinicians in the Veterans Affairs (VA) system.

An electronic survey was developed and sent out to clinicians all of the VA long-term and subacute care facilities (Community Living Centers, or CLCs) and Home-Based Primary Care outpatient teams to assess current attitudes, previous training and skills related to POCUS. Survey items were based on a literature review of POCUS surveys in the outpatient and acute care settings. Clinicians were identified through the national email list serves.

90 clinicians responded to the survey, 49% of whom were APRNs, 33% were physicians, and 7% were PAs. 69% were female. 28% reported working in CLCs, 63% in home care settings. 70% of clinicians reported a lack of previous formal training in POCUS, and even among those who have had POCUS training only 4% of clinicians reported feeling confident or very confident of their skills on a 6 point Likert scale). 50% of clinicians feel that POCUS would be very useful in their clinical setting, with vascular followed by pulmonary evaluations as the most helpful. The most frequently identified barrier to use of POCUS in these clinical settings was lack of training.

A majority of clinicians in the care settings of home-based care and skilled nursing facilities do not have prior formal training in POCUS and many clinicians would find this tool useful to increase access to care for these patients. This national needs assessment survey will inform future POCUS training to increase access to clinical imaging for home bound or institutional dwelling older adults.

A204

Following through: effects of consult criteria on geriatric trauma patients

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Background

Adults aged 65 and older are the fastest growing trauma demographic with the number of major trauma hospitalizations expected to increase to 39% by 2050 compared to 28% in 2014. The Trauma Quality Improvement Program (TQIP) recommends developing criteria for early geriatric consultation. At our institution the standard includes a geriatric consultation on every trauma admission for patients 65 years and older. We seek to evaluate the efficacy of this protocol by accessing the utilization of a well-established geriatric consult team.

Methods:

A chart review was conducted on patients 65 years and older whom the trauma team evaluated during November 2019. Data was collected from the trauma registry at a Level 1 trauma center in Akron, OH. Descriptive statistics were generated for patient demographic information, mechanism of injury frequency, frequency of geriatric consultation and time to ordering and completion.

Results

In November 2019, the trauma team evaluated 135 patients. Of these, 57%(n=78) were 65 years of age or older. Eleven patients were excluded from analysis as they were subsequently discharged from the emergency department. A total of 67 patients were included. Primary reason for trauma evaluation was due to minor fall (85% of trauma types). The average age was 80 with 61.2%(n=41) female. The average time from initial trauma evaluation to placement of geriatric consult was 6.5hours. Most (56/67, 83.6%) patients received a geriatric consult. For four charts there was mention of geriatric consult but no order was placed. For the remaining patients the reason for not placing a consult is unknown. The average time from consult placement to completion was 10.1hours.

Conclusion

The above findings indicate fairly wide use of the standard protocol for geriatric traumas. It also highlights the short time frame from consult placement to completion ensuring patient's access to the geriatric care team. In the future we aim to assess barriers in order to

ensure that patients receive comprehensive care and analyze outcomes (ex: length of stay, hospital acquired complications) related to protocol use.

References:

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American College of Surgeons: ACS TQIP Geriatric Trauma Management Guidelines

A205 Encore Presentation

Abaloparatide and Teriparatide Effects at the Hip: DXA-Based 3D Modeling

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Background

Osteoporosis-related fractures are an important public health concern. Increased mortality among hip fracture patients is ~10-20% in the year following fracture, with up to two thirds of patients never regaining prior functional status. The phase 3 trial ACTIVE and its extension (ACTIVExtend) demonstrated efficacy of abaloparatide (ABL) followed by alendronate (ALN) for an additional 24 months (M) for fracture risk reduction and BMD gain in postmenopausal women with osteoporosis. In ACTIVE, 18 M of ABL treatment significantly increased BMD vs placebo (PBO) and teriparatide (TPTD) at the hip (P<.001), with significant increases observed as early as 6 M. In a supplemental analysis of ACTIVE+ACTIVExtend, no hip fractures were reported in the ABL/ALN group vs 5 in the PBO/ALN group. This analysis was done to better elucidate effects of ABL and TPTD on measures of bone strength at the proximal hip.

Methods

Differences in the effects of ABL and TPTD on cortical bone density were previously reported based on 3D modeling of proximal femur DXA images. These changes were further examined in the femur neck (FN), intertrochanteric (IT), and shaft (S) subregions to determine heterogeneity and impact on bone strength indices. Baseline, 6 M, and 18 M hip DXA scans from 750 patients, 250 in each group from ACTIVE were subjected to DXA-based 3D modeling (3D-SHAPER v2.10.1, Galgo Medical, Spain). Changes from baseline were calculated for each subregion for cortical thickness (Ct.Th), cortical volumetric BMD (Ct.vBMD), cross-sectional moment of inertia (CSMI), and section modulus (Z). Comparisons to baseline were made using paired t-tests; pairwise group comparisons were made for % change from baseline using P-values derived from contrast tests based on an MMRM model.

Results

For each subregion at 18 M, ABL and TPTD similarly increased Ct.Th from baseline (1.4-2.1%; all P<0.05), while only ABL significantly increased Ct.vBMD from baseline (1.4-1.8%; all P<0.05). Ct.vBMD improvement with ABL was associated with greater increases in the density-weighted strength indices CSMI and Z than with TPTD, particularly at the more cortical subregions (FN: 7.2-7.7% vs 4.5-5.0%; S: 2.7-3.2% vs 0.4-0.5%, all P<0.001 ABL vs TPTD).

Conclusions

Both ABL and TPTD resulted in increased positive changes in Ct.Th and bone strength indices across the proximal hip by DXA-based 3D modeling after 18 M.

A206

Cognitive screening tools and predicting driving safety

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Background

In estimating driving risk, Montreal Cognitive Assessment (MOCA) is a useful tool for individuals with a preestablished cognitive impairment diagnosis.[1] The Saint Louis University Mental Status Examination (SLUMS) can detect mild cognitive impairment and dementia.[2] However, the predictive value of SLUMS as a screening tool for driving performance has not been studied. The Motor Free Visual Perceptual Test (MVPT) is used to assess visual perception and its role in on-road driving performance and safety. We hypothesized that a low SLUMS score is associated with MVPT failure.

Method

Retrospective chart review was completed for patients seen at the Geriatric Driving Safety clinic at the VA Pittsburgh Healthcare System. We completed a from 2010 to 2019. This clinic uses a team-based approach to assess driving safety in older Veterans with known or suspected cognitive decline. All of the patients were tested with MVPT. Some patients had a cognitive screen such as SLUMS or MOCA as part of their cognitive testing at the time of the visit if prior cognitive screen had not been completed. The psychologists on our team chose which test to use based on their preference. The occupational therapist on our team administered the MVPT test. One-way Analysis of variance was used for statistical analysis.

Results

All 527 patients took the MVPT test. 125 patients had a result of SLUMS. 86 of 125 failed the MVPT test. 56 patients had a result of MOCA. 40 of 56 failed the MVPT test. For SLUMS score and MVPT pass or failure, ANOVA p-value was 0.07. For the MOCA score and MVPT pass or failure, the ANOVA p-value was 0.0006.

Conclusion

This is the first research to look at the effectiveness of SLUMS in assessing driving capacity of patients with cognitive decline. Acknowledging that determining driving safety in this population is complex, this analysis suggests that SLUMS may not be the best tool to use. We did not randomize the patients in determining use of MOCA or SLUMS. However, the demographic and comorbidities of those two groups were not significantly different. Further research will be needed to assess the correlation of the pass rate of the on-the-road driving test and the test result of SLUMS.

A207

Evaluating the Benefit of Intensive Blood Pressure Lowering Based on Individual Outcome Profile: Post-hoc Analysis of the Systolic Blood Pressure Intervention Trial (SPRINT)

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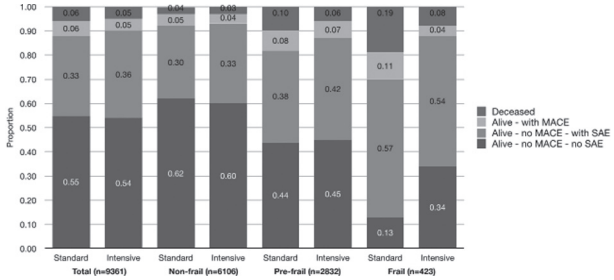
Background: The SPRINT showed reductions in major adverse cardiovascular events (MACE) with intensive blood pressure control. Because some patients may experience serious adverse events (SAE), examining outcome profile at the patient level may be more informative than analyzing MACE and SAE separately.

Methods: We conducted a post-hoc analysis of SPRINT (n=9361) that compared intensive (systolic blood pressure target <120mmHg) vs standard blood pressure target (<140mmHg). A 4-year outcome profile was defined for each participant: alive with neither MACE nor SAE (most desirable), alive with SAE and no MACE, alive with MACE, and deceased (least desirable). Frailty was defined based on low energy, difficulty climbing stairs, low activity, low body mass index, and slow gait. Proportional odds model was used to evaluate the probability of a more desirable profile with intensive blood pressure targets.

Results: Intensive strategy was not associated with a more desirable outcome profile than standard strategy (OR [95% CI], 1.08 [0.93-1.25]). The proportions of participants who died (5% vs 6%) or were alive with MACE (5% vs 6%) were lower with intensive strategy, whereas the proportion of those who were alive with SAE and no MACE was increased (36% vs 33%) (**Figure**). By frailty (**Figure**), intensive strategy was associated with a more desirable profile than standard strategy (OR [95% CI], 2.98 [1.41-6.30]) among frail participants, but not among pre-frail (1.19 [0.91-1.56]) or non-frail participants (0.97 [0.82-1.16]).

Conclusions: Intensive strategy reduces the proportion of individuals who died or developed MACE, but increases the proportion of those with SAE and no MACE. Our results show the utility of outcome profile analysis in quantifying the benefit-risk trade-off at the patient level.



A208

Efficacy and Safety of Ferric Derisomaltose in Older Patients: A Sub-Analysis of The FERWON-IDA Trial

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Background:

One in ten people ≥ 65 years old in the US are anemic, and iron deficiency accounts for most cases. Anemic older patients often benefit from intravenous (IV) iron, but data on the use of IV irons in this population is limited. Ferric derisomaltose (FDI), also known as iron isomaltoside, is the only IV iron approved in the US for delivery of 1000mg of iron in a single administration. FERWON-IDA, a large randomized-controlled trial, demonstrated non-inferior efficacy and safety of FDI vs. iron sucrose (IS) in patients with iron deficiency anemia (IDA). FDI and IS demonstrated similar efficacy in increasing hemoglobin (Hb), and both preparations were well-tolerated with a low incidence of serious or severe adjudicated hypersensitivity reactions (HSRs). In this sub-study of the FERWON-IDA trial, we evaluated the efficacy and safety of FDI in patients aged ≥ 65 years old.

Methods:

Patients in the FERWON-IDA trial were randomized 2:1 to receive FDI (1x1000mg) or IS (≤5x200mg) and followed for 8 weeks. Of the 1483 participants constituting the safety analysis set, 167 were ≥ 65 years old. In the older patient sub-study, efficacy endpoints included changes in Hb, ferritin and transferrin saturation (TSAT), and the safety evaluation focused on adverse drug reactions (ADRs) and the incidence of adjudicated serious/severe HSRs.

Results:

A total of 104 and 63 patients were ≥ 65 years old in the FDI and IS groups, respectively. In the FDI group, mean [standard deviation (SD)] age was 74.0 (6.9) years and in the IS group 73.1 (6.3) years. Baseline Hb, ferritin and TSAT were similar between the two groups. Hb increased substantially from baseline to Week 8 in both groups, but statistically significantly greater increases were observed with FDI vs. IS at Weeks 1 ($p<0.05$) and 2 ($p<0.05$). Similar observations were found in ferritin and TSAT levels. A total of 4/104 patients (3.85%) experienced ADRs in the FDI group and 5/63 (7.94%) in the IS group. No patients experienced any serious/severe ADRs or adjudicated HSRs.

Conclusions:

FDI was efficacious and well-tolerated in older patients with IDA of mixed etiologies. Efficacy and safety were similar between FDI and IS. Response to treatment was achieved faster with FDI, which also offers the convenience of a single 1000mg dose vs. ≤ 5 doses with IS.

A209

Strength on Wheels: A pilot meal delivery and exercise intervention for homebound older adults

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Background: Increasing numbers of community-dwelling older adults have functional impairments with inability to leave their homes independently. Still, a 2014 U.S. Census Bureau survey showed ~90% of older adults wanted to remain in their homes as long as possible. Given these preferences, it is imperative that we identify risk factors and potential interventions to help older adults successfully age in place.

Methods: We conducted a pilot randomized-controlled trial to evaluate the effects of a 12-week nutrition and exercise intervention on frailty status and biomarkers in homebound older adults. We partnered with our local Meals on Wheels (MOW) organization, to have trained drivers deliver enhanced meals to all participants. Participants in the exercise intervention group also received a weekly set of low-impact exercises that could be performed in their home. The primary objectives were to assess frailty status by Fried Frailty Phenotype (FFP) and potential frailty biomarkers in the control and intervention group at 12 weeks.

Results: 9 participants have completed the study, 5 treatment (exercise+meals) and 4 control (meals only). Based on FFP criteria, the control group had 50% participants who were frail, which remained the same after 12 weeks. The treatment group, however, went from 40% frail participants to 20% after the exercise intervention. In addition, the treatment group tended to walk faster while the control group's walking speed remained the same. Our exercise group also tended to have decreased heat-shock protein 70 (HSP70), macrophage inflammatory protein-1β (MIP-1β), and soluble interleukin-6 receptor (sIL-6R) while the control group had increased levels in the same 3 cytokines.

Conclusion: Success with this exercise program delivered by nationally available MOW could lead to a large-scale, sustainable intervention for improving resiliency in homebound older adults. Further confirmation of the association between frailty biomarkers and clinical changes could also lead to future etiology-based therapeutic strategies.

A210 Encore Presentation

Effects of Lemborexant on Fatigue Severity and Subjective Sleep Outcomes in Older Adults With Insomnia and Clinically Significant Fatigue

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Background: Fatigue is a common daytime functional impairment for patients with insomnia. In the Phase 3 Study 303 (SUNRISE-2; NCT02952820), lemborexant (LEM) provided significant benefit on fatigue severity and subjective sleep outcomes vs placebo (PBO). These outcomes were analyzed post hoc in subjects aged ≥65y with clinically significant fatigue (defined as Fatigue Severity Scale total score [FSS-TS] ≥36) at baseline. The FSS self-report questionnaire assesses impact of fatigue on quality of life and daily functioning.

Methods: This 12mo, randomized, double-blind study enrolled subjects age ≥18y (Full Analysis Set n=949). For the first 6mo (Period 1), subjects were randomized to PBO or LEM (5mg [LEM5]; 10mg [LEM10]). During the second 6mo (Period 2), PBO subjects were rerandomized to LEM5 or LEM10 (reported separately); LEM subjects continued their original dose. Changes from baseline in FSS-TS and subjective sleep onset latency (sSOL) and wake after sleep onset (sWASO) for LEM vs PBO were examined at 6mo.

Results: For this subgroup (n=134), baseline FSS-TS and subjective sleep measures were generally similar across groups. Greater decreases from baseline in FSS-TS, sSOL, and sWASO, were observed for LEM vs PBO at 6mo (Table). Treatment-emergent adverse events (TEAEs) were generally mild to moderate. The most common TEAE (≥10% in either LEM group and >PBO) was somnolence (PBO, 0%; LEM5, 11.4%; LEM10, 22.4%).

Conclusions: In insomnia subjects aged ≥65y with clinically significant fatigue at baseline, LEM demonstrated improved efficacy vs PBO on FSS-TS and subjective sleep measures at 6mo. Fatigue severity decreases generally paralleled the time course of sleep parameter improvements.

Table. Baseline FSS-TS and subjective sleep parameters and 6-mo change from baseline for insomnia disorder subjects aged ≥65y with clinically significant fatigue (FSS-TS>=36) at baseline

	PBO (n=41)	LEM5 (n=44)	LEM10 (n=49)
FSS-TS			
Mean (SD) at baseline	44.1 (6.8)	46.2 (7.6)	44.9 (6.3)
Mean (SD) change from baseline at 6 mo	−8.7 (10.0)	−18.3 (12.9)*	−17.4 (11.6)*
sSOL, min			
Median at baseline	49.0	44.1	54.3
Median change from baseline at 6 mo	−9.0	−20.1†	−19.8
sWASO, min			
Mean (SD) at baseline	134.9 (82.3)	126.8 (65.1)	166.4 (91.0)
Mean (SD) change from baseline at 6 mo	−9.9 (47.2)	−58.3 (79.9)*	−50.6 (56.6)‡

*P<0.01; †P<0.001; ‡P<0.05. For sSOL, P-values are based on the mixed-effect repeated measures model evaluating the least squares geometric mean treatment ratio between PBO and LEM. P-values for all other variables are based on the mixed-effect repeated measures model evaluating least squares mean treatment differences between PBO and LEM. FSS-TS, Fatigue Severity Scale total score; LEM5, lemborexant 5mg; LEM10, lemborexant 10mg; PBO, placebo; sSOL, subjective sleep onset latency; sWASO, subjective wake after sleep onset.

A211 Encore Presentation

Cardiovascular safety of pimavanserin in patients with neurodegenerative disorders

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Background: Cardiovascular adverse events contribute to increased mortality associated with antipsychotic use in elderly patients with dementia-related psychosis (DRP), and prolonged QT intervals in such patients increase risk of serious/fatal arrhythmias. Thus, cardiovascular safety is an important consideration when treating patients with neurodegenerative disorders (NDD), including DRP. We evaluated cardiovascular safety of pimavanserin in patients with NDD.

Methods: Safety data were pooled from 8 double-blind, placebo-controlled, parallel-group studies for patients with NDD treated with ≥1 dose of pimavanserin (34 mg) or placebo once daily. Electrocardiograms were reviewed centrally, and electrocardiogram parameters from this evaluation were summarized with descriptive statistics as changes from baseline and proportion of patients with potentially clinically important electrocardiogram changes.

Results: Among the 580 and 649 patients treated with pimavanserin and placebo, respectively, median ages were 74.0 and 74.0 years, 92.2% and 93.5% were white, 59.1% and 60.4% had ≥1 vascular disorder, and 45.3% and 47.9% had hypertension, respectively. Mean (SE) change in corrected QT interval using Fridericia's formula (QTcF) from baseline to last postbaseline assessment was 5.2 ms (1.14) in the pimavanserin group and 0.0 ms (0.67) in the placebo group. QTcF >500 ms was reported in 0.2% of patients in both groups. Change from baseline in QTcF >60 ms was reported in 1.5% of pimavanserin and 0.5% of placebo patients. None of the patients with these QTcF interval values had associated treatment-emergent adverse events (TEAEs). Electrocardiogram-associated TEAEs reported in ≥1% were atrial fibrillation (1.2% pimavanserin, 0.6% placebo) and prolonged QT (1.0%, 0.8%, respectively). Serious cardiac-related TEAE occurred in 0.2% of pimavanserin and 0.8% of placebo patients. There were no reports of torsade de pointes or ventricular tachycardia.

Conclusions: Data from this large group of patients with NDD, including a notable proportion of older patients with comorbidities, shows that pimavanserin prolonged the QT interval by an average of 5.2 ms compared with placebo. Patients with potentially clinically important changes in QTcF did not report associated TEAEs. Results were consistent with previous findings.

A212

Screening for Elder Abuse with Digital Health Technology

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Background: Elder Abuse is a national public health problem that affects older adults regardless of race, ethnicity, education, or socioeconomic status. Abuse includes physical, emotional, sexual, and financial abuse along with neglect. The prevalence of abuse in the United States is estimated to range from 5% to 10% of community-dwelling older adults, and it is estimated that only 1 in 24 cases become known to authorities[1,2].

Methods: We developed and tested a digital health tool designed to screen for abuse suspicion. This tool is designed to run on tablets, uses a digital coach to conduct quick self-administrated screening, and includes various multimedia elements such as text-to-speech, videos, and animations to educate and screen for abuse.

Results: We conducted a front-end usability evaluation with 15 older adults to test our tool on an iPad. Participants were 60 years or older, with varying degrees of comfort with using technology. The overall feedback from the usability study was positive, and 93% of participants indicated that they would recommend this tool to others. Participants specified that the tool interface was very easy to use for each given task, with an average of 4.9 on a 5-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). The feasibility of the tool is currently being tested among 800 older patients at a busy emergency department; the corresponding results will be discussed.

Conclusions: Our tool uniquely places the elder abuse screening process in the hands of the older adult instead of the healthcare provider. By prioritizing and addressing the needs of older adults, our hope is that this tool will help bridge an important knowledge gap in the current elder abuse literature and address safety and ethical concerns regarding traditional elder abuse screening.

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A213 Encore Presentation

Empagliflozin Reduces The Total Burden Of Cardiovascular Events Including Recurrent Events In The EMPA-REG OUTCOME Trial

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Introduction In EMPA-REG OUTCOME, empagliflozin (EMPA) reduced the risk of major adverse cardiovascular (CV) events (MACE), CV mortality and hospitalization for heart failure (HHF) in analyses of first events in patients with type 2 diabetes (T2D) and atherosclerotic CV disease (ASCVD). We assessed the effect of EMPA on the total burden of CV events.

Methods Patients were randomized to EMPA 10 mg, EMPA 25 mg, or placebo. We assessed the effects of EMPA pooled vs placebo on any (first plus recurrent) adjudicated CV event (composite of myocardial infarction (MI), stroke, coronary revascularization (CR), hospitalization for unstable angina, transient ischemic attack, HHF, and CV death) using a negative binomial model.

Results Among 7,020 treated patients (mean [SD] age 63 [9] years), there were 2,142 total adjudicated CV events, most frequently CR (585), MI (421), and HHF (321). EMPA reduced the risk of total adjudicated CV events by 24% vs placebo (event rate ratio [95% CI]: 0.76 [0.67, 0.87], p<0.0001). The data suggest a directionally similar treatment effect in age groups <65 or ≥65 yrs and a reduction in risk in older patients (≥65 yrs (<65 yrs, N=3893: 0.87 [0.72, 1.05]; ≥65 yrs, N=3127: 0.66 [0.55, 0.80]; p=0.0508 for interaction)). Risk reductions were driven predominantly by reductions in HHF (0.58 [0.42, 0.81], p=0.0012), MI (0.79 [0.620, 0.998], p=0.0486), and CV death (0.62 [0.49, 0.77], p<0.0001). The estimated number of total CV events prevented with EMPA was 414.4, and the number of patients needed to treat over 3 years to prevent one event was 10.2 [6.6, 22.7].

Conclusions EMPA produced a sizeable risk reduction in the total burden of any adjudicated CV outcome, including HHF, MI and CV death, in patients with T2D and ASCVD.

A214

Predictors of Older Adult Driving Performance Under Simulated and On-Road Driving Conditions

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Background: Car driving in older adults is a public health concern, although research is unclear on whether the best predictors of their driving performance lies within cognitive, physical or sensory factors. This project assessed predictors of driving success in older adults under two drive scenarios. First, subjects operated a driving simulator that replicated real-world driving. Second, subjects conducted an on-road driving test scored for driving strategy and performance. The study objective is to ascertain the complementarity of the two driving scenarios and to determine the cognitive and perceptual predictors of driving success.

Methods: Sixty-one cognitively intact community dwelling older adults (66–92 yrs; *M*=78.9) completed the simulated driving test using a STISIM driving simulator as well as an on-road test and cognitive-perceptual battery. The battery of tests included a cognitive screen, gait speed, Time-Up-and-Go, a visual recall test, and useful field of view (UFOV). On-road driving was assessed in a 45-min test with a certified driving instructor and measured with the Record of Driving Errors, a standardized score system that calculates specific driving errors, including errors of operation (i.e., basic control), tactics (i.e., turning or switching lanes) and strategy (i.e., judgment, planning and anticipation).

Results: Zero-order correlations indicated moderate association between on-road driving strategic errors and simulator driving speed deviation (r=.46, p<.01), although no other significant correlations between on-road and simulator driving. We conducted a relative weights analysis in which the percentage of overall variance within the maximal model is accounted for by each variable independent of the effects of the other variables. When considering either driving on-road or simulator errors, the best predictors (capturing 90% of observed variance) were the cognitive screen, useful field of vision, and visual recall. Other variables accounted for less than 10% of the observed variance, including age.

Conclusions: Simulator and on-road driving performance were minimally correlated. The best predictors for driving performance were UFOV, visual recall, and the cognitive screen, regardless of age.

A215

A Telehealth Pilot of Me & My Wishes

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Background:

Long-term care (LTC) settings, such as assisted living and nursing homes, rarely have systematic approaches to elicit and communicate residents' end-of-life (EOL) care preferences. Me & My Wishes provides a novel and systematic approach for residents living with Alzheimer's and related dementias to record videos about their care preferences that can be shared with staff and families in the care plan meeting. With the onset of COVID-19, we modified on-site intervention procedures to a remote, telehealth platform. In this pilot, we assessed the feasibility of telehealth-delivered Me & My Wishes.

Methods:

From one assisted living and two nursing homes, we enrolled five residents living with dementia, their families (n=4) and care team members (n=8). We used the University of Utah Telehealth Network for research staff to video record residents remotely and for the facility care plan teams to help set up video recording, initiate the care plan meeting, share the video, and prompt conversation with meeting participants. We surveyed residents, family, and staff on items related to the ease of setting up telehealth, connecting to the Internet, and communicating with meeting participants, using a scale of 1=strongly disagree to 5=strongly agree and open-ended questions. We performed descriptive analyses.

Results:

Residents reported that video recording via telehealth "worked well" and that they could see and hear the person they were talking to as well as if it were done in person. Staff strongly agreed that setting up video recording using telehealth was easy (mean=5), and disagreed that connecting to the internet was problematic (mean=1) or that residents needed a lot of help setting up for video recording (mean=1.4). At the time of sharing the video, care teams easily connected with research staff; family participation was limited. Connecting to the care plan meeting via telehealth was positive for the family member who participated. All respondents agreed that sharing the video facilitated conversation about the resident's preferences.

Conclusions:

Our findings suggest that Me & My Wishes can be delivered via a telehealth to achieve the program's goal of facilitating conversations about EOL preferences among residents living with dementia, staff, and remote family members, thus improving care coordination even when the post-COVID-19 LTC environment complicates or precludes in-person meetings.

A216

Impact of Sleep on Chronobiology of Micturition in the Elderly

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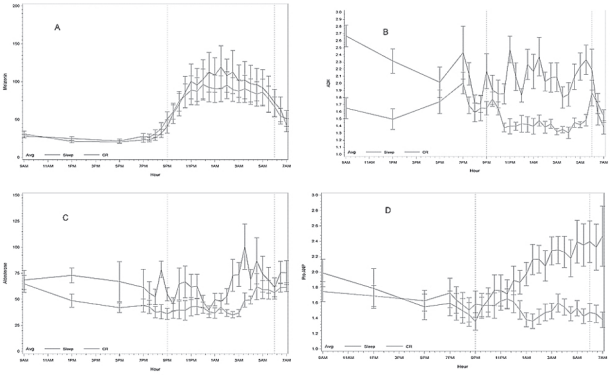
Background: Nocturnal polyuria or higher nighttime urine production is the most prevalent cause of nocturia among the elderly. While studies in the young have shown a strong concordance between sleep and nocturnal surge in secretion of hormones that control water and salt excretion: antidiuretic hormone (ADH), the renin-angiotensin-aldosterone system, and atrial natriuretic peptide (ANP), the relation is not clear among the elderly. We conducted this study to better understand the pathophysiology and the role of sleep underlying this disruption of the diurnal excretory pattern.

Method: We recruited healthy older adults aged 65 or more without insomnia or nocturia who underwent two 24-h studies at our Clinical Research Center, 6 weeks apart in: 1) a normal sleep-wake protocol, and 2) a constant routine (CR) protocol that removed the masking influence of sleep, posture, and other confounders. During each 24-hour study we collected plasma (every 4 hours 8am-7pm, and every 30 minutes 7pm-7am) to measure the rhythm of ADH, renin, angiotensin II (ANG II), aldosterone, and ANP. Circadian rhythms were assessed with phase and amplitude of plasma melatonin rhythms.

Results: Nighttime awakening during the CR protocol significantly suppressed the ADH, aldosterone, and ANP levels during the 9h nighttime sleep compared with the normal sleep protocol (Fig.1). Additionally, we found that the participants with no deep or N3 stage of sleep had significantly lower levels of renin than those with any deep sleep. This was further suppressed during the CR protocol.

Conclusion: These results demonstrate that the 24-h variations in secretion of these renal regulatory hormones are not circadian in nature but are related to sleep processes.



The 24-h plasma variations in (A) melatonin, (B) ADH, (C) aldosterone, and (D) ANP during normal sleep and constant routine (CR) protocols

A217

Feasibility and Acceptability of a Technology-Based, Rural Weight Management Intervention in Older Adults with Obesity

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Background: Older adults with obesity residing in rural areas have reduced access to weight management programs. We determined the feasibility, acceptability and preliminary outcomes of an integrated technology-based health promotion intervention in rural-living, older adults using remote monitoring and synchronous video-based technology.

Methods: A 6-month, non-randomized, non-blinded, single-arm study was conducted from October 2018 to May 2020 at a community-based aging center of adults aged ≥65 years with a body mass index (BMI) ≥30 kg/m^2. Weekly dietitian visits focusing on behavior therapy and caloric restriction and twice-weekly physical therapist-led group strength, flexibility and balance training classes were delivered using video-conferencing to participants in their homes. Participants used a Fitbit Alta HR for remote monitoring with data feedback provided by the interventionists. An aerobic activity prescription was provided and monitored.

Results: Mean age was 72.9±3.9 years (82% female). Baseline anthropometric 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. A total of 142 participants were screened (n=27 ineligible), and 53 consented. There were nine dropouts (17%). Overall satisfaction with the trial (4.7+0.6, scale: 1 (low) to 5 (high)) and with Fitbit (4.2+0.9) were high. Fitbit was worn an average of 81.7±19.3% of intervention days. In completers, mean weight loss was 4.6±3.5kg or 4.7±3.5% ($p<0.001$). Physical function measures of 30-second sit-to-stand repetitions increased from 13.5±5.7 to 16.7±5.9 ($p<0.001$), 6-minute walk improved by 42.0±77.3m ($p=0.005$) but no differences were observed in gait speed or grip strength. Subjective measures of late-life function improved (3.4±4.7 points, $p<0.001$).

Conclusions: A technology-based obesity intervention is feasible and acceptable to older adults with obesity and may lead to weight loss and improved physical function.

A218

Anti-Platlet Therapy and Cognitive Function Outcome

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Background

Emerging data suggests increased platelet activation and aggregation with aging is associated with a higher rate of amyloid protein deposition in brain that can contribute to pathogenesis of Alzheimer's Disease. Clopidogrel shown to decrease platelet activation and reduce amyloid deposition in mouse models[1]. We aimed to investigate the effect of anti-platelet medications on long-term cognitive function outcome.

Method

We performed a longitudinal retrospective analysis on a cohort aged 50 or older with a baseline normal or mild cognitive impairment (MCI) using data from the National Alzheimer's Coordinating Center. The study cohort were stratified based on medication use to four groups of clopidogrel, aspirin, clopidogrel plus aspirin use and control group (no clopidogrel or aspirin use). The primary outcomes were

time to clinical event (progression to MCI or dementia from normal cognition or progression to dementia from MCI state) defined as a change in Clinical Dementia Rating global score (CDR) and change in Mini-mental State Examination over a four-year follow up. Secondary outcomes were change in domain-specific cognitive tests of executive function, attention, and memory. We used Cox proportional hazards regression analysis to compare treatment groups after controlling for 13 confounding covariables.

Result

A total of 1,521 participants were included in the analysis, including clopidogrel (n= 122), aspirin (n= 733), clopidogrel plus aspirin (n= 86) and control (n=580). The aspirin group had a statistically significant effect in reducing the risk of progression in cognitive decline (CDR score) (HR 0.66, 95% CI 0.46-0.93) (p<.005). The clopidogrel group (HR 1.1, 95% CI 0.72-1.95) and aspirin plus clopidogrel group (HR 0.78; 95% CI 0.34-1.80) had no significant effect on time to clinical event CDR global score. The secondary outcome analysis result will be presented.

Conclusion

Aspirin use reduces the rate of cognitive decline in patients with normal cognition or mild cognitive impairment. There was no evidence that clopidogrel had any protective effect on cognitive function.

Reference:

Donner L, et al. "Platelets contribute to Aβ aggregation in cerebral vessels through integrin αIIbβ3–induced outside-in signaling and clusterin release." Science Signaling 9.429 (2016): ra52-ra52

A219

Nocturnal Polyuria and Sleep Microarchitecture: Associations Beyond Time in Bed

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Background

Nocturia is the most common cause of sleep interruption among older adults, but there is limited research regarding the role of poor sleep contributing to nocturnal polyuria (NP) or increased sleep time urine production, the most common attribute of nocturia in this population. The current study aims to assess the role of sleep, especially first uninterrupted sleep period (FUSP), and deep sleep (N3 sleep stage) in worsening NP among older adults.

Methods

We analyzed the data collected at baseline from an ongoing study assessing the role of sleep in treatment of nocturia. We are recruiting participants aged 65 or over with ≥2 voids/night and concomitant subjective sleep difficulty. Baseline data from 36 participants, 77% women, with mean age 72±5 years, was analyzed. All had completed 3-day voiding diary that included time of voiding, and voided volume. One night of home sleep study was completed concomitant with voiding diary to determine sleep stages. Participants with a nocturnal polyuria index greater than 35% were categorized as having NP (nocturnal polyuria index = nocturnal urinary volume per 24-hour urine volume). Associations between NP and various sleep parameters including latency to deep sleep, and percentage of total sleep time spent in deep sleep were determined.

Results

Overall, 73% of the participants had NP. Despite spending similar time in bed, those with NP had a shorter FUSP (163±55 vs 210±44 minutes, p=.02) and the difference remained significant even after adjusting for age and body mass index. Additionally, compared with those without NP, those with NP had a significantly longer latency to deep sleep (79±92 vs 29±14 minutes, p=.01), and spent significantly shorter duration in deep sleep (16±12 vs 30±17%, p=.009).

Conclusion

Among older adults with nocturia, shorter FUSP, and lack of deep sleep is associated with NP

A220 Encore Presentation

National Trends in Delirium Rate in Hospitalized Older Adults with Heart Failure

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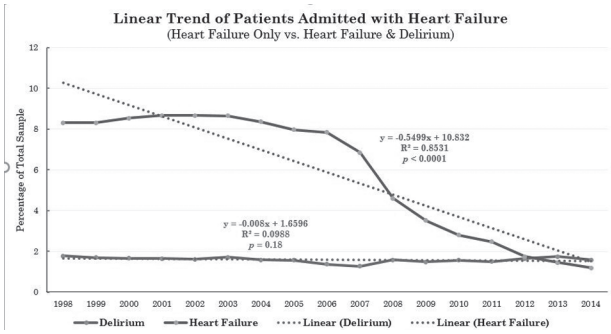
Delirium is common in hospitalized older adults with heart failure (HF). A decline in primary HF hospitalizations and improved care may result in a downward trend in delirium rate. However, delirium is often under recognized. Hence, national efforts in delirium education may result in an increase in rate over time due to better recognition. This study was performed to investigate the rate of delirium over a 16 years' time period in older adults with HF

Methods: This study used the National Inpatient Sample (NIS), a representative sample of 20% of the national hospitalizations. ICD 9 diagnostic codes were used to identify HF and delirium

Results: A total of 1,820,818 patients with a diagnosis of HF and age > 64 years were identified from 1998 to 2014. Overall, 61% were white, 56 % female, mean age was 75 years and mortality 5%. Delirium was identified in 28,987 (1.6%) patients. The number of HF patients reduced from 151,329 in 1998 to 21,782 in 2014. Delirium rate was 1.8% in 1998 and 1.6% in 2014. Patients with delirium when compared with those without delirium were older (mean age 81.6 years vs. 79 years); had longer length of stay (7.1 vs. 5.3 days) and higher mortality (13% vs 4.8%). Variables associated with delirium in multivariate analysis included females (OR=0.87; 95% CI), black race (OR 0.73;95% CI 0.69-0.78), hispanic ethnicity (OR 0.79; 95% CI 0.75-0.84), white race (OR 0.96; 95% CI 0.94-0.99), in-patient mortality (OR 2.6; 95% CI 2.5-2.7), age (OR 1.04; 95% CI 1.04-1.04), length of stay (OR 1.015; 95% CI 1.014-1.016)

Conclusion: The overall prevalence of delirium was much lower than expected and declined over the 16 years' time period. Most importantly those with delirium had 2.6 times higher risk of inpatient mortality as compared to those who did not have delirium



A221

The Impact of Personal Factors and Patterns of Care on Outcomes for Older Adults Diagnosed with Solid Tumors.

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Background: Research suggests that cancer prognosis, treatment, and outcome are complex and intertwined. However, while researchers found differences in health outcomes based on personal factors as a prevailing public health problem, sparse research addresses patterns of care and how issues of aging impact quality palliative care metrics such as hospital length of stay. Examining the association among age groups and patterns of care may inform pathways of advance care planning to help reduce disparities in outcomes for older adults with solid tumors.

Methods: We conducted a retrospective cohort analysis of older adult patients at a large Southeast academic medical center using data restricted to ICD10 codes for solid tumors. We obtained measures of central tendency and frequencies to investigate the relationship

between patterns of care and age, gender, race, comorbidities, and insurance status. We performed bivariate tests and multivariable logistic regressions to examine demographics, patterns of care, and length of stay.

Results: The sample (n=4495) of adult cancer patients was 50% female, 51% white, and mostly (81%) high social economic status (SES). The mean age was 66.24 years (SD=15.23). Median length of stay was 12.88 days. Over 95% of sample reported multiple comorbidities while 76% reported enrollment in government insurance. Treatment patterns included 596 (14%) chemotherapy, 402 (9%) radiation, 415 (9%) both chemotherapy and radiation; and 3015 (68%) reported not having any treatment. Based on the conventional result (OR= 1.64; confidence interval 1.24, 1.99), high SES patients were 1.64 times more likely to have treatment compared to the low SES patients.

Conclusion: Low SES and older adults were more likely to experience differential patterns of treatment. Further research is needed to disentangle complex individual variables versus age categories to derive a more valid and precise estimate of the association between older adults and treatment in cancer patients. It is important to identify factors that account for the link to health across all age strata to elucidate mechanisms previously ignored and misunderstood in the relationship to negative outcomes.

A222

Older Adults With Visual but Not Auditory Impairment Are Less Likely to Have a Usual Source of Health Care

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Background: Auditory and visual impairment are increasingly prevalent with age, negatively affect functioning, and are associated with poor health outcomes, worse mental health, and suboptimal care for older adults. We know relatively little, however, about how sensory impairment may affect health care access. Our goal was to examine the association of auditory and visual impairment with whether an older adult reported having a usual source of health care.

Methods: The National Health and Aging Trends Study (NHATS) longitudinally examines a nationally representative cohort of United States Medicare beneficiaries aged 65 years and older with annual in-person interviews. We examined participants who were interviewed in 2015. Our primary outcome was determined by this question: "Is there a doctor that you think of as your regular doctor, that is, a doctor you usually go to when you are sick and need advice about your health?" Our primary independent variables were self-reported auditory impairment (unable to "hear well enough to carry on a conversation in a room with a radio or TV playing") and visual impairment (unable to "see well enough to read newspaper print"). Bivariate and logistic regression analyses examined the association of auditory and visual impairment with the presence of a usual source of health care.

Results: Among 7,513 older adults, 11.2% (N=946) and 4.7% (N=486) had auditory or visual impairment. In the unadjusted regression analysis, people with visual but not auditory impairment had decreased odds of having a usual source of health care (visual impairment: odds ratio, OR=0.59, 95% confidence interval, CI: 0.36-0.98; auditory impairment: OR=0.95, 95% CI: 0.65-1.40). A similar relationship was observed in the multivariate regression analysis that adjusted for covariates (visual impairment OR=0.55; 95% CI: 0.31-0.98; auditory impairment: OR=0.96, 95% CI: 0.59-1.56).

Conclusions: Having a regular care provider is associated with better health care quality, improved patient satisfaction, and reduced costs. That older adults with visual impairment were less likely to report having a usual source of health care suggests that addressing potential barriers to having a usual source of care may improve health outcomes among older adults with vision loss.

A223

Bullseye – targeted geriatric assessment improves prognostication in hospitalized older adults

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Background: Comprehensive geriatric assessments can predict adverse outcomes in older adults. However, they can be unpractical in real-life clinical work. We investigated the effectiveness of using a targeted geriatric assessment to predict death in hospitalized older adults. **Methods:** We studied a cohort of 911 patients aged +60 years hospitalized in a university hospital in Brazil, between 2017 and 2020. Patients were routinely assessed according to a detailed admission protocol, and we reviewed our data to consolidate scores for the 10-minute Targeted Geriatric Assessment (10-TaGA). The 10-TaGA is a brief multi-domain screener validated to predict adverse outcomes in acute care services. It measures social support, healthcare utilization, falls, polypharmacy, functional status, cognition, self-rated health, depression, nutrition, and gait speed (scores=0-1; 1=worse). Our primary outcomes were time-to-death in 30, 60, and 180 days. We used Cox proportional hazards models to investigate the association between the 10-TaGA and mortality. We also estimated areas under the ROC curves to compare different prediction models. **Results:** Median age was 80 years, and 61% were women. The 30, 60, and 180-day cumulative incidence of death were, respectively, 14, 17, and 21%. 10-TaGA scores were independently associated with time-to-death in 30, 60, and 180 days, with respective hazard ratios and 95% confidence intervals of 13.4 (3.60-49.7), 9.15 (2.86-29.2), and 7.21 (2.62-19.8). Models combining the 10-TaGA with other clinical predictors significantly improved outcome discrimination (Table 1). **Conclusions:** 10-TaGA scores were strongly associated with time-to-death in hospitalized older adults. The instrument also significantly improved the accuracy of mortality prediction when combined with data from demographics, comorbidities, and laboratory tests.

Table 1. Impact of the 10-min Targeted Geriatric Assessment (10-TaGA) on outcome discrimination

	30-day mortality AUC (95%CI)	p-value	60-day mortality AUC (95%CI)	p-value	180-day mortality AUC (95%CI)	p-value
Model 1	0.76 (0.72-0.81)		0.73 (0.68-0.77)		0.72 (0.68-0.76)	
Model 2	0.82 (0.78-0.86)	<0.001*	0.81 (0.77-0.85)	<0.001*	0.78 (0.75-0.82)	<0.001*
Model 2 + 10-TaGA	0.85 (0.82-0.89)	0.012**	0.84 (0.80-0.87)	0.029**	0.80 (0.77-0.84)	0.072**

AUC=area under the ROC curve; 95%CI=95% confidence interval
Model 1= age, sex, Charlson Comorbidity Index; Model 2= Model 1 + C-reactive protein, albumin, urea
***Models 1 vs. Model 2**
****Model 2 vs. Model 2 + TaGA**

A224

Impact of Deintensifying Diabetes Regimens on All-Cause Negative Events in Older Veteran Nursing Home Residents

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Background: Guidelines recommend against tight glycemic control in older nursing home (NH) residents with advanced dementia (AD) and/or limited life expectancy (LLE). However, outcomes of deintensifying diabetes medications in this population has not been studied. We examined the impact of deintensifying diabetes medications on all-cause negative events in this population.

Methods: National, retrospective analysis of VA NH residents ≥65yo with diabetes and AD/LLE for fiscal years 2009-15. We used the VA Residential History File, Minimum Data Set, Corporate Data

Warehouse, Vital Status File, and Medicare claims. We identified residents who were potentially overtreated for diabetes (HbA1c ≤7.5% and ≥1 diabetes medication). Deintensification was assessed in the 30 days after HbA1c measurement and defined as a dose decrease or discontinuation of a non-insulin agent or stopping insulin, without no new agents or dose increases, sustained for ≥7 days. Cox proportional hazards models estimated the association of deintensification with all-cause negative events (i.e., emergency (ED) visit, hospitalization, death) within 60 days of deintensification. We used entropy weights to balance covariates across whether residents had medications deintensified.

Results: Among 2,359 male VA NH residents with LLE/AD and potentially overtreated for diabetes, most were ≥75 years old (62%) and white (76.3%). Deintensification was observed in 25%. All-cause negative events occurred in 34.3% (49.3% ED visits, 26.1% hospitalizations, 24.6% death). Causes of negative events were generally unrelated to diabetes (e.g., septicemia, heart failure, pneumonia). In entropy-weighted models, deintensification was not associated with likelihood of all-cause negative events (HR=1.07 [0.91-1.28], p=0.39).

Conclusions: Deintensification of diabetes medications in NH residents with AD/LLE who were potentially overtreated did not appear to increase all-cause negative events. Our findings support recommendations for relaxed treatment goals and suggest that deprescribing is safe in older NH residents with tight glycemic control.

A225

Social Isolation and Subsidized Housing: Prevalence and Risk Factors Among Older adult residents

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Objectives

Social isolation among older adults is an important but underrecognized risk for poor health outcomes. Little is known about the prevalence and factors associated with social isolation among older adults who live in subsidized housing.

Methods

Mercy Housing, a large non-profit housing organization, across 13 states conducts an annual assessment of sociodemographic and health characteristics on a rolling basis during the course of the calendar year. We use data from 2019 that included the Lubben Social Network Scale (6 item). Utilizing this deidentified data, we estimated the prevalence and correlates of social isolation.

Results

Of the 4,586 respondents of the Senior Health and Wellness Assessment, 3,496 responded completely to the Lubben Social Network scale. 24% of these self-responding, community-dwelling older adults were characterized as socially isolated. Multivariable logistic regression indicated that being Black, Hispanic, and Asian, having higher levels of self-rated health, and reporting that they feel that they can rely on their neighbors were all independently associated with lower odds of social isolation, after adjusting for covariates.

Discussion

Social isolation is an important and potentially modifiable risk that affects a significant proportion of the older adult population who live in subsidized housing. These findings fill an important gap in the literature on social isolation among low income older adults who live in subsidized housing.

A226

Identifiable Support on Functional Outcomes in Older Adults who Live Alone

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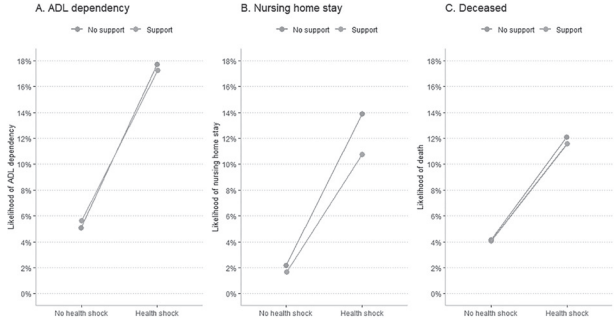
Background: Older adults who live alone are vulnerable. However, some are well-supported and may not be as vulnerable as their living status suggests.

Methods: We performed a longitudinal study of Health and Retirement Study subjects who were ADL independent and lived alone. We determined (1) the association between identifiable support and death, ADL dependency, and nursing home stay and (2) if identifiable support buffers the effect of a health shock (hospitalization or new cancer, stroke, heart attack). We included adults ≥65 years living alone and functionally independent (2005-2015). Identifiable support was measured by asking if participants could identify a relative/friend who could help with basic care needs should the need arise. We used generalized estimating equations to account for confounders and repeat observations, and report the average marginal effect (AME).

Results: We included 4920 older adults who lived alone (median 76 years, 72% women). 62% were able to identify someone who could support them. Those with identifiable support were less likely to have a nursing home move over 2 years (adjusted, 6.7% vs. 5.2%, AME -1.4% p<0.001). In the absence of a health shock, identifiable support was not associated with a nursing home move. However, in the presence of a health shock, identifiable support was associated with lower rates of a nursing home move (AME -3.2%; 95%CI -5.2% to -1.1%). Identifiable support was not associated with ADL dependence or death in those with or without a health shock.

Conclusion: In older adults who live alone, identifiable support is associated with lower rates of nursing home moves. This association was only observed in the setting of a health shock. Based on these results, providing support to those who live alone in the setting of a health shock may impact nursing home costs and patients' ability to remain in the community.



A227

Factors Associated with Deprescribing Bisphosphonates in Nursing Home Residents with Dementia

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Background: Clinicians lack robust evidence for bisphosphonate use in nursing home (NH) residents with dementia, leaving uncertainty about when it is appropriate to continue or deprescribe these medications. We examined patterns of deprescribing oral bisphosphonates in NH residents with dementia.

Methods: We linked 2015-16 Medicare claims, Part D prescriptions, Minimum Data Set (MDS) 3.0 and Nursing Home Compare for non-skilled NH residents aged 65+ with dementia. We excluded those with non-continuous Medicare enrollment or hospice use. We identified residents with an oral bisphosphonate prescription overlapping

the first 14 days of the stay and defined deprescribing as a gap in medication supply ≥90 days during 1 year. Independent variables included demographics, NH characteristics, and resident characteristics that may serve as reasons for deprescribing, including: reduced mobility (transfer ability, locomotion, mobility devices); life-limiting conditions (dementia severity, cancer, end-stage renal disease, heart failure); potential adverse effects (appetite/weight loss, swallowing difficulty), and comorbidity (Charlson Comorbidity Index, total medications, hospitalizations). We used competing risks regression to estimate associations with deprescribing bisphosphonates.

Results: Among NH residents with dementia treated with oral bisphosphonates (n=5,312), most were ≥80 years old (72%), female (90%), and white (81%). More than 30% had severe dementia, and >10% were totally dependent for transfer ability and mobility. Bisphosphonates were deprescribed for 15%. In adjusted analyses, deprescribing was associated with age ≥90, newly admitted, greater mobility dependence, swallowing difficulty, greater Charlson Comorbidity score, and continuing care retirement community (vs. other NH). Factors associated with lower likelihood of deprescribing included cancer, >5 medications, and Western region.

Conclusions: Bisphosphonate deprescribing was more likely in NH residents with advanced age, reduced mobility, greater comorbidities, and life-limiting conditions, suggesting decision-making based on prognosis. However, bisphosphonates were continued for a majority of residents with severe dementia. Future studies should evaluate outcomes of deprescribing bisphosphonates in this population.

A228 Student Presentation

Factors Associated with New Prescribing of Potentially Inappropriate Medications in US Older Adults with Multimorbidity using Multiple Medications

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Background: The use of potentially inappropriate medications (PIMs) is common in older multimorbid adults with polypharmacy. The aim of this project was to investigate patient factors associated with the new outpatient prescribing of PIMs in older multimorbid adults already with polypharmacy.

Methods: In this retrospective cohort study, we used linked Medicare claims and electronic health records from seven hospitals and medical centers in Massachusetts (01/01/2007-12/31/2014) to obtain complete information on both dispensing and prescribing. There were 17,912 patients aged ≥65 years with multimorbidity and polypharmacy, who had not used or been prescribed a PIM in the prior 365 days before an office visit defined as cohort entry. All patients used drugs from ≥5 pharmaceutical classes for ≥90 days (to define polypharmacy) and had ≥2 chronic conditions (multimorbidity). PIMs were defined using the Beers criteria of the American Geriatrics Society (2019 version). We used multivariable Cox regression analysis to estimate the effect of measured baseline demographic and clinical characteristics on the probability of being prescribed a PIM during a 90-day follow-up period.

Results: 10,497 (59%) of patients were female and mean age was 78.0 (SD=7.5). The mean numbers of chronic conditions and chronic medications were 5.1 (SD=2.3) and 6.1 (SD=1.4), respectively. 447 patients (2.5%) were prescribed a PIM during the follow-up period. Male sex (hazard ratio (HR)=1.3; 95%CI 1.1-1.6), age, (≥85 years: HR=0.8, 95%CI 0.6-0.99), ambulatory outpatient visits (18-29 visits: HR=1.4, 95%CI 1.1-1.9/ ≥30 visits: HR=2.1, 95% 1.5-3.0), and heart failure (HR=1.4, 95%CI 1.1-1.8) were found to be independently associated with being newly prescribed a PIM.

Conclusion: Several demographic and clinical characteristics, including factors suggesting lack of care coordination, were found to be associated with the new PIM prescribing. This knowledge could inform the design of interventions to optimize pharmacotherapy in this patient group.

A229

High Reports of Concern for Illegal Substance Use Among Community-Dwelling Older Adults Living With HIV

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Background: One third of HIV^+ adults report current illegal substance use (ISU) compared to 10% of HIV^- adults. Less is known about ISU in older adults (OA) regardless of HIV status, but improved understanding remains critical to the delivery of patient-centered care and reduction of associated harms (including HIV transmission).

Methods: We partnered with the San Diego Lesbian Gay Bisexual Transgender (LGBT) Community Center to design and administer an online questionnaire to persons residing in the San Diego county with the highest HIV prevalence between August 2019 and February 2020. We collected self-reported data on socio-demographics, HIV status and concerns about ongoing ISU. Pearson's χ^2 test tested for differences between participants by age [adults (age 25-49 years) and older adults (50+)] and HIV status. Multivariable Poisson regression estimated adjusted prevalence ratios (aPR) for the effect of age and HIV status on concern about ISU controlling for age, gender identity, sexual orientation, race/ethnicity, relationship status, education, and income.

Results: Of 2815 respondents, 1346 (48%) were OA (≥ 50 years). HIV^- OA were male (57.4%), then female (38.3%) and transgender/other (4.3%). A significantly higher proportion of HIV^+ OA were male (77.9%). A similar proportion of OA identified as LGBT (96.7% HIV^- vs. 98.3% of HIV^+). HIV^- OA were more likely White (76.5% vs. 48.1%) while HIV^+ OA were more likely Latinx (30.2% vs. 4.6%). HIV^+ OA were also more likely to attain at least a college/trade school education (75.3% vs 69%), yet a greater proportion reported a gross annual household income of < $50,000 (45.3% vs 7.1%).

Compared to the reference population of HIV^- adults concerns about ongoing ISU were highest among HIV+ adults (aPR = 2.84, 95% CI: 2.46-3.29) followed by HIV^+ OA (aPR 2.24, 95% CI: 1.82-2.76) and HIV^- OA (aPR = 1.69, 95% CI: 1.38-2.07).

Conclusions: Compared to HIV^- adults, a high proportion of HIV^+ adults and OA with and without HIV report concerns about ongoing ISU. These results highlight the need to routinely screen and assess older adults for unhealthy substance use, especially among those living with HIV.

A230

Experiencing Conflict when Caring for Persons Living with Dementia During the COVID-19 Pandemic

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BACKGROUND: Care partners (CP) providing support for persons living with dementia (PLWD) often experience physical, emotional, and financial hardships which may negatively affect both members of the caregiving dyad. During the COVID-19 pandemic, stay-at-home orders and social distancing recommendations were given to reduce virus transmission. Research is needed to assess

the impact of policy responses to COVID-19 on formal services for PLWD and the care dyad's well-being and interpersonal interactions. This presentation seeks to address these needs by exploring the pandemic's impact on caregiving dyads.

METHODS: Data from this observational, cross-sectional analysis were drawn from a larger longitudinal study examining the relationship between PLWD aged 65+ and their CPs recruited from clinical sites in Southern California. Interviews took place via videoconferencing, during which CPs also completed a self-administered survey. Data on health service utilization and changes in sources of care, types of care provided, relationship quality, and sources of relational conflict during the COVID-19 pandemic were collected and analyzed using descriptive statistics and tests of independence.

RESULTS: While we will report on data from ongoing data collection, preliminary results (n=9 dyads) suggest that the dyad adherence to stay-at-home orders increased conflict between the PLWD and their CP. CPs were concerned about the impact of the pandemic on the PLWD. Several CPs reported increased stress as a result of social distancing or quarantine measures, and many reported an increase in conflict with the PLWD surrounding decisions to run errands or gather socially outside the home or welcome visitors into the home. Preliminary data were collected from dyads of higher socio-economic status (SES); data from dyads of lower SES will also be discussed.

CONCLUSIONS: Though necessary to prevent COVID-19 transmission, social distancing and quarantine measures may also increase dyadic interpersonal conflict and CP stress, with potential implications for elder abuse and neglect. These unintended consequences may be greater among dyads with lower SES. During healthcare visits, clinicians should assess CP stress and anxiety and, if necessary, provide referrals for caregiver support services.

A231

The Longitudinal Association of Egg Consumption with Cognitive Function in Older Men and Women

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Background: The prevalence of Alzheimer's Disease and cognitive impairment are rising, making identification of modifiable factors associated with maintenance of cognitive function a public health priority. It is biologically plausible that egg consumption is associated with beneficial effects on cognitive function, but previous studies are sparse and results inconsistent. This study examines the prospective association of egg consumption with multiple domains of cognitive function in 1,515 older, community-dwelling men and women followed an average of 16.3 years.

Methods: Participants were 617 men and 898 women from the Rancho Bernardo Cohort aged 60 and older who were surveyed about egg intake/week at enrollment in 1972-74, and attended a 1988-91 research clinic visit when cognitive function was assessed with 12 tests. Sex-specific linear and logistic regression examined the association of egg intake/week with cognitive function scores and odds of impaired cognitive function.

Results: Egg intake ranged from 0-24/week (means=4.2±3.2 in men, 3.5±2.7 in women, p<0.0001). In men, 5.5% consumed no eggs/week, 11.0% 1 egg, 16.7% 2 eggs, 14.8% 3 eggs, 17.3% 4 eggs, 6.7% 5 eggs, 10.0% 6 eggs and 18.0% ≥7 eggs/week. In women, 9.9% consumed no eggs/week, 11.7% 1 egg, 17.9% 2 eggs, 17.9% 3 eggs, 16.3% 4 eggs, 6.7% 5 eggs, 6.6% 6 eggs and 13.0% ≥7 eggs/week. For both sexes, those who consumed more eggs/week had lower cholesterol, triglycerides, and rates of cholesterol lowering medication use. In men, age and education adjusted regressions showed egg intake was associated with better performance on Buschke total (p=0.04), long-term (p=0.02) and short-term (p=0.05) recall. Associations remained significant after additional adjustment for smoking, cholesterol, cholesterol lowering medication use, heart attack history and hypertension. No other associations of egg intake with cognitive function scores were found in men and no associations were observed in women before and after adjustment for covariates (ps>0.06). Egg intake was not significantly associated with odds of poor performance on Buschke long-term recall, Heaton immediate recall, MMSE, Trails B, or category fluency in either sex.

Conclusion: These reassuring findings suggest there are no long-term detrimental effects of egg consumption on multiple domains of cognitive function, and for men, there may be beneficial effects for verbal episodic memory.

A232

Vitamin and supplement use in middle-aged and older adults

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Background

Despite limited evidence of clinical benefits, vitamin and dietary supplement use is increasingly common among older adults. The aim of this study was to characterise the prevalence of vitamin and supplement use in a national sample of community-dwelling middle-aged and older adults and investigate the factors associated with their use.

Methods

This was a cross-sectional study using data from the Health and Retirement Study (HRS), a biennial, nationally representative survey of individuals aged 50 years and older in the United States. This study combined data from the 2013/14 Health Care and Nutrition Survey (HCNS) and 2012 Core Survey. The primary outcome was the use of any vitamin or supplement at least once a week. Secondary outcomes were the use of multivitamins and specific vitamin and supplement types. Multivariable regression models were used to identify factors associated with any vitamin and supplement use. All analyses were weighted and adjusted for the complex survey design of the HRS to obtain estimates reflective of the national population.

Results

A total of 6045 participants (weighted n = 70,469,721) were included in the final analytical sample (mean age 67.7 years, 59.3% female). Of these, 60,292,704 (85.6%) were regular vitamin/supplement users, with participants taking a mean of 3.2±0.1 different vitamins/supplements and 41.9% taking four or more. Multivitamins were the most common, used by 41,147,146 (58.3%) participants, with over half of these participants taking 6-9 pills per week and for 10 years or more. Other commonly used vitamins and supplements were vitamin D, fish oil, calcium, vitamin C, and vitamin B12. Older age (75+ years), female sex, higher education, daily alcohol use, vigorous physical activity, regular medication use, and arthritis were associated with higher odds of vitamin and supplement use. Conversely, current smoking and obesity were associated with lower odds of vitamin and supplement use.

Conclusions

The prevalence of vitamin and supplement use was high in this nationally representative sample of middle-aged and older Americans. Certain demographic, behavioural, and clinical factors are associated with their use. Given the lack of evidence for improving health outcomes, our findings suggest overuse of vitamins and supplements in people over the age of 50.

A233

Identification of Risk Factors for Self-reported Dysphagia in Older Adults Receiving Meal Support

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Background: Dysphagia is common in older adults with and without dementia. Dysphagia in community-dwelling older adults who receive meal support may show more physical frailty and reduced

ADL abilities than those without meal support. However, risk factors associated with dysphagia in this population are unknown. The purpose of the study was to examine the relationship between self-reported dysphagia and risk factors for dysphagia (demographic factors, nutrition and ADL status, chewing ability, dental conditions, and prior diagnoses of dementia, dysphagia, and pneumonia, and prior pneumonia hospitalization) in community-dwelling older adults receiving meal support.

Methods: 412 community-dwelling older adults over 65 years old (81.24±8.7) receiving Elder Nutation program participated in the study. Data were collected through administration of questionaries such as Nutrition Risk Screening questionnaire, and ADL and Instrumental ADL forms. The validated 10-item eating assessment tool (EAT-10) was used to assess self-reported dysphagia. Univariate and multivariate logistic regression will be conducted to examine the relationships.

Results: The preliminary data results with nine independent variables (nutrition status, ADL status, chewing ability, dental condition, prior diagnoses of dementia, dysphagia, and pneumonia, and prior pneumonia hospitalization) indicated that poor nutrition status (p=0.04), prior dysphagia diagnosis (p<0.001), and difficulty chewing (p=0.021), were associated with self-reported dysphagia (EAT-10 ≥ 3). Reduced ADL (p=0.94) and prior dementia diagnosis (p=0.96) were not associated with self-reported dysphagia. Among the participants who answered whether they had dementia, only 3.6% had prior dementia diagnosis. The prevalence of self-reported dysphagia in participants with prior dementia diagnosis was 6.7%.

Conclusions: Consistent with the findings of the prior studies, greater risk of poor nutrition, reduced chewing ability, and prior dysphagia diagnosis were significantly associated with self-reported dysphagia in community-dwelling older adults receiving meal support. Administration of dysphagia screenings and risk factor questionnaires may be useful in identifying dysphagia in this population for timely referral for swallowing evaluation and treatment. The results of the final analysis will be reported and discussed at the actual presentation.

A234

Quantifying daily patterns of physical activity decline after falls in glaucoma

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Background: Visually impaired older adults have a greater risk of falling, making them particularly susceptible to fall-related health consequences. We quantify longitudinal changes in daily patterns of objectively measured physical activity after falls in older adults with visual impairments.

Methods: 237 older adults with glaucoma from a prospective cohort study were included. Cumulative incidence of falls was determined through self-reported fall calendars. According to falls data collected in the first study year, participants were classified into three groups – multiple fallers (two or more falls), single fallers (exactly 1 fall), and non-fallers. Daily physical activity was measured over 1 week using a waist-bound accelerometer. Activity fragmentation was defined as the reciprocal of average activity bout duration (in minutes), with higher fragmentation reflecting shorter bouts of continuous activity. Multivariate linear mixed-effects models were used to assess 1) three-year longitudinal changes in activity fragmentation, and 2) accumulation of activity across six three-hour intervals from 5 AM to 11 PM.

Results: In adjusted models accounting for visual field damage and other factors, multiple fallers demonstrated greater annual declines (per year) in daily active bouts (-1.79 bouts/day, 95% confidence interval [CI]: -3.35, -0.22), daily active minutes (-17.15 minutes/day, 95% CI: -26.35, 7.94), and higher fragmentation (1%, 95% CI: 0, 2%) over the three-year follow-up period as compared to non-fallers; however, none of these measures declined significantly in single-fallers. In time-of-day analyses, multiple falls, rather than single fall, was significantly associated with greater annual declines in average steps over 5 PM to 8 PM interval (-27.07 steps/hour, 95%: -51.15, -2.99) compared to non-fallers.

Conclusion: In an older population enriched for visual impairment, multiple falls identified prospectively over 12 months led to more transient and fragmented activity over a 3-year period, and activity declines most pronounced during evening hours. These findings suggest that multiple fallers may experience a rapid decline in physical capacity and endurance.

A235

Frailty and Hospital Outcomes Among Veterans With COVID-19

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Introduction

Older adults have borne the brunt of the burden from COVID-19. They make up the majority of hospitalizations and deaths in the United States. However, the majority of older adults hospitalized for COVID-19 will survive. Frailty may be a useful risk-stratification tool for prognostication, shared decision-making, and discussing goals of care in this population. Smaller studies in Europe using the Clinical Frailty Scale support this idea. We assess the ability of a validated frailty index to risk-stratify patients hospitalized with COVID-19 in the VA Health Care System.

Methods

Data were obtained for veterans aged ≥65 years who had a positive test for SARS-CoV-2 between March 1 and October 22, 2020, with an ongoing admission or a new admission within 30 days after the test. For those with multiple admissions, only their first stay was considered. Comorbidities, vital signs, medications, and laboratory studies were obtained as covariates. Frailty was assessed using a validated 31-item cumulative deficit frailty index.

Analysis will be done by multiple logistic regression for 30-day and in-hospital mortality. Among those who survived past 30 days, we will also conduct multiple logistic regression to assess discharge to a facility.

Results

We identified 7,834 veterans admitted to a VA hospital with a positive COVID test. Cohort characteristics are given in table 1. Their average age was 76 years and average frailty index score was 0.219.

Discussion

Once finalized, the results of this analysis will help inform how useful a frailty index may be in risk-stratifying veterans admitted to the hospital with COVID-19.

Table 1

Age - Mean (SD)	76 (7.84)
White - N (%)	4,785 (61.1%)
African-American - N (%)	2,473 (31.6%)
Unknown/Other - N (%)	576 (7.4%)
Charlson Index - Mean (SD)	7.28 (3.01)
Non-Frail - N (%)	1,939 (24.8%)
Pre-Frail - N (%)	2,212 (28.2%)
Frail - N (%)	3,683 (47.0%)
2+ SIRS Criteria - N (%)	3,439 (43.9%)

A236

Frailty Index from Common Laboratory Tests (FI-LAB) as a Predictor of In-Hospital Mortality in Hospitalized Older Veterans

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Background: Frailty, a syndrome characterized by vulnerability to stressors and is associated with disability, increased healthcare utilization, morbidity, and mortality. Frailty assessments fail to detect acute changes in frailty status. The FI-LAB utilizes laboratory values and vital signs to detect acute changes using the deficit accumulation model. Previous studies have shown an association between the FI-LAB score and mortality in hospitalized older adults. However, there are no studies in Veterans, a population with increased levels of multimorbidity, disability and frailty. The study aim was to assess the FI-LAB score as predictor of in-hospital mortality (IHM).

Methods: A retrospective cohort study was conducted in a population of adults ≥60 years old admitted to the Miami VAHS due to an acute event, January 2011-December 2014. We constructed a 31-item FI-LAB including laboratory values and vital signs upon admission. FI-LAB scores were categorized as low (<0.25), moderate (0.25-0.40), and high (>0.40). IHM rate was assessed among the FI-LAB groups using a chi-square test. We compared the tradeoff sensitivity and specificity of the FI-LAB in determining IHM using a Receiver Operating Characteristic (ROC), Area Under the Curve (AUC) analysis.

Results: Out of a total of 1731 index admissions during the specified period, 89.25% (n=1545) were included. The Veterans' mean age was 72.78 (SD=8.97) years, majority Caucasian (67.51%), males (96.18%), and Non-Hispanic (84.14%). According to the FI-LAB, 48.88% (n=754), 39.67% (n=613), and 11.52% (n=178) were in the low, moderate, and high groups, respectively. The high FI-LAB group had a significantly higher proportion of IHM (n=16, 9%) when compared to both the low (n=5, 0.66%) and moderate (n=7, 1.14%) groups, p<.001. The FI-LAB showed an acceptable diagnostic accuracy for IHM, AUC=.763 (CI: .653-.876; p<.001).

Conclusions: In this study, higher FI-LAB scores were associated with higher IHM. The FI-LAB had acceptable diagnostic accuracy in predicting IHM. The FI-LAB may identify older patients at higher mortality risk and assist clinicians in the development of early strategies to reduce mortality of hospitalized patients with frailty.

A237

Opioid use disorder in older adults: Understanding the needs of older adults in a community MOUD program

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Background:

Opioid use disorder (OUD) among the general adult population in the US is on the rise. Estimates of OUD for adults >50 y/o show a tripling of prevalence, likely due to the aging population. Despite this rise, research on the characteristics and needs of older adults undergoing treatment for their OUD is limited.

Methods:

A retrospective chart review was performed at a community-based medication for opioid use disorder (MOUD) program to compare characteristics of adults >50 y/o to younger adults in the same program. Collected data included: age group, race/ethnicity, gender, presence of comorbidities, presence of polypharmacy, presence of psychiatric illness. A survey was designed to administer to those >50 y/o to better understand the unique needs of older adults accessing MOUD and interest in age-specific MOUD groups.

Results:

232 patients had active prescriptions for suboxone. Of these patients, 28% (N=66) were > 50 y/o. Further data on the variables above are being reviewed and analyzed, and will be reported. Survey outcomes will also be reported.

Conclusion:

Given the aging population and the rise of OUD, providers will care for more older adults with OUD. The goal of this study is to better understand the characteristics and needs of older adults with OUD in a community MOUD program. Study results will guide provider training and program development.

A238

Cross-Sectional Association between Agent Orange and Frailty

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Background: Three million veterans were exposed to Agent Orange (AO), a phenoxy-herbicide extensively used during the Vietnam War by US military forces. The exact mechanism of action of AO is unknown but its chemical components may impair enzymatic and hormonal pathways, which in turn may trigger off its harmful effects. Research evidence shows that AO exposure may cause several chronic diseases including diabetes, coronary disease and forms of cancer which may subsequently lead to frailty, a common condition in older adults. Frailty is characterized by vulnerability to stressors caused by multisystem dysfunction. The study aims were to determine whether AO exposure was cross-sectionally associated with frailty in older Vietnam Veterans.

Methods: This is a retrospective case-control study and electronic health record (EHR) database review of community dwelling, Vietnam Veterans 65 years and older who had a primary care visit to the Miami VA Healthcare system between October 2018-September 2019. Socio-demographic, clinical, and AO exposure data were obtained from the EHR database. A 31-item VA Frailty Index (VA-FI) was generated at the time of the assessment and participants were categorized into non-Frail (FI ≤ .21) and frail (FI≥.21). A case-control match was performed at a 1:1 ratio with age, gender, race, ethnicity, obesity, substance abuse, smoking, and alcohol abuse as the covariates. Odds ratios (ORs) and 95% confidence intervals (CIs) were calculated using binomial logistic regression models with frailty as the outcome and AO as the independent variable.

Results: After case-control matching of 9778 Vietnam veterans, the study population sample consisted of 3610 Veterans (frail:1805, non-frail:1805), mean age 71.25 (SD=4.41) years, 66.70% (n=2408) Caucasian, 99.67% (n=3598) male and 88.40% (n=3190) non-Hispanic. From a total of 726 (20.11%) of veterans exposed to AO, there were no differences in exposure between the non-frail (n=357, 19.78%) and the frail groups (n=369, 20.44%), p=.618. Using BLR, AO was not cross-sectionally associated with frailty, OR:1.04 (95% CI:0.88-1.22), p <0.618).

Conclusions: This study shows a lack of association between AO exposure and frailty. Future studies should examine more sensitive measures of individual AO exposure which may more accurately reflect AO harmful effects.

A239

Diabetes mellitus and physical performance across the adult life span: a cross-sectional study in the PALS Study

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Background: Diabetes mellitus (DM) is associated with functional impairment and accelerated aging; however, few studies have evaluated this association across the adult life span. In this cross-sectional study in age groups across the adult life span, we evaluated the association of DM and a battery of physical performance (PP) measures.

Method: The Physical Performance Across the Life Span (PALS) study is a longitudinal cohort study of adult residents of Cabarrus and surrounding counties in North Carolina; participants in 6 decade-groups (age 30-39, 40-49, 50-59, 60-69, 70-79, 80+ years) were enrolled. In this analysis using data from the baseline visit, PP measures included gait speed, number of completed chair stands in 30s, timed single-leg stance, and 6-min walk distance. Comorbidity number was calculated based on self-reported presence of 34 conditions. T-scores for PP measures were calculated using normative values from the age 30-39 years group. Multivariable linear regression was used to determine association between each PP measures T-score and DM, serially adjusting for multiple covariates including comorbidity number.

Results: Of 972 participants at the baseline visit, 146 had prior diagnosis of DM. After adjusting for age, gender, race, and body mass index, DM was associated with lower 6-min walk distance ($b = -0.31$, $p < 0.001$), fewer chair stand number ($b = -0.22$, $p = 0.011$), and shorter single-leg stance time ($b = -0.67$, $p < 0.001$), but no difference in gait speed ($p = 0.30$). There was no significant interaction between age and DM for 6-min walk, chair stands, or gait speed, but for single-leg stance the difference associated with DM decreased with age ($p = 0.02$). After further adjusting for comorbidity number, 6-min walk ($p = 0.03$) and single-leg stance ($p = 0.005$) remained significantly lower among those with DM, but not for chair stands ($p = 0.22$).

Conclusion: Compared to those without DM, adults with DM have lower PP measures across the adult life span, specifically measures of physical endurance and balance. These findings highlight the importance of screening for functional deficits and implementing interventions early in the treatment of DM.

A240

The decline in the perceived risk of regular cannabis use among older adults in the United States from 2015 to 2019

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Background: The legalization of cannabis has increased across the US, potentially reducing its perceived risk. Reduction in perceived risk is associated with increases in use. Older adults are especially sensitive to the potential risks associated with cannabis use due to their increased burden of chronic disease, so it is important to monitor risk factors for use such as the perception of harm.

Methods: We examined data from adults age ≥65 in the 2015-2019 cohorts of the National Survey on Drug Use and Health, a cross-sectional nationally representative survey of noninstitutionalized individuals in the US. We estimated the prevalence of older adults who believe that people who smoke cannabis once or twice a week are at great risk of harming themselves physically and in other ways. This was examined across years for all older adults and stratified by demographic and drug use characteristics.

Results: Between 2015 to 2019, the prevalence of past-year cannabis use increased from 2.4% to 5.0% while the perceived risk associated with regular use decreased from 52.6% to 42.7% (ps<0.001). Decreases in perceived risk were detected among nearly all strata including binge drinkers (a 31.3% decrease), tobacco users (a 26.8% decrease), those with kidney disease (a 32.1% decrease), asthma (a 31.7% decrease), heart disease (a 16.5% decrease), chronic obstructive pulmonary disease (a 21.5% decrease), two or more chronic diseases (a 20.2% decrease), among those never married (a 32.6% decrease), and among those reporting past-year use of an emergency department (a 21.0% decrease) (ps<0.05).

Conclusion: The perceived risk of regular cannabis use is decreasing among older adults in the US. We found sharp decreases in risk perception among those with chronic disease and those with high-risk behaviors, including binge drinking and tobacco use. As the number of older adults who use cannabis continues to increase, efforts should be made to raise awareness of the possible adverse effects of cannabis for older adults as its legalization continues.

A241

Sex Differences in Binge Drinking among Older Americans: Findings from the National Survey on Drug Use and Health

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Background: Binge drinking differs by sex as do its correlates. Previous literature shows an increase in binge drinking among older adults with sharper increases among older women compared to older men. However, among older persons, little is known about current sex differences in binge drinking or its correlates.

Methods: We examined aggregated data from 18,794 adults age ≥65 from the 2015 to 2019 National Survey on Drug Use and Health, an annual cross-sectional survey of a nationally representative sample of non-institutionalized individuals in the US. We estimated the prevalence of past-month binge drinking (≥5 drinks for men and ≥4 drinks for women in a day). Multivariable generalized linear models using Poisson and log link were used to examine associations between demographic characteristics, past-month tobacco and cannabis use, depression, and chronic disease, and binge drinking stratified by sex.

Results: Past-month binge drinking among men increased from 12.8% in 2015 to 15.7% in 2019 (p=.022), but no significant trend was detected for women (7.6-7.3%). In adjusted models, having a college degree was associated with higher risk of binge drinking in women (adjusted prevalence ratio [aPR]=1.68, 95% CI: 1.13-2.50) and a lower risk among men (aPR=0.69, 95%CI: 0.56-0.85). Among men, being divorced/separated was associated with higher risk (aPR=1.25, 95% CI: 1.04-1.50) as was having hypertension (aPR=1.25, 95% CI: 1.05, 1.50). Both men and women were at higher risk if they reported tobacco use (men aPR=1.87, 95% CI: 1.61-2.17, women aPR= 2.11, 95% CI: 1.71-2.60), cannabis use (men aPR= 2.05, 95% CI: 1.63-2.58, women aPR= 2.77, 95% CI 2.00-3.85), or an annual family income of ≥$75,000 (men aPR=1.33, 95% CI: 1.01-1.74, women aPR= 1.37, 95% CI: 1,00-1.88). Having diabetes was associated with a lower risk in both men and women (aPR= 0.76, 95% CI: 0.62-0.94, aPR= 0.73, 95% CI 0.55-0.97, respectively).

Conclusions: Binge drinking is increasing among older men in the US while remaining stable among older women. This divergence in binge drinking is important to note given recent studies suggesting a convergence of binge drinking among younger adult men and women. Public health prevention, screening and interventions should take into consideration gender-based differences in unhealthy alcohol use among older persons as well as co-use of tobacco and cannabis.

A242

Antihypertensives and Dementia-Related Neuropathology in an Autopsy Cohort

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Background: Antihypertensives (AHT) increasing angiotensin-II mediated activity at the angiotensin-2 and angiotensin-4 receptors (Ang+) may provide greater brain protection than those decreasing this activity (Ang-). We tested whether Ang+ AHTs (thiazides, dihydropyridine [DHP] calcium channel blockers, and angiotensin-1 receptor blockers) are associated with severity of dementia-related neuropathology compared to Ang- AHTs (angiotensin-converting enzyme inhibitors, beta blockers, and non-DHP calcium channel blockers).

Methods: Observational community-based autopsy sample, Adult Changes in Thought enrollment cohort. We ascertained incident use of lifetime AHT medications (classified into Ang+ and Ang-) from automated pharmacy and medical chart data, expressed as Person-Years (PY) of exposure (N=690). We used modified Poisson regression to estimate relative risks (RRs) for Ang+ vs. Ang-exposure, as continuous variables and, separately, as binary indicators for long-term use (15+ PY), on dementia-related neuropathology. Main outcome measures were Amyloid plaque distribution (Thal phase), neurofibrillary tangle distribution (Braak stage), and cortical neuritic plaque density (CERAD). Models adjusted for average annual systolic and diastolic blood pressure, other AHTs, age at Ang+/- initiation, age at death, sex, ACT cohort, education, self-rated health, exercise, *APOE* genotype, obesity, comorbidity score, myocardial infarction, stroke, and atrial fibrillation. Inverse probability weights used to account for selection into the autopsy cohort. Statistical inferences obtained via bias-corrected and accelerated bootstrapping.

Results: Mean age at death was 89 years; 59% were women. After a mean of 20.9 years of follow-up, participants had on average 9.2 PY of Ang+ exposure and 10.8 PY of Ang- exposure. Adjusted models revealed no significant differences in neuropathology outcomes when comparing Ang+ and Ang- exposure continuously. At least 15 PY of Ang+ exposure was associated with a 29% lower risk of CERAD 2/3 (moderate/frequent) compared to long-term Ang-exposure (RR=0.71; 95%CI=0.51-1.03).

Conclusions: Ang+ and Ang- AHTs were associated with similar risk of dementia-related neuropathology outcomes, overall. Long-term use of Ang+ AHTs may be associated with lower amyloid burden compared to Ang- AHTs.

A243

Recent Trends in Neurodegenerative Disease Burden in North and South Carolina

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Background: In the United States, healthcare spending on degenerative brain diseases has surpassed that of cancer and heart disease, largely due to the use of nursing home care through Medicare benefits. Substantial geographic variation in diagnosis rates has created the need for estimating the prevalence of degenerative brain disorders in specific regions to create appropriate public health policies and equitable resource use. This study characterizes contemporary patterns of incident and prevalent neurodegenerative disease (dementia and Parkinson's disease) (ND) among North and South Carolina Medicare fee-for-service (FFS) beneficiaries and describes associated comorbidities.

Methods: Medicare claims data for 100% of Medicare North and South Carolina fee-for-service beneficiaries age 50+ with at least 1 year continuous FFS enrollment (2013-2017) was analyzed. ND diagnosis was defined using ICD-CM-9 and IC-CM-10 codes in any position on inpatient, outpatient, carrier, skilled nursing facility or home health claims.

Results: Among Medicare beneficiaries, prevalence of ND increased from 14.5% in 2014 to 15.8% in 2017. Incidence of ND decreased over time from 3.6% in 2014 to 2.9% in 2017. Over the same period, incidence decreased from 3.5% to 2.9% among white beneficiaries, from 3.9% to 2.9% among black beneficiaries, from 3.1% to 2.9% among male beneficiaries, and from 3.9% to 2.9% among female beneficiaries. In the pooled cohort of beneficiaries with prevalent ND, the most common comorbidities were hypertension (84.3%), diabetes mellitus (38.2%), peripheral vascular disease (33.3%), depression (33.3%), coronary heart disease (31.4%), and chronic pulmonary disease (30.7%).

Conclusions: Neurodegenerative disease affects a substantial number of Medicare beneficiaries in NC and SC, and the comorbidity burden is high. Despite the recent growth in the prevalence of neurodegenerative disease, the incidence of diagnosis has declined among beneficiaries who are female or black. More research is needed to understand the underlying causes of this decline in incident diagnosis.

Variable	White	Black	Other	Variable	White	Black	Other
2014 Cohort N	684,287	166,658	22,174	2017 Cohort N	809,907	180,652	31,819
2014 ND incidence n(%)*	24,089 (3.5)	6,454 (3.9)	585 (2.6)	2017 ND incidence n(%)*	23,759 (2.9)	5,314 (2.9)	685 (2.2)
2014 dementia incidence n(%)*	22,010 (3.2)	6,255 (3.8)	523 (2.4)	2017 Dementia incidence rates (%)*	21,769 (2.7)	5,093 (2.8)	604 (1.9)

***p-value for test of differences across race within year**

A244

Normative Reference Data for the SPPB Among U.S. Older Adults Across Two Nationally-Representative Datasets: NSHAP and NHATS

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Background. Functional assessments like the Short Physical Performance Battery (SPPB) are fundamental to older adult research and clinical care, yet we lack U.S. reference data to aid in interpretation and translation. The primary objective of this study was to examine the performance distribution of 3-meter usual walk, 5-repeated chair stands, and 3 static balance stances among age and gender subgroups of U.S. adults ≥65 in two national datasets. We secondarily determined whether demographic-function associations varied across datasets, birth cohorts, or models incorporating data from those 'unable to do' tasks versus excluding as missing data.

Methods. Two nationally-representative datasets were used to generate age and gender subgroup performance distributions for the 3 SPPB components: 1) the 2015-2016 National Social Life Health and Aging Project (NSHAP) and 2) the 2016 National Health and Aging Trends Study (NHATS). We then separately regressed interval 3-meter walk and chair stand performance on age, gender and race/ethnicity in ordinal models, examining differences across datasets and birth cohorts (1920-47, 1948-65) and before/after incorporating data from those 'unable to do' a task.

Results. The data confirmed the gradual decline in function with age and allowed an estimate of 'relative' performance within age and gender subgroups. Dataset distribution differences were noted, possibly due to recruitment, eligibility, and protocol variations. Demographic associations were similar across datasets but generally weaker among those born between 1948-65 and when including those 'unable to do' a task in models.

Discussion. We present the largest and most current reference data for the SPPB in U.S. adults ≥65. Findings call for standardization of administration protocols in research and clinical care and support modification of patient counseling to include overall functional risk *and* relative performance. Further exploration into potential generational shifts in gender and racial/ethnic associations with function and innovative longitudinal modeling allowing inclusion of the substantial proportion of 'unable to do' data is warranted.

A245

The Effect of Vitamin D Level on COVID-19 Severity in Older Adults

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Background

The COVID-19 pandemic is an unprecedented crisis in clinical medicine, public health, and politics, the ramifications of which may not be fully clear yet. Retrospective analyses have been performed for identification of risk factors for development of severe symptoms, and vitamin D deficiency presents a promising target as an easily measurable and modifiable risk factor. There are data to suggest that vitamin D deficiency carries a greater risk for more severe COVID-19 disease, but data are lacking specifically within the geriatric population, a large and vulnerable group.

Methods

We performed retrospective analysis of patients 65 and above with a positive COVID-19 PCR and a serum 25-OH vitamin D level. 30-day mortality was used as a primary outcome. Severity of disease was characterized by serum biomarkers associated with poor clinical endpoints. The Shapiro-Wilk test was to assess normality of continuous variables. For bivariate analyses, the Kruskal-Wallis test was used for continuous variables, and the chi-square test for categorical variables. To adjust for comorbidities, multivariable analyses were conducted using exact logistic regression if the outcome was binary and rank regression if the outcome was continuous.

Results

Data was collected on 106 patients with COVID-19. The median age was 77, 62% of the population was female, and the median BMI was 27.2kg/m^2. Comorbidities were prevalent in the sample with diabetes in 51%, hypertension in 92% and one-third having cancer. The number of patients classified as vitamin D deficient, insufficient, and sufficient were 34 (32%), 31 (29%), and 41 (39%), respectively.

The 30-day mortality rate ranged from 32% in the vitamin D sufficient group to 39% in the insufficient group and the relationship between vitamin D level and mortality was not statistically significant (p=0.825). Further, after adjusting for comorbidities in the multivariable analyses, neither the insufficient (OR=1.54; 95% CI=[0.462, 5.29]) nor the sufficient (OR=0.66; 95% CI=[0.186, 2.26]) vitamin D level groups showed a decrease in 30-day mortality compared to the deficient group.

Conclusion

These data suggest that vitamin D level is not associated with an increased risk of 30-day COVID related mortality, but further studies with greater sample size may help to illustrate other risks associated with vitamin D deficiency.

A246

Violent Deaths from Elder Abuse: Analysis of the National Violent Death Reporting System, 2003-2018

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Background:

Elder abuse involves mistreatment of an older adult by a caregiver or another person in a position with an expectation of trust. While abuse is common and may have devastating consequences only limited research exists examining violent deaths due to elder abuse. Our goal was to use the CDC National Violent Death Reporting System (NVDRS) to describe homicides from elder abuse.

Methods:

We use descriptive statistics to explore the circumstances surrounding homicides involving victims aged ≥60, for the period spanning 2003-2018 in the NVDRS dataset. We considered violent deaths as elder abuse if either the perpetrator was the victim's caregiver or the relationship between perpetrator and victim included an expectation of trust. We described these deaths including demographics, perpetrator characteristics, substance use, and available data on the surrounding circumstances.

Results:

We identified 3,244 violent deaths from elder abuse (40% of all homicides involving a victim aged ≥60). 55% of elder abuse violent death victims were female, and victims had a median age of 69 (IQR 64 – 77). Perpetrators were most commonly children (28%) and spouses (27%), and 10% of perpetrators were identified as the victim's caregiver. Substance use by the perpetrator was involved in 8% of deaths, while firearms were involved in 45% of deaths.

Conclusions:

Elder abuse represents a significant percentage of homicides among older adults. An improved understanding of violent deaths from abuse not only aids identification of older adults at particularly elevated risk but also may inform intervention and prevention strategies.

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A247

Epidemiology of Smoking in U.S. Older Adults, 1998-2016

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Background: Older smokers account for the greatest tobacco-related morbidity and mortality in the U.S, while smoking cessation remains the single most effective preventive health intervention for reducing the risk of smoking-related illness. Yet, knowledge about patterns of smoking and smoking cessation in older adults is lacking. We assessed trends over time in prevalence of smoking and estimated incidence and predictors of smoking cessation in U.S. adults aged 50 and older.

Methods: Analysis of data from the nationally-representative Health and Retirement Study from 1998-2016. Smoking was assessed every 2 years by asking: "Do you smoke cigarettes now?" Smoking cessation was defined as having at least two consecutive waves (between 2 and 4 years) in which participants reported they were not currently smoking. We used a Fine-Gray competing risk regression model to estimate cumulative incidence and identify predictors of smoking cessation.

Results: A total of 36,115 participants met inclusion and were included in prevalence analysis and 2,761 current smokers in 1998 were included in analyses of smoking cessation (mean age=60, 54% female). Age-adjusted smoking prevalence decreased from 16.8% in 1998 (95% CI: 15.9, 17.7) to 13.4% in 2016 (95% CI: 12.5, 14.3). The cumulative incidence of smoking cessation was 68%. Predictors of smoking cessation included smoking less than 10 cigarettes/day (AOR 2.4; 95% CI: 2.0, 2.9) and >3 impairments in activities of daily living (AOR 1.76, 95% CI: 1.0-3.1). Higher depression score was associated with lower likelihood of smoking cessation (AOR 0.8; 95% CI: 0.70-0.98).

Conclusions: Despite declines in smoking prevalence and evidence that many older adults are able to successfully quit smoking, almost 1 in 6 older adults still smokes cigarettes. Clinical and public health interventions targeted at older adults are critical to reaching zero cigarette smoking prevalence in this population.

A248

Comparisons of sarcopenia and its parameters predicting future cognitive decline: longitudinal outcomes from the ASPRA cohort.

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Background

Sharing a major risk factor of physical activity, association between status of sarcopenia and future cognitive decline is predictable. However, previous studies have shown inconsistent associations. We aimed to identify the association of sarcopenia and its parameters with cognitive decline.

Methods

A total of 1,327 participants from the Aging Study of Pyeongchang Rural Area (ASPRA) cohort were analyzed for the 3-year longitudinal outcome. Cognitive performance was evaluated by Mini-Mental State Examination (MMSE) and sarcopenia was defined using different sarcopenic markers; original and revised Asian Working Group for Sarcopenia (AWGS), European Working Group on Sarcopenia in Older People (EWGSOP) 1, EWGSOP 2, and Sarcopenia Phenotype Score (SPS), a novel index of counting numbers of impaired domain of sarcopenia among decreased muscle mass, decreased handgrip strength, and slow gait speed, ranging from 0 to 3. Association of different sarcopenic definitions and each sarcopenic parameter with cognitive decline was analyzed by linear and logistic regression.

Results

About half (50.8%) of the participants showed 3-year meaningful decline of MMSE. Among different sarcopenia definitions, EWGSOP 1 (p=0.009) and SPS (p=0.001) were associated with MMSE decline. Only SPS showed consistent predictability of cognitive impairment even in different criteria of meaningful decline of MMSE (table below). Of SPS parameters, gait speed was associated with MMSE decline (p=0.033) and well predicted 3-year cognitive impairment (OR 0.54, 95% CI 0.30-0.97).

Conclusions

SPS could well predict the future cognitive impairment with using its graded scoring system. In particular, gait speed was the single most important indicator of cognitive decline.

	Meaningful decline of MMSE (1 point)		Meaningful decline of MMSE (2 point)		Meaningful decline of MMSE (3 point)	
	Logistic regression Model 1	Logistic regression Model 2	Logistic regression Model 1	Logistic regression Model 2	Logistic regression Model 1	Logistic regression Model 2
	Odds ratio (95% CI)	Odds ratio (95% CI)	Odds ratio (95% CI)	Odds ratio (95% CI)	Odds ratio (95% CI)	Odds ratio (95% CI)
Original AWGS	1.22 (0.87-1.71)	1.19 (0.85-1.68)	1.32 (0.94-1.87)	1.28 (0.90-1.81)	1.02 (0.69-1.50)	0.96 (0.65-1.43)
Revised AWGS	1.14 (0.83-1.56)	1.10 (0.80-1.52)	1.25 (0.90-1.73)	1.21 (0.87-1.68)	1.01 (0.70-1.46)	0.95 (0.65-1.39)
EWGSOP 1	1.46 (1.05-2.04)	1.43 (1.02-2.00)	1.45 (1.03-2.04)	1.40 (0.99-1.97)	1.13 (0.77-1.65)	1.06 (0.72-1.56)
EWGSOP 2						
Sarcopenia	1.31 (0.91-1.89)	1.27 (0.88-1.83)	1.32 (0.91-1.91)	1.27 (0.87-1.84)	1.01 (0.67-1.53)	0.94 (0.62-1.44)
Severe sarcopenia	1.34 (0.89-2.02)	1.28 (0.84-1.95)	1.14 (0.75-1.72)	1.05 (0.69-1.61)	0.98 (0.62-1.56)	0.88 (0.55-1.42)
SPS	1.25 (1.06-1.48)	1.23 (1.04-1.46)	1.37 (1.16-1.63)	1.34 (1.12-1.59)	1.26 (1.05-1.53)	1.22 (1.01-1.49)

Model 1 adjusted for age, sex and baseline MMSE score; Model 2 adjusted for age, sex, baseline MMSE score, multimorbidity, ADL disability and IADL disability.

A249

Efficacy of Hydroxychloroquine (HCQ) in treatment of COVID-19 infection in patients over 65 in Nursing Home setting

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Background: Currently, Remdesivir is the only FDA approved drug for treatment of COVID-19. The FDA had issued an emergency use authorization (EUA) for the use of Hydroxychloroquine in the fight against COVID-19. On June 16th, 2020 the FDA recommended against the use of HCQ after multiple large trials failed to show any benefit in their preliminary stages. Despite these recent findings, HCQ is still being prescribed world-wide for treatment of COVID-19. The geriatric population is at a higher risk for medication side effects which makes it even more important to know the efficacy of a drug before prescribing it to the elderly.

Methods: We conducted a retrospective chart review looking at nursing home patients over 65 years of age who had a positive COVID-19 test from March to May of 2020 in Northern New Jersey. Information included demographics, LDH and CRP levels, and comorbidities (COPD/Asthma, CHF, CKD/ERDS, DM, and active malignancies). The primary outcome used was 30-day mortality. The secondary outcomes used included Emergency Room (ER) visits, Inpatient stays, and ICU admissions. The Shapiro-Wilk test was used to assess the normality of continuous variables. Comparisons between groups were conducted using the Wilcoxon Rank-Sum test for continuous variables and either the Chi-square test or Fisher's exact test for categorical variables.

Results: 73 patients met the inclusion criteria for this study. The median age was 81 (IQR: 72, 88) and two-thirds of patients were female. Of these patients, 21% had diabetes, 40% had chronic kidney disease of stage 3 or greater, and 15% had heart failure. 30-day mortality and ICU admissions were not seen in either group. 60-day mortality was observed in one patient who was in the non-treatment group. No statistical difference was observed in 60-day mortality with p-value of (0.26), ER visits (12%), and hospital admissions (8%) with P-values of (1.00).

Conclusions: Our study in the nursing home setting did not reveal any benefits in use of HCQ for treatment of COVID-19. There were no differences in 60-day mortality, ER visits, or hospital admissions in geriatric patients with COVID-19 between those treated with HCQ and those not treated. These results are consistent with findings in other previously studied populations.

A250

Association between a Frailty Index of Laboratory Values (FI-LAB) and Inpatient Mortality in Veterans Hospitalized with COVID-19

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Background: Frailty is a syndrome characterized by vulnerability to stressors resulting from multisystemic loss of physiological reserve associated with poor clinical outcomes. Recent studies have shown worse outcomes and higher mortality rate in older adults with COVID 19 infection. The risk for mortality may be even higher in hospitalized older adults with coexistent frailty and COVID 19 infection. The FI-LAB is a validated, objective measure of frailty in acute care settings which is based on laboratory values and vital signs. The study aim was to assess the FI-LAB score as a predictor of inpatient mortality in Veterans admitted with COVID-19 Infection.

Methods: Retrospective cohort study conducted in a population of veterans admitted with COVID-19 infection to 7 VISN 8 acute care facilities across Florida. We calculated the 31-item FI-LAB using laboratory values and vital signs upon admission. Veterans were categorized as low (<0.25), moderate (0.25-0.40), and high (>0.40) based on FI-LAB scores. Differences in inpatient mortality among the 3 FI-LAB groups were determined using a Cox regression model, adjusted for age, BMI, gender, race, and ethnicity.

Results: 700 patients were hospitalized, mean age 66.03 (range:22-103, SD=14.86) years, Caucasian 58.14% (n=407), non-Hispanic 81.71% (n=572), and 93.86% (n=657) male. According to the FI-LAB, 47.42% (n=332), 43.85% (n=307), and 8.71% (n=61) were in the low, moderate and high groups, respectively. There were 53 total inpatient deaths (<65, n=6, 11.32% and ≥65 years, n=47, 88.68%): FI-LAB low 10 (3.01%), moderate 3 (10.09%), high 12 (19.67%), p<.0005. The median follow up was 5 days (IQR=12). As compared with the low FI-LAB group, Veterans in the moderate and high groups had higher mortality risk, adjusted hazard ratio (HR)=2.87 (95%CI:1.36-6.06), p=0.006 and HR=5.23 (95%CI:2.10-13.06), respectively, p<.005.

Conclusions: Moderate and higher FI-LAB groups were associated with higher inpatient mortality than the low category. Most deaths were among older adults. The FI-LAB may identify patients at higher mortality risk and assist clinicians in the development of early strategies to reduce mortality in hospitalized older patients with frailty and COVID 19 infection.

A251

The Braden scale and mobility subscale for older acute care inpatients

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Background:

The Braden scale is a valid and widely used instrument in different contexts and populations to assess the risk of hospital-acquired pressure injuries (HAPI). Associations between the Braden scale, the Braden mobility subscale and the development of HAPI have been shown but remain unknown in older patients in acute care.

The aim of this study is to evaluate and compare the predictive validity of the Braden score and the mobility score for the development of HAPI in older patients hospitalized in acute care depending on the time between two assessments.

Methods:

This retrospective longitudinal study is a secondary analysis of electronic health records from medical or surgical inpatients aged 65 and over with at least one Braden score assessment. A multivariable generalized estimating equation (GEE) was performed to assess the predictive validities of the Braden score and the mobility score on HAPI development. The quasi-likelihood under the independence model criterion (QIC) was calculated to choose the best correlation structure and the most representative models.

Results:

This study included 18 758 patients, of which 453 (2,4%) developed HAPI. The multivariable GEE PA showed that the Braden scale and mobility subscale scores were associated with HAPI development when the time between two assessments was less or equal to two days. The two models were similar (Braden QIC = 472.7, Mobility QIC = 471.1). When the time between assessments was more than two days, only the moderate and low risk categories of the Braden scale and the "very limited" category of the mobility subscale were associated with HAPI development. The two models were also similar (Braden QIC = 470.0, Mobility QIC = 469.9).

Conclusions:

Braden scale and mobility subscale are predictive of HAPI development when the time between two assessments is less or equal to two days. Using the Braden scale every two days could be recommended when caring for inpatients aged 65 and over to screen for the risk of HAPI. The mobility subscale is effective for a more in-depth evaluation to improve prevention.

A252

Frailty in Older Veterans Hospitalized with COVID-19 Infection

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Background: Frailty is a clinical syndrome characterized by vulnerability to stressors resulting from multisystemic loss of physiological reserve. In hospitalized patients with COVID 19 infection, frailty may place Veterans at higher risk for poor clinical outcomes. The aim of this case-series was to compare clinical and utilization outcomes of patients hospitalized with COVID-19 according to frailty status.

Methods: This is a case-series of Veterans, ≥65 years old, hospitalized with COVID 19 infection at 7 VA facilities across Florida, March-August 2020. Frailty was operationalized with the 31-item VA Frailty Index (VA-FI), generated upon admission, as a proportion of clinical variables from electronic health records. The VA-FI categorized Veterans into non-frail (FI<.21) and frail (FI≥.21). Sociodemographic, COVID-19 PCR status, and clinical information was obtained from VA databases and in-depth chart reviews. We compared the clinical and utilization outcomes of frail and non-frail Veterans using Mann Whitney test for continuous and Chi-square analysis for categorical variables. Group differences in inpatient mortality were determined using a Cox regression model adjusted for age, BMI, gender, race, and ethnicity.

Results: 400 older veterans were hospitalized, mean age 76.30 (SD= 8.26) years, 97.25% (n=389) male, 64.75% Caucasian (n=259), 14.75% (n=59) Hispanic, and 59.25% (n=237) frail. Patients with frailty were less likely to undergo cardiopulmonary resuscitation (CPR) than non-frail, p=.002. There were no significant group differences in terms of length of stay, direct ICU admission, ICU transfer, shock, intubation, and readmissions. During a median follow up of 7 days (IQR=15), there were 47 inpatient deaths (frail: 24, 10.13%; non-frail 23, 14.11%). There were no significant differences in inpatient mortality between non-frail (reference) and frail groups: adjusted hazard ratio=0.745 (95%CI:0.41-1.35), p=0.329.

Conclusion: Older veterans with coexistent COVID-19 infection and frailty were less likely to undergo CPR. There were no group differences in terms of inpatient mortality, and key clinical and utilization outcomes. Future studies should examine modifiable protective factors that may mitigate the effects of frailty on hospitalized patients with COVID-19 infection.

A253

Two-Year Changes in Physical Activity Domains Across the Lifespan: Impact of Age and Gender

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Background: The importance of physical activity (PA) as adults age is well-established. However, there is currently limited data describing the change over time in levels of PA that includes the full spectrum of measurement from sedentary to vigorous PA across the adult lifespan. This study explored 2-year change, by age and gender, in minutes of time spent in sedentary, light, and moderate/vigorous (MV) PA in a cohort of community dwelling adults.

Methods: Design: Exploratory analysis of prospectively collected data from the Physical Performance Across the Lifespan (PALS) cohort study. Setting: Community-dwelling adults from Cabarrus County, North Carolina. Participants: 344 adults (aged 30-90+ years, 54.7% female) enrolled in PALS between 2012-2014 with complete accelerometry data across a two-year interval. Measures: Demographic characteristics were assessed by self-report; age was categorized across 6 decade bins (30-39, 40-49, 50-59, 60-69, 70-79, 80+). Physical activity was measured by accelerometry, worn by participants over 7 days during waking hours at each measurement point. Analyses: Change scores between baseline and 2-year follow-up were analyzed for amount of average daily time (minutes) spent in sedentary, light, and moderate/vigorous PA by increasing age decade and gender.

Results: There was a significant decrease in average daily minutes of MVPA from baseline to 2 years per increasing age decade (M= -0.44 minutes; SE=0.17; p=0.012). A significant change in average daily minutes of light PA was observed between genders (M=14.9; SE=7.5; p<0.05); with minutes decreasing more in men (M=-23.3, SD=65.4) than in women (M=-8.4, SD=71.9). No significant age or gender effects were observed for changes in sedentary time (p=0.14 and p=0.64, respectively).

Conclusion: We observed significant changes in PA domains over two years which varied by gender and decade of life. Although, no overall changes in sedentary behavior over two years was found, further analyses, exploring each decade of life by PA domain may yield useful knowledge identifying particular decades of life in which changes in activity patterns might occur for each gender. These may inform the tailoring of future delivery of PA promoting interventions.

A254

Is there a post-hypertension syndrome?

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Background

We showed that systolic blood pressure(SBP) declines for 15-18 years prior to death in older people[1], based on routine clinical data. We aimed to confirm these findings, test declines in frailty, and estimate the association between BP decline and mortality stratified by hypertension.

Methods

SBP trends were estimated for up to 24 years in participants aged 60+ from an aging cohort(n=1067) and UK Biobank(UKB n=89,885 linked primary care data). We estimated group level BP trends using mixed linear effects models by survival, adjusted by age, sex and antihypertensives. Cox models tested individual-level association between decline and all-cause mortality, stratified by baseline hypertension(<140 vs ≥140mmHg).

Results

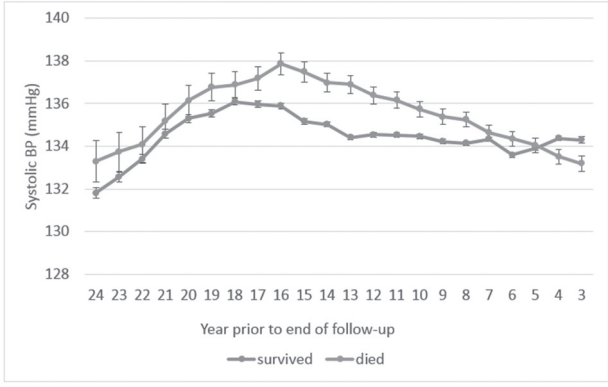
Data confirmed longer term BP declines prior to death of up to 12 years in the cohort study (mean end of follow-up age 84 vs UKB 75 years) and 16 years in UKB. Declines differed significantly by survival, and with elevated peak BP with frailty and participants who died. Frailty was associated with steeper BP declines (10 year decline +1.8 mmHg aging cohort; 95%CI 1.1- 2.8; +1.1mmHg UKB; 95% CI 0.5-1.7).

Individual 6 year BP decline ≥5mmHg was associated with reduced mortality with baseline hypertension (≥140mmHg:HR 0.53; 95%CI 0.42-0.67), but excess mortality without baseline hypertension (<140mmHg:HR 2.13; 95%CI 1.24-3.66) versus stable (+/-5mmHg).

Conclusions

BP declines longer term prior to death in older people, accelerated with frailty. Continued BP decline without hypertension is associated with excess mortality. This may represent a post-hypertension syndrome: when a chronic hypertension diagnosis is no longer clinically important for the individual. More work is required to explore post-hypertension syndrome and its management, which may include de-escalation of antihypertensive medications.

1. *JAMA Intern Med* 2018;**178**:93.



SBP trend in 89885 UKB participants

A255

Trends and Patterns in Sepsis Mortality Among U.S. Adults Aged 65 and Over

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Background: Sepsis can occur at any age, but those at higher risk include infants, people with chronic conditions, and older adults. Septicemia was the 12th leading cause of death in the United States in 2019, with three-fourths of the deaths occurring among people aged 65 and over. Death rates due to septicemia in the United States have generally declined in the past two decades. The objective of this research is to describe the trends and patterns in older adult septicemia mortality using national-level data.

Methods: The number of deaths and death rates due to septicemia were calculated from multiple cause-of-death data from the National Vital Statistics System using the CDC WONDER online database (wonder.cdc.gov/mcd.html). Septicemia is identified from the ICD-10 113 cause list, with deaths due to Streptococcal septicaemia (A40) and Other septicaemia (A41) together recognized as a leading cause of death. Age-adjusted and age-specific death rates were calculated by sex, race and Hispanic origin, and age group. Trends in death rates from 2000 to 2019 were examined.

Results: In 2019, there were 29,027 deaths among persons aged 65 and over where septicemia was recorded as the underlying cause of death. Another 120,947 deaths occurred where septicemia was listed as a contributing cause of death. Approximately 80% of deaths with septicemia mention occurred in a hospital and an additional 15% occurred in a long-term care or hospice facility. Death rates were highest for persons aged 85 and over compared with those aged 65-74 (150.2 deaths per 100,000 vs. 28.0 per 100,000) and for men compared with women at all ages. Death rates for non-Hispanic black older adults have declined more steeply than rates for other groups since 2000, but significant differences by race and ethnicity remain. In 2019, non-Hispanic black older adults had the highest age-adjusted rate of septicemia mortality compared with non-Hispanic whites, non-Hispanic Asians, and Hispanics (88.6, 55.5, 25.2, and 40.3 respectively).

Conclusions: Despite declines in septicemia death rates since 2000, significant differences remain among subpopulations. Understanding these patterns and trends can be useful to target interventions to those at highest risk.

A256

Association of Gout with Frailty Status in a Veteran Population

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Background: Frailty is a common condition in older adults characterized by a vulnerability to stressors caused by multisystem dysfunction associated with poor clinical outcomes. Gout could increase the incidence of frailty by several mechanisms including chronic inflammation leading to chronic pain and disability, the potentially harmful effects of therapies and its association with other comorbidities. The study aim was to determine the cross-sectional association of gout with frailty status in older veterans.

Methods: This is a cross-sectional study of veterans identified through a search of the VHA electronic health record. We compared veterans with and without frailty for the diagnosis of gout. Gender, age, race, ethnicity, presence of obesity, alcohol abuse, and smoking history were also recorded. Frailty was determined using a modified 30-item VA Frailty Index (VA-FI, excluding the arthritis variable) generated as a proportion based on the number of items present (morbidity, function, sensory loss, cognition and mood, and others): non-frail (VA-FI<.21); and frail (VA-FI≥.21). Continuous and categorical variables were compared with Mann Whitney and Pearson Chi-Square tests respectively. After adjusting for gender, age, race, ethnicity, presence of obesity, alcohol abuse, and smoking history, we performed a binomial logistic regression by calculating odds ratios (OR) with 95% confidence intervals (CI) with gout as the independent variable and frailty as the dependent variable.

Results: A total of 21,105 Veterans were included in the analysis, mean age 68.84 (SD=10.73) years, 95.60% male, 63.26% Caucasian, 80.62% non-Hispanic, 23.54% (n=4970) were frail and 1,996 (9.46%) had gout (frail: n=746, 3.53%; non-frail, n=1,250, 5.92%, p<.0001). After binomial logistic regression, the presence of gout was associated with frailty, adjusted OR:1.93 (95%C.I.:1.74-2.14), p <0.0001.

Conclusions: In this analysis of the veteran population, gout is significantly associated with frailty status. Identifying and treating the patients with gout who are frail may assist in targeting clinical interventions aimed at preventing or reversing frailty status. The clinical trajectory of patients with gout with frailty requires further clarification.

A257

Clinical Outreach to Older Adults in the Community During COVID: a Description of Unmet Health-Related Needs

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Background: Shelter-in-place orders and service disruptions due to the COVID-19 pandemic created a risk of unmet health-related needs among older adults and those with disabilities, such as the ability to obtain medications or receive healthcare. To mitigate these risks, primary care clinics performed outreach calls to identify and address unmet needs. We examined the association with unmet needs and healthcare utilization.

Methods: Four primary care clinics completed outreach calls, each with differing with at-risk populations: home-based, safety-net adult, academic geriatrics and safety-net HIV. Examined needs included medication refills, medical supplies, food insecurity, and telehealth capability. Utilization included urgent care, ER visits and hospitalizations, measured 3 months prior and 3 months after the call. We also report on COVID diagnosis and death in the 3 months after the outreach call. We show descriptive statistics and will use Poisson regression models to examine associations.

Results: Thus far, we analyzed 165 of 500 total outreach calls. Mean age was 84.1, with 18% of patients >95, 71% female, 40% white, 33% Asian, 12% Black, and 15% Latinx. Forty five percent had both Medicare and Medi-Cal, 33% had Medicare and supplemental insurance, and 17% had Medicare only. Comorbid conditions were frequent: 69% had hypertension, 37% had dementia, 30% had depression. Unmet needs and care utilization are presented in Table 1.

Conclusion: The pandemic has disrupted health and social care among older adults. Evaluation of associations between unmet needs and use of urgent healthcare services can inform future planning during crises to better meet the needs of community dwelling older adults.

Unmet needs and care utilization among older adults during COVID

Needs, n (%)	
Medication refill needed	20 (12.1)
Medical supplies needed	20 (12.1)
Poor food access	3 (1.8)
Equipment needed for telehealth	83 (50.3)
Utilization, mean (SD) 3 months before call – 3 months after call	
Urgent care visit	0.02(0.17) – 0.04(0.39)
Emergency room visits	0.26(0.66) – 0.13(0.55)
Hospitalizations	0.18(0.45) – 0.11(0.44)

A258

Material Hardship and Food Insecurity Among Older Adults during the COVID-19 Pandemic

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Background: Along with heightened risk for severe COVID-19, older adults are less accustomed to navigating online services to access food and material supports. While people with lower incomes and from racial and ethnic minoritized groups have experienced high levels of material hardship due to COVID-19, little is known about the experience of older adults.

Methods: We used the Health and Retirement Study (HRS), a nationally-representative cohort study of aging, to identify community-dwelling older adults age ≥51. Material hardship due to COVID-19 was defined as: receiving money or help paying bills from family/friends; missing payments on rent or mortgage, credit cards or other debt, utilities, insurance, or medical bills; not having enough money to

buy food; or other financial hardship. Food insecurity was defined as not having enough money to buy food and/or having difficulty buying food despite having money.

Results: Of 3,053 community-dwelling older adults, nearly half were >65 years, with 10.7% Black and 10.6% Hispanic. Material hardships were reported by 27.2%, including receiving financial help from others (21.1%), missing rent/mortgage payments for rent/mortgage (2.8%), credit cards/debt (4.1%), other payments/bills such as utilities or insurance (3.3%), or not having money for food (6.6%). Food insecurity was experienced by 20.8%, and 15.7% had trouble buying food despite having enough money. Material hardships were reported at higher levels by those in the youngest age group vs. the oldest. Greater material hardship was also reported by those with impairments in activities of daily living (ADLs) and cognitive impairment.

Conclusions: This nationally-representative survey demonstrates high levels of hardship due to COVID-19, with 1 in 3 older adults reporting material hardship and 1 in 5 reporting food insecurity. Although nutrition benefits were increased during the pandemic, those who received food stamps still had high rates of food insecurity. This may be because the assistance was insufficient, or because of limitations in how food stamps may be used (such as through online grocery shopping or paying for delivery fees). High rates of hardship indicate an urgent need for targeted supports to highest-risk older adults as the pandemic persists.

A259

Depression and Mortality between ages 70-95

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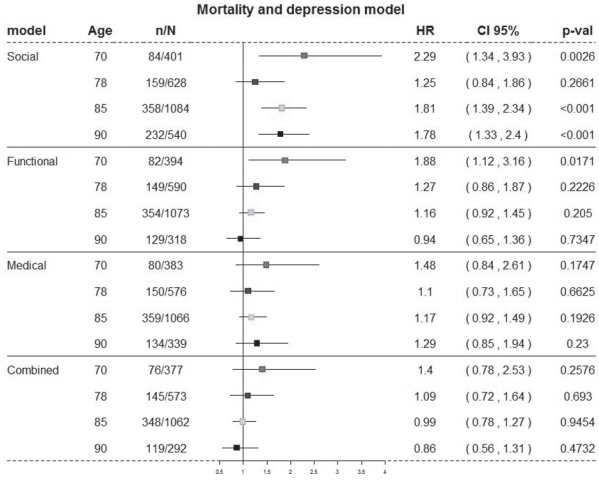
Background: Understanding the complex causal relationship between late-life depression and mortality is challenging. This study describes the association of depression at increasing ages between 70-90 with mortality, adjusting for social, functional and medical factors with rising age.

Methods: The Jerusalem Longitudinal Study follows a representative cohort of Jerusalem residents, born 1920-21. At ages 70, 78, 85, and 90 years old (1990, 1997, 2005, 2010) a total of 499, 836, 1465, and 799 subjects were assessed, including depression (Basic Symptom Inventory). Mortality data were collected between age 70-95.

Results: Frequency of depression was 17.4%, 20.3%, 25.0%, and 30.4% at ages 70, 78, 85, and 90 respectively, and unadjusted Mortality Hazards Ratios (HR, 95% Confidence Intervals) among depressed subjects were 2.07(1.28, 3.33), 1.29(0.91, 1.83), 1.82(1.48, 2.23), and 1.72(1.34, 2.22) respectively. A Forest plot shows the depression HRs after adjusting separately for a Social (gender*, socioeconomic status*, loneliness), Functional (gender*, dependence in Katz BADL*, frequency leaving the house, physical activity*), Medical (gender*, diabetes*, heart disease*, hypertension, cancer, chronic pain*, impaired cognition*, self-rated health*, smoking), and Combined model (all significant variables [marked*] from other models).

Conclusions: Depression was significantly associated with mortality irrespective of rising age in unadjusted and social models. This association lost significance after separately adjusting for functional and medical variables, emphasizing their important role in late life depression.



Forest Plot: Hazards Ratios for Depression at ages 70-90.

A260 Encore Presentation

Patient Factors and Clinical Outcomes Associated with an Atypical Presentation of Older Adults Hospitalized with COVID-19

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Introduction: Typical COVID-19 presentation has been characterized by fevers/chills, cough, and shortness of breath (SOB). Recent literature of older adults (OA) with COVID-19 has highlighted an atypical presentation. The objective of this study was to identify the type and frequency of atypical presentation, as well as patient factors and outcomes associated with an atypical presentation.

Method: A retrospective cohort study of all OA, aged 65 or greater, who were admitted to the hospital between March 1st, 2020 and April 20th, 2020 with a diagnosis of COVID-19. Utilizing a natural language processing tool (ClinicalRegex), review of the chief complaints on presentation, documented by the admitting clinician was quantified and grouped into two main categories: atypical presentation (only atypical or atypical + typical) and only typical. Analysis was completed between the two groups and other variables using Chi-squared and nonparametric Kruskal-Wallis testing. Logistic regression was performed to compare discharge status between the two groups after controlling for relevant factors.

Results: Of 4,961 hospitalized OA, average age was 77.3 years old, 56% were male, 16% were Hispanic, and 20.8% were Black. The majority of OA (79%) arrived from home. Top comorbidities were hypertension (61.1%) and diabetes mellitus (36.8%). Patients presented mostly commonly with; respiratory (55.7%), fever/chills (41.7%), cough (29.4%), functional decline (27.6%), altered mental status (12.6%), and gastrointestinal (7.9%). Over a third of patients (36.7%) presented atypically. Factors associated with atypical presentation included: older age ($p < .0001$), female ($p = .002$), non-white ($p < .0001$), non-Hispanic ($p < .0001$), number of comorbidities ($p < .0001$), dementia ($p < .0001$) and diabetes ($p = .002$). After controlling for age, gender, race, residence prior to hospital, comorbidity index, MEWs score, first documented oxygen and DNR order, atypical presentation was associated with decreased mortality ($p = .05$).

Discussion: Atypical presentation is common in OA. Our findings highlight the need to consider atypical presentation when considering testing and containment efforts. Further studies need to evaluate the long-term clinical course and impact of atypical presentation in OA.

A261

Decrease Prevalence of SARS-CoV-2 in Long-Term-Care Facilities; the curve is moving in the Right Direction!

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Background: Covid-19 is pandemic infection caused by new strain of coronavirus, SARS-CoV-2 virus, with over 20 million cases and over 350,000 deaths in the USA. Long-term Care Facilities (LTCF) residents were the first to get affected because of their congregated setting, decrease in their immunity, comorbidity, medication taken, staffing and personnel protective equipment shortage, and lack/shortage of testing and treatment.

Method: We analyzed data collected from 330,693 specimens collected from residents in LTCF from March-December 2020. All samples were tested using RT-PCR (molecular) test, results were separated monthly based on gender and age. Statistical analysis was done using Analyse-it

Results: Median age was 74 years old for female and 68 for male, and 61.9% of the patients tested were female. 15,896 specimens were positive; the highest prevalence was in March and the lowest one was September with slight increase in November and December. Although men had slightly higher rate than women but that was not statistically different.

Conclusion: LTCF had the highest prevalence and death from COVID-19 in the first few months of the pandemic. Based on our study, the prevalence declined to much lower than the general population; the increase in November and December could be related to the holidays. The lower rate in LTCF could be attributed to serval reasons: most facilities have implemented strong and tight infection control program including education, training, and surveillance for covid-19 signs and symptoms for residents and workers, visitor restriction, increase testing interval for employees and residents to detect asymptomatic patients and isolate them to stop the spread of the virus, and the development of immunity to the virus in these population.

Table 1

Month	All patients	Female	Male
Mar-2020	70.1%	69.6%	71.6%
Apr-2020	66.4%	66.3%	66.7%
May-2020	10.9%	10.6	11.7%
June-2020	2.7%	2.7%	2.8%
July-2020	0.6%	0.6%	0.5%
Aug-2020	0.5%	0.5%	0.4%
Sep-2020	0.4%	0.4%	0.3%
Oct-2020	0.7%	0.6%	0.8%
Nov-2020	1.3%	1.4%	1.2%
Dec-2020	2.3%	2.4%	2.2%
March to Dec 2020	4.8%	4.8%	4.9%

A262

The Association Between Fall and Sleep Quality in Older Adults with Dementia and Depression

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Fall is a major health problem among older adults with incidence rate 20% per year in community-dwelling older adults. Several factors contribute to falls in older adults including cognitive dysfunction and sleep disturbance. Over 60% of patients with dementia suffer from sleep disturbance and up to 90% of depressed patient complain of sleep disturbance. To our knowledge, no study to date has addressed the association between fall risk and sleep quality in patients with dementia in comparison to patients with depression.

Methods Data was obtained from the Care Management for Cognitively Vulnerable Older Adults study. This is a randomized clinical trial to compare two different care management approaches for community-dwelling adults ≥ 65years old with depression and dementia. Data collected including diagnosis (dementia, depression, dementia with depression), self-reported falls (no falls, 1 fall and 2 ≥ falls), Pittsburgh Sleep Quality Index (PSQI), GRID Hamilton Depression Scale and Montreal cognitive assessment.

Results A total of 72 patients were enrolled in the study. There were 24 patients in dementia group, 30 patients in depression and 18 patients in dementia with depression groups. Fall incidence among patients with dementia only; depression only; and dementia with depression were compared and showed similar rates for single fall risk but greater likelihood of multiple falls ≥2 in the depression with dementia group 44.4% and depression group 43.3% than in patients with dementia only 20.8% (p=0.39). Sleep quality using PSQI score was compared between the 3 D groups. There was a significant relationship between the three D groups and poor sleep quality ($p<0.001$), post hoc analysis showed that the depression group had a higher mean score than the other groups. The sleep quality and depression severity in the three D groups were strongly correlated (p=0.00). The association between fall incidence and sleep quality in all 3 D groups showed similar PSQI score means in all three fall groups. There was no statistical significance in the association between the PSQI score and fall incidence (p=0.72).

Conclusion We concluded that patient with depression had twice the risk to fall than patient with dementia or dementia with depression. Patients with depression are more susceptible to have poor sleep quality. Sleep disturbance did not affect the fall incidence between the three D groups.

A263

Use of Dietary Supplements among Older Adults in the South: Results from the Study of Aging, a Population Based Survey

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Background: The use of dietary supplements (DS) is an increasing trend among older adults in the U.S. Older adults tend to use DS to lower their risk of health problems or add nutrients to their diet. Research from population-based surveys on the use of DS among community dwelling older adults in the South are scarce. Thus, the aim of the present study was to examine which sociodemographic variables predict the use of one or more DS in Southern, older adults.

Methods: Data were extracted from the UAB Study of Aging, a population-based longitudinal study of mobility among community-dwelling older adults. This study enrolled participants in five central Alabama counties and followed them for eight years. We examined which sociodemographic variables predict the use of one or more DS, dichotomized as use / no use. Logistic regression was used to identify factors that influence the use of DS among older adults who participated in the study. The SPSS version 26.0 statistical package was used for analysis.

Results: Of the 1,000 participants, 50% were male, 92% lived in a single-family home, 51% were married, and 24% had a High School degree or GED. The mean age was 75 years (standard deviation 6.5). In a regression-based model, gender (p=0.029) and education (p=0.002) were significant predictors for the use of one or more supplements. Other sociodemographic variables (e.g., marital status and housing type) did not predict the use of one or more DS.

Conclusion: Participants who were female and reported a higher level of education were more likely to use one or more DS (mainly glucosamine or glucosamine/chondroitin). Findings from this study expand on the existing literature as it relates to use of DS among Southern, older adults. Future research should seek to understand trends in the use of DS over time.

A264

Comparative risk of harm associated with zopiclone or trazodone use in nursing home residents: A retrospective cohort study

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Background: Trazodone and zopiclone – two psychotropic medications commonly prescribed to older adults with neuropsychiatric symptoms (e.g. sleep disturbances) - are associated with potential harms (e.g. falls, fractures) in this patient population, but their comparative risk of harm in older nursing home residents is unknown.

Methods: We conducted a retrospective cohort study of older (≥66 years old) nursing home residents living in Alberta, Canada, between December 1, 2009 and December 31, 2018 using routinely collected, linked health administrative databases. We compared the rate of falls and major osteoporotic fractures (primary outcome) and all-cause mortality (secondary outcome) within 180 days of trazodone or zopiclone initiation with cause-specific hazard models and inverse probability of treatment weights to control for confounding. Our primary analysis was intention-to-treat (ITT) and our secondary analysis was per-protocol (PP; i.e. patients were censored if dispensed the other exposure drug).

Results: Our cohort included 1403 residents dispensed trazodone and 1599 residents dispensed zopiclone. At cohort entry, the mean resident age was 85.7 (standard deviation 7.4), 61.6% were female, and 81.2% had dementia. The median total daily zopiclone dose was 7.5mg (Q1 3.75mg to Q3 7.5mg) and the median total daily trazodone dose was 25mg (Q1 25mg to Q3 50mg). In primary and secondary analyses, new zopiclone use was associated with similar rates of falls and major osteoporotic fractures (ITT-weighted hazard ratio [HR] 1.15, 95% confidence interval [CI] 0.90-1.48; PP-weighted HR 0.85, 95% CI 0.60-1.21) and all-cause mortality (ITT-weighted HR 0.96, 95% CI 0.79-1.16; PP-weighted HR 0.90, 95% CI 0.66-1.23) compared to trazodone.

Conclusion: Zopiclone was associated with a similar rate of falls, major osteoporotic fractures, and all-cause mortality compared to trazodone in older nursing home residents. Given their similar risk profiles, one should not be used *in lieu* of the other to reduce neuropsychiatric symptoms. Clinicians should consider nonpharmacologic interventions to avoid potential harms associated with zopiclone and trazodone use.

A265

Presenting Symptoms of COVID-19 and their Association with Outcomes in an Older African American Population

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Background: Older adults and ethnic minority patients are at higher risk for worse outcomes from COVID-19 disease. Older adults may present with atypical symptoms or geriatric syndromes. Understanding the spectrum of symptoms of COVID-19 among older adults particularly ethnic minority groups disproportionately affected by COVID-19 has significant implications for early detection and outcomes. We sought to characterize the presentation of older African Americans (AA) with COVID-19 and its association with outcomes. **Methods:** The study was conducted at a safety net hospital, serving a largely AA population. A retrospective chart review of all patients 65 years or older with a positive SARS-COV-2 test admitted from March 4th – May 20th 2020 was performed. Data collected included demographic information and data regarding symptoms, laboratory findings, and outcomes. Clinical outcomes were monitored until June 23, 2020. **Results:** 135 patients, mean age 76.4, 93.3% AA, were studied. Up to 90.1% of patients presented with typical symptoms (TS) of COVID-19 (fever, shortness of breath{SOB}, and cough), however mostly in association with geriatric syndromes (GS) occurring in 88.3% of them. The most common associated GS was altered mental status (AMS) occurring in 77.6%. Only 8.9% of patients presented with TS alone. 55.7% of patients presented with atypical symptoms (ATS). Of these, 83.8% had coexisting TS. The most common ATS were anorexia, dizziness, and syncope. 76.4% of the patients who presented with ATS also had co-existing GS. AMS was the most common associated GS occurring in 61.8% of them. In general, GS were identified in 102 (75.6%) patients. AMS was the most common GS found in 84.3% of them, 31.4% presented with weakness while 29.4% had a fall. Respiratory failure(RF) occurred in 64.5% while 22.3% of patients died. Older age, male gender, SOB, and sepsis were significantly associated with mortality. Age and male gender were associated with RF. Presence of GS was not associated with mortality or RF though falls showed a trend towards association. **Conclusion:** Our study demonstrates that older African Americans with COVID-19 commonly present with TS, ATS and GS together. This study adds to the growing body of evidence that ATS and GS are common presentations of COVID-19 among older adults.

A266

Resuscitation Status Changes in Hospitalized Older Veterans with Frailty and COVID-19 Infection

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Background: COVID-19 infection in older adults may cause serious clinical complications requiring hospitalization. Frailty is a clinical syndrome characterized by a loss of physiologic reserve that increases the risk for poor health outcomes. Identification of frailty status during hospitalization my influence clinicians, patients and surrogates' resuscitation decisions. The study aim was to determine whether frailty changes resuscitation decisions (code) in hospitalized older veterans with COVID 19 infection.

Methods: Retrospective case series of Veterans ≥65 years old, hospitalized with COVID-19 infection at 7 VA centers in Florida from March-August 2020. We used a 31-item VA Frailty index (VA-FI) to determine frailty status on admission based on clinical variables found in the medical records. The VA-FI categorized veterans in two groups: non- frail (FI<.21) and frail (FI≥.21). Information on changes in code status upon admission and during hospitalization were obtained from in-depth chart audits. After adjusting for age, gender, race, and ethnicity, we performed a binomial logistic regression by calculating Odds ratios (OR) with 95% confidence intervals (CI) with frailty status as the independent variable and change in code status from FC to DNR/DNI as the dependent variable.

Results: 400 Older Veterans were hospitalized, mean age 76.30 (SD=8.26) years, 64.75% Caucasian (n=259), 85.25% non-Hispanic (n=341), and 97.25% (n=389) male. On hospital admission, 73.50% (n=294) were full code (FC), 25.50% (n=102) had do not resuscitate/ do not intubate (DNR/DNI) status and 1.00% (n=4) had DNR/OK to intubate order. During the course of the hospital stay, 18 Veterans changed code status from FC to DNR/DNI (Non-frail n=4, 13.33%, frail n=14, 46.67%) and 12 changed from DNR/DNI to FC (Non-frail n=5, 16.67%, frail n=7, 23.33%). Frailty status was not associated with the decision to change code status from FC to DNR (OR:1.65 95%CI .226-12.092, p=0.620).

Conclusion: In older Veterans hospitalized with COVID-19 infection frailty status was not associated with changes in code status from full code to DNR/DNI. Future studies are needed to confirm these preliminary findings in larger and more diverse populations.

A267

COVID-19 and Incidence of Geriatric Falls at a Level One Trauma Center

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Background

Falls are the most common cause of nonfatal trauma-related hospital admissions among older adults. The objective of this study was to determine whether the quarantine/lockdown elicited by the SARS-CoV-2 pandemic led to a change in the incidence of falls in geriatric patients between March 2020 - December 2020 compared to March 2019 - December 2019 at a Level 1 Trauma Center. We hypothesized there would be an increase in ER admissions for geriatric falls due to a more sedentary lifestyle.

Methods

A retrospective chart review was performed using a large urban level 1 Trauma Center database. The study population included patients age 65 and older who experienced falls between March 2019-December 2019 and March 2020- December 2020. Study variables included ISS, HLOS, ICU LOS, Mechanism of injury, in-hospital mortality, polypharmacy, and comorbid conditions.

Results

A total of 355 patients met the study criteria. Of these, 191 patients (53.8%) were admitted in 2019, and 164 (46.2%) were admitted in 2020. The mean age of the patients in 2019 was 77.2 ± 8.5 years, and in 2020 was 78.6 ± 9.7 years. 52.9% of patients were male in 2019 compared to 58.5% in 2020, and 37.9% of the patients were African American in 2019 compared to 45.7% in 2020. The mortality rate was 4.8% in 2019 and 5.5% in 2020 (p= 0.7). The major comorbidities were hypertension (61% vs 61.3%) and diabetes mellitus (24% vs 27%) in both 2019 and 2020. The mean number of home medications that patients were taking in 2019 was 4.2 ± 4, and 2020 was 4.6 ± 4 (p=0.9).

The mean ISS in 2019 and 2020 was similar (6.13 ± 4.7 vs 6.14 +4.8, p=0.9). The mean HLOS was 4.7 ± 6.0 days in 2019 and was 4.4 ± 5.3 days in 2020 (p=0.1). 23.5% of patients were admitted to ICU in 2019 compared to 45.7% in 2020. The average ICU length of stay in 2019 (6.4 ± 5.3 days) was significantly different when compared to 2020 (3.6 ± 3.8 days) (p=0.009).

Conclusion

Contrary to our hypothesis, during COVID-19, the incidence of geriatric admissions due to falls was decreased during the period studied. There were more patients admitted to the ICU in 2020 when compared to 2019, but the ICU length of stay was significantly reduced in 2020 compared to 2019, though the total hospital length of stay remains unchanged. We hypothesize that there appears to be redistribution of hospital resources due to the COVID-19 pandemic.

A268 Student Presentation

Has awareness of medication harms and deprescribing changed among Canadian community-dwelling older adults since 2016? A population-based survey.

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BACKGROUND

Efforts are ongoing to raise awareness of medication harms and deprescribing among Canadian older adults. Sequential population-based surveys can be used to track progress and identify future priorities.

METHODS

A repeat population-based telephone survey was conducted from a sampling frame of all listed household numbers in Canada, called at random. Eligible respondents were men or women aged 65 years and older who spoke English or French. Survey questions included 1) awareness of the term deprescribing, 2) knowledge of harmful effects of medications including sleeping pills and gastric acid suppressants, and 3) initiation of a deprescribing conversation with a healthcare provider. Data were analyzed using descriptive statistics with 95% confidence intervals (CI), associations determined with logistic regression, and 2016 and 2020 data compared using Chi-square tests.

RESULTS

Between September and November 2020, 43,959 households were contacted, 19,001 were ineligible, 6749 answered and 2316 (34%) met eligibility criteria and consented to participate. Respondents had a mean age of 74.4 ± 7.2 (range 65–104), 63.8% (95%CI 61.8-65.8%) were female and 21.2% (95%CI 19.5-22.9) completed the survey in French.

Compared to 2016 survey results, awareness of the term "deprescribing" increased from 6.9% to 8.2% (p=0.066). The proportion of respondents who were aware that some medications could be harmful decreased from 65.2% to 58.6% (p<0.001), and only 38.2% initiated a deprescribing conversation with a healthcare provider compared to 41.8% in 2016 (p=0.35). Awareness of the term "deprescribing" or medication-related harm was persistently associated with patient-initiated deprescribing conversations (odds ratio [OR] 1.40 [95%CI 1.04-1.88], OR 2.14 [95%CI 1.78-2.56] respectively).

CONCLUSION

Despite slow progress and interruptions by the COVID-19 pandemic, there is value in educating older adults about medication harms in order to promote patient-initiated deprescribing conversations.

A269

"It seems like it's miles and miles… when it's only right around the corner." A mixed methods study of the mobility of older adults on hemodialysis

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Introduction Most persons on hemodialysis (HD) are older, and many have trouble with walking and self-care. Yet data are sparse on how mobility is shaped by personal factors such as motivation in this group. Our goal was to identify what personal factors impact the mobility of older adults on HD.

Methods We included 1) older adults on HD (inclusion criteria: ≥60 years; on outpatient HD) and 2) care partners (inclusion criteria: ≥18 years; routinely helping an older adult on HD). Each had a single in-person assessment. We administered the Short Physical Performance Battery (SPPB, range 0-12 points) to assess mobility, and audio-recorded one-on-one semi-structured key informant interviews regarding personal factors for mobility. Unless requested, older adults and care partners were interviewed separately. Transcripts underwent descriptive and focused coding; the codebook was revised iteratively until consensus on all code definitions was reached. We identified codes that were personal factors using International Classification of Function criteria. A combined inductive and deductive approach extracted major themes.

Results We enrolled 31 older adults on HD (42% female, 50% Black) with a mean age of 72.5±8.1(S.D.) years and a mean history on HD for 4.6±3.5 years. For the older adults on HD, mean SPPB was 3.6±2.8 points. Twelve care partners enrolled (75% female, 50% Black) with a mean age of 53.8±15.7 years. TheTable lists the themes that emerged.

Conclusion Our diverse sample of older adults on HD had poor mobility, and had a mean SPPB score that is associated with 20% one-year mortality in other groups. They want mobility and

independence, but mobility frequently flutuates, causing distress. They and their care partners have learned to be flexible in their expectations. Future studies should incorporate these insights in interventions to improve the mobility of older adults on HD.

Theme	Quote
Desire for mobility and independence	"I always wanted to do as much as I can for myself. I'm not one of those people who run to somebody say 'Can you give me this? Can you do that?' That's part of me doing for myself. Walking." -Black female on HD, age in 60s, SPPB of 0
Mobility fluctuates	"I get off the machine, crawl around the corner to the car. 'Cause I have my good days and my bad days … It seems like it's miles and miles … when it's only right around the corner." -Black male on HD, age in 60s, SPPB of 6 "I really don't take anything for granted anymore. Because one day you can be up, and then you fall right down." -Black female on HD, age in 60s, SPPB of 1
Distress	"It's frustrating. At times, I just stay home… When is this gonna be all over?" -Black female on HD, age in 70s, SPPB of 5 "Every day, I never know what's gonna happen." -White female care partner, age in 80s, SPPB of 7
Flexibility in expectations	"Luckily, I've come to my senses, and realize that…I have to accept the fact that I can no longer do things after dialysis." -White male on HD, age in 70s, SPPB of 5

A270

Missed opportunity: Do community oncologists discuss palliative care in their management of older adults with acute myeloid leukemia?

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Background: Research on how oncologists communicate about prognosis and when to involve palliative care for older adults with acute myeloid leukemia (AML) is limited. In this study, we conducted a secondary qualitative analysis of whether oncologists referred their older patients with AML to palliative care.

Method(s): This is a secondary analysis of a parent qualitative study of community oncologists who saw at least one older patient (>60 years) with AML in the prior 6 mo. Recruitment of 15 community oncologists was done via email and social media with sampling based on practice locations across the U.S. Telephone interviews were conducted via a semi-structured in-depth interview about their care of older patients with AML. Two of the authors coded the transcripts and created analytic case summaries to identify key themes about the communication of palliative care and prognosis.

Results: We identified three similar decision-making steps in oncologists' care of older adults with AML. First, oncologists conducted an initial assessment of their patient's fitness during the first visit using their overall gestalt rather than objective assessments of function or cognition. "I feel like I've been doing this long enough… that I can really eyeball and get a sense if someone…seems to be fit for treatment." Second, oncologists discussed management with their patients by presenting multiple potential treatment options and offered their recommendation on what the patient could tolerate. Third, if patients did not qualify for AML-directed therapy, oncologists provided care in the form of transfusion support. At each of the three steps, most community oncologists did not discuss palliative care. Community oncologists who had access to consultative palliative care generally referred their patients after the third step or when patients no longer benefitted from transfusion support.

Conclusion(s): Each of these three steps can serve as opportunities to consider referral to supportive care. These three steps are also important timepoints for conversations with older adults with AML to clarify overall management, prognosis, and goals of care. Lastly, understanding the availability of palliative care resources is necessary to inform practice change.

A271

Voice Intelligent Personal Assistant for Managing Social Isolation and Depression in Homebound Older Adults

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Background: Loneliness and social isolation are both common in older adults in the United States. Social distancing, which may cause increased isolation, is an essential public health strategy during a pandemic such as COVID-19, especially for those older adults at increased risk of morbidity and mortality. Strategies are needed to mitigate the negative effects of social isolation on the mental and physical health of older adults. Voice Intelligent Personal Assistants (VIPAs) (e.g. Google Home) may be useful to homebound older adults with social isolation by connecting them to family, caregivers, and medical care and providing functional, cognitive, and social stimulation.

Methods: A panel of stakeholders (n=25) with geriatrics expertise, including geriatricians, nurses, nurse practitioners, older adults, social workers, and caregivers of older adults, independently used a VIPA for 4 weeks. Participants then completed a survey where they were asked to describe the features that would be the most relevant for older adults to help minimize social isolation, provide feedback on ease of use of the device, and share information about use that might be helpful for older adults. Mixed method analysis will be conducted with qualitative responses analyzed using thematic and constant comparative analysis.

Results: Participants have been provided VIPAs and are completing surveys about the use. We anticipate the results of the surveys and analysis will provide information pertaining to improving the utility of VIPA for older adults.

Conclusions: Stakeholders with geriatrics expertise will identify several features of VIPAs that may be useful to homebound older adults with social isolation. Based on results, a companion booklet to the VIPA will be designed highlighting applications that may benefit older adults with social isolation and providing instructions tailored to older adults to facilitate use of the VIPA in the home. Future research will test the VIPA and companion booklet with homebound older adults to examine the effects on social isolation and depression.

A272

Surrogates' Perspectives on Anticoagulation for Atrial Fibrillaion in Persons with Dementia

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Background: Almost 20% of older adults with dementia have atrial fibrillation (AF). Most persons with both conditions meet the guideline-supported risk threshold to be treated with an anticoagulant. It is unclear whether guideline-based treatment is appropriate for persons with dementia, who have competing risks of death and declining cognition and function and increased risk of anticoagulant-related harm. Little is known about how surrogate decision-makers approach decisions about anticoagulants for persons with both conditions in the face of uncertain benefits and harms.

Methods: Surrogate decision-makers (n=16 to date) of persons with AF and moderate to severe dementia completed open-ended interviews regarding decisions to start, continue, and discontinue anticoagulants. Participants were recruited from a dementia care center. Qualitative content analysis is being used to identify themes. Enrollment will continue until thematic saturation is achieved.

Results: Among surrogate decision-makers, 16 (100%) were female, 2 (12.5%) were nonwhite, 13 (81.2)% were daughters, and 3 (18.8%) were spouses or long-term partners. On the date of the interview, 13 patients (81.2%) were on an anticoagulant. Developing themes include: 1) **Surrogates are unlikely to revisit**

anticoagulation decisions unless the patient experiences a major health crisis. Discontinuation often follows a major bleeding event or injurious fall. 2) **Decision-making does not account for dementia as a progressive, terminal illness.** While surrogates were knowledgeable about impairments, many had poor understanding of the patient's future health trajectory. 3) **Surrogates often fear stroke even when the patient has advanced impairments.** Many surrogates feared the potential for worsened cognition, function, mobility, and even persistent vegetative state. 4) **Surrogates rely on the clinician they trust most for decision support.**

Conclusion: Initial results suggest that surrogates' decision-making about anticoagulation often occurs in times in crisis, does not explicitly consider the trajectory of dementia, weighs the potential for stroke heavily, and relies on clinician guidance. Shared decision-making around anticoagulant therapy in patients with comorbid AF and dementia needs to address surrogate concerns and knowledge as well as empiric evidence of benefits and harms.

A273

The Lived Experience of Low-Income Older Adults During the COVID-19 Pandemic

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Background: Older adults have been disproportionately affected by COVID-19. The primary goal of this study is to increase understanding of how the COVID-19 pandemic impacts independent-living low-income older adults in an urban setting and how they are managing the everyday challenges resulting from the COVID-19 crisis.

Methods: In a mixed-methods study of participants in Virginia Commonwealth University's Richmond Health and Wellness Program, telephone surveys were conducted with 100 older adults using the Epidemic – Pandemic Impacts Inventory Geriatric Adaption. Survey responses were statistically analyzed for income and education effects across seven aggregated domains: home life problems, social activities, isolation problems, economic problems, emotional health-wellbeing problems, physical health problems, COVID infection history, and positive change behaviors/experiences. Qualitative analysis identified emergent themes from fifteen individuals who were further interviewed.

Results: Ages of study participants ranged from 55-87, 88% were Black, 57% reported incomes of less than $10,000, and 60% reported high school education or below. Income and education effects were only seen for the social activities and isolation problems ($t = -1.82$, $p < .04$) and positive change behaviors/experience domains ($t = -2.23$, $p < .03$). The themes that surfaced within the qualitative interview align with the quantitative results in the survey. The three most prevalent themes include 1) societal environment, including culture and trust of the health care and political systems, 2) personal environment, including housing, economics, literacy, mobility, and technology and 3) emotional impact, including trauma, anxiety and depression among other domains.

Conclusions: Findings suggest that lower income and education may be risk factors for positive coping behaviors during a crisis event. The identification of how individuals feel and are able to cope was found to be related to perceived locus of control. Further research on improving coping strategies as a potential pathway for intervention is warranted.

A274

Cultural Perceptions of Medication Management During Hospital-To-Home Transitions of Older Latino Adults Living with Dementia

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Background: With a growing Latin American and Spanish-speaking population, the American health care system is tasked with providing care across changing landscapes of culture and language. Specifically, the hospital-to-home transition is a high-risk period for medication errors and adverse events for older adults with Alzheimer's Disease and Related Dementias (ADRD), and the older Latino population is widely understudied. Our objective was to elicit and categorize cultural perceptions of ADRD and views on medication use during the hospital-to-home transition of older Latino adults with ADRD.

Methods: Qualitative study using semi-structured interviews and participant solicited diaries with caregivers of older Latino adults with ADRD. We used a human factors engineering-informed Systems Ambiguity Framework to guide data analysis. At least two researchers independently coded each transcript on ATLAS.ti using a content analysis approach. We identified recurring cultural perceptions of medication use and resource accessibility.

Results: We interviewed 11 caregivers of older Latino adults with moderate-to-severe ADRD. We elicited cultural perceptions of medication management, medication purpose, and available resources. Recurring themes indicate 1) Concern about over-medication, 2) Resignation over limited medication effectiveness for treating ADRD, 3) Scarcity of culturally specific and appropriately translated resources, and 4) Wariness to trust providers and medical institutions based on negative experience. Multiple caregivers experienced initially incorrect diagnoses or contradictory information from providers, contributing to feeling resigned to treatment options and a paucity of trust in providers and institutional resources.

Conclusions: We identified four cultural perceptions of medication use and resource accessibility. The elicited themes point to a need for culturally tailored care instructions for family caregivers, appropriate language services across the care continuum, and a concerted outreach effort to form trusted relationships among Latino communities and health care providers.

A275

No Place Like Home: The Value of Geriatric House Calls for Patient Care and Medical Education

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Background: Boston Medical Center has the nation's oldest, continuously-operating home care program, established in 1875. It serves about 500 patients, 60% from minority populations and 25% with low English proficiency. During their geriatrics clerkship, Boston University School of Medicine fourth year students participate in home visits. Informally, those involved, including patients, providers, and students, have recognized the value of the program. Our goal was to elucidate the perspective of these stakeholders to better understand its strengths, challenges, and areas for improvement.

Methods: To begin our 360-degree assessment, we interviewed 11 students and 5 providers using structured questionnaires. We audio recorded and transcribed 15 of the interviews, and we used notes for the final interview. Two members of the research team independently coded the transcripts and then identified concordant themes.

Results: Themes emerged in two categories: patient care and education. Patient care themes included 1) Unpredictable environment (100% of interviews), 2) Context-appropriate care (87%),

3) Relationship-based care (68%), and 4) Goal-concordant care (31%). Educational themes included 1) Environmental learning (100%) and 2) Impact on future practice (75%). Participants identified social determinants of health (SDH) as central to the program's value but also as a significant challenge. Providers were more likely than students to mention goal-concordant care, whereas both groups equally recognized the intimate relationship between patient and provider. Interestingly, some students named this relationship as a challenge because it was difficult to appreciate the complexity of the patient's history and care. Providers valued the opportunity to take trainees into homes for hands-on experiences, and students identified the setting as an excellent teaching environment.

Conclusions: The opportunity for experiential learning, including the chance to better understand communities and SDH, is a key point of value of a home care program. Expanding opportunities for students to visit patients' homes, ideally with members of an interdisciplinary team, would enhance this understanding and allow students to more fully appreciate the complex network required to care for our most vulnerable patients. To complete our 360-degree assessment, we are going to interview our home care patients and caregivers.

A276

The specter of "soft" rationing among older adults with COVID-19: A proposed retrospective pilot study

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Background:

Data about mortality and morbidity in COVID-19 reveal clear differences by age. An assumption has been drawn from this data that age itself is the primary risk factor — that intrinsic to the biology of older adults is increased risk for COVID-19 complications and death. Our goal is to examine whether this conclusion is overly simplistic and whether factors associated with ageist discrimination against older adults, such as decisions about the timing of referral for hospital care, also affect the high COVID mortality and morbidity rates among older adults. To the extent that such "soft" rationing decisions contribute to differences in COVID outcomes by age, they risk becoming self-fulfilling prophecies: older adults are thought more likely to have poor outcomes, are not referred for standard-of-care treatments, and then experience poorer outcomes.

Methods:

We propose a retrospective pilot study to test the hypothesis that soft rationing may be affecting referral patterns for older adults, with significant effects on health care outcomes including death rates, late referrals for hospital care, and increased hospital length of stay that are independent of biological age. All-payer claims data during the period prior to COVID vaccination of Utah long term care residents (March 2020 – December 2020) will be obtained and multivariate modeling will be used to assess the effect of age on the timing of hospital referral after initial COVID diagnosis. We will also examine the effect of age on hospital length of stay and in-hospital mortality rate.

Results:

Results will be submitted as a manuscript upon completion of the pilot study.

Conclusions:

Exploration of soft rationing could reveal important insights about age-based differences in COVID-19 morbidity and mortality data.

A277

Clinician views on the impact of psychosocial factors on the geriatric surgical experience: A qualitative study

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Background: As the number of older adults undergoing major surgery continues to increase, the challenges of addressing the psychosocial vulnerabilities in this population are increasingly visible. Prior population studies have reported that psychosocially vulnerable older adults have higher rates of mortality, readmission, and functional decline after surgery; however it is unclear whether clinicians are aware of or feel prepared to address psychosocial issues. This study explores the views of clinicians regarding the psychosocial facilitators and barriers of the surgical experience for older adults.

Methods: Semi-structured interviews were conducted with clinicians at the University of California, San Francisco. Fifteen interviews were conducted with geriatricians, primary care physicians, surgeons, hospitalists, procedural and inpatient nurses, physical therapists, and social workers. Interviews explored perspectives on the influence of psychological and social factors on the surgical experience for older adult patients undergoing major surgery. The data were analyzed using thematic analysis and an inductive approach to identify themes.

Results: Five themes relevant to the impact of psychosocial factors on the surgical experience for older adults were identified: 1) quality of social support, 2) outlook towards life, 3) acceptance vs. denial of the limits of surgery, 4) assessment and interventions for cognitive and mental health issues, and 5) ensuring appropriate followup and engagement throughout the surgical trajectory. Providers universally agreed that current assessment and interventions for psychosocial needs in surgery were suboptimal despite acknowledging their influence on patient outcomes.

Conclusions: The perspectives of clinicians highlight the need for additional research on how to better assess for and reduce the impact of psychosocial vulnerability in older adults undergoing major surgery. Effective communication and patient-centered assessment incorporating psychosocial vulnerabilities should be further explored with the aim of developing interventions to address psychosocial vulnerabilities prior to surgery and improve geriatric surgery outcomes.

A278

Music therapy for Dementia

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Question:

"Does prophylactic music therapy promote adherence to person-centered bathing in nursing home patients with dementia in the age of COVID19?"

The increase in isolation from family and loved ones due to COVID-19 based nursing home restrictions leads to a decrease in resident orientation and subsequent worsening of in behavioral symptoms of dementia, often during ADL assistance. This decrease in orientation has led to an increase in the emergence of behavioral disturbances surrounding administration of person-centered bathing.

Does music therapy as a scheduled intervention prior to a person-centered bathing strategy promote functional behavioral regulation during nursing assistance with bathing, thereby promoting ADL adherence?

Method:

At the VA Sierra Nevada Health Care System in the Community Living Center, we have a large population of long-stay veterans with cognitive impairment and dementia.

Nursing will monitor and measure agitation during bathing with the Riker Agitation Scale during assisted baths and showers.

We will schedule individualized music therapy from *Eversound* with recreation therapy for thirty minutes to one hour prior to a veteran's request to bathe in an effort to help orient veterans with dementia.

We plan to trial this intervention for one month and will record any behavioral changes on the Riker Agitation Scale before and after music therapy.

Results:

We will use a static T-score to measure for improvement or decline in the presence of agitated behaviors.

Conclusion: Scheduled, recreation therapy-assisted administration of music therapy prior to the initiation of a person-centered bathing strategy decreases the emergence dysfunctional behaviors during bathing and increases adherence with the assisted administration of this ADL.

Riker sedation agitation scale

	Richmond agitation scale and sedation	Description
4	Combative	Violent, immediate danger to staff
3	Very Agitated	Aggressive
2	Agitated	Frequent non purposeful movements
1	Anxious	Apprehensive, but movement not aggressive or vigorous
0	Alert and calm	Alert and calm
-1	drowsy	Not filly alert, sustain awake to voice, eye open >10 seconds
-2	Light sedation	Light sedation

A279

Impact of COVID-19 on Patients with Memory Loss and Their Caregivers

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Background: Dementia is a common condition that has significant morbidity with disease progression.[1] Behavioral mitigation strategies aimed at slowing progression of dementia include social contact and engagement.[2] Thus, social distancing guidelines related to COVID-19 have potential to compound the morbidity in individuals with dementia and to increase burden on caregivers tasked with supporting their loved ones. The goal of this work is to explore the impact of COVID-19 on patients with memory loss and their caregivers.

Methods: This is a secondary analysis from a qualitative study exploring advance care planning goals among patients with dementia at an academic health center in Philadelphia, PA. We used an open-ended semi-structured guide to interview patients with memory loss or dementia and caregivers about experiences living with dementia and goals for care planning. Interviews were recorded, transcribed, and analyzed using conventional content analysis. The following focuses on content in the "COVID-19" node.

Results: Seventeen patients and 8 caregivers completed interviews from August-Oct 2020. All participants discussed impact of the COVID-19 pandemic on their lives. Four primary themes emerged: lack of social life / isolation, fear associated with the pandemic, precautions, and coping strategies. Both patients and caregivers identified social interactions as important to mitigate or cope with memory loss. Relatedly, some patients attributed recent disease progression to continued isolation and caregivers reported increased burden during the pandemic. Further data to support the themes will be presented.

Conclusions: The COVID-19 pandemic threatens to disrupt patients' strategies to preserve memory by limiting salient social interactions and may increase the likelihood of more precipitous decline. Practical support for both patients and caregivers as a response to the pandemic are needed.

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A280

Age-related Changes in Structure and Function of the Mouse Pulmonary Artery

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Background: There are limited systematic studies on underlying mechanisms to explain changes in the pulmonary artery due to aging. We explored how aging affects the structure and function of mouse proximal pulmonary arteries.

Methods: We harvested right pulmonary arteries from young 4-5 months old C57Bl/6J male mice (n=6) and 20-month-old C57Bl/6J male mice (n=3) to characterize geometry and biomechanical properties of their pulmonary arteries including stiffness and vaso-activity. Biomechanical properties of the arteries were measured ex vivo in a warm, oxygenated, physiologic solution. The structural composition of the pulmonary arteries was analyzed by histology.

Results: We observed no significant change in contractility of the *ex vivo* right pulmonary artery from young and old mice when exposed to vasoactive substances such as potassium chloride and phenylephrine despite lower smooth muscle cell density within the pulmonary arterial wall of older mice (old = 0.0011 cells/μm^2, young = 0.001443 cells/μm^2, $P = 0.2885$). Old vessels had significantly greater material stiffness compared to young vessels (old = 12.8 kPa, young = 9.3 kPa, $P < 0.05$). At a mean arterial pressure of 15mmHg, old vessels were 66% less distensible than young vessels (old = 265.3 ± 28.5 $mmHg^{-1}$, young = 403.3 ± 24.1 $mmHg^{-1}$, $P < 0.05$). Old pulmonary arteries had significantly thinner walls than younger pulmonary arteries (old = 55.54 ± 0.9 µm, young = 64.2 ± 2.9 µm, $P < 0.05$) with a 4.8% decrease in medial to adventitial collagen ratio.

Conclusions: Pulmonary arteries in mice do not thicken as they age but do have decreased medial collagen. Pulmonary arteries from older mice stiffen with age but maintain their ability to contract and dilate. We hypothesize that there are age-related changes in phenotype of smooth muscle cells to compensate for a decrease in the number of smooth muscle cells in order to maintain contractility.

A281

Concordance and discordance between hip and spine T-score in patients 65 years and above with previous fragility fractures

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Introduction:

Bone loss occurs at different rates in different skeletal sites. This leads to varying degrees of concordance and discordance between skeletal sites in the diagnosis of osteoporosis.

Aim:

To determine concordance and discordance between hip and spine T-scores.

Methods:

A retrospective cross-sectional analysis of patients attending a fracture prevention clinic was performed. Concordance was present if the T-scores of the spine and hip fell within the same category of the WHO diagnostic criteria of osteoporosis and osteopenia (both in osteoporotic range for instance). Mild discordance was present if there was one step difference between the two T-scores e.g. osteopenia and osteoporosis. Major concordance was present if one T-score was normal and the other was in the osteoporotic range. SPSS 27 statistical software was used for analysis. Descriptive statistics and Pearson chi square were calculated.

Results:

151 patients were analyzed 25 males and 126 females. All had prior fragility fractures. Mean age was 74.5 years +/-6.79. Out of 54 patients with hip osteoporosis concordance was 31.4% between hip and spine T-scores; minor discordance was present in 55.6 % and major discordance in 13%. This can be partly explained by the fact that osteoarthritic degenerative changes in the spine can give a false impression of higher T-score.

Conclusion:

There was concordance between the hip and spine in only a third of patients 65 and over with osteoporosis. There was discordance in the majority of cases although most of the discordance was minor.

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A282

Out of the Classroom and into the Home: a mixed methods analysis of medical students' lessons learned from geriatric home visits

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Home visits are an important and positive part of geriatric education for medical students (MS), but the main lessons learned by MS are not known. As part of the new Aging/End of Life Care curricular theme at Harvard Medical School, first year medical and dental students participate in older adult home visits with geriatrics faculty to learn about the geriatric assessment. Our mixed methods analysis explores students' main lessons learned.

We collected anonymous evaluation forms from 310 students following a one-time geriatric home visit over a 3 year period. Using a 5-point Likert scale, MS rated their comfort with various aspects of geriatric assessment and rated whether their interest in geriatrics increased after the home visit. MS described two lessons learned. Two coders analyzed 604 lessons learned and identified major themes which were then organized into the Geriatric 5Ms Framework (Multicomplexity, Mobility, Mind, Matters Most, Medications). Qualitative and quantitative data were analyzed using Excel, Dedoose and JMP statistical software.

A majority of MS (72%) reported their interest in geriatrics somewhat or greatly increased after the home visit. Of the 604 lessons learned that were coded, 51% related to mobility. 56% of responses related to multicomplexity, of which the most common was understanding different living facilities (43%).

After a geriatric home visit, MS interest in geriatrics increases as they learn about applying the Geriatric 5Ms Framework. The most common lessons learned related to mobility and multicomplexity, essential areas of focus in a geriatrics curriculum. Though more difficult to arrange in the COVID-19 era, educational home visits are an important opportunity to increase MS interest in geriatrics and build their skills to improve the care of older adults.

Lessons Learned from a MS Geriatric Home Visit

No. and % of students (N=310) with responses coded to the Geriatric 5Ms domains in lessons learned from home visits.						
Geriatric 5Ms	Multicomplexity	Mobility	Mind	Matters Most	Medications	None
Total N (% of total)	174 (56.1)	158 (51.0)	127 (41.0)	76 (24.5)	48 (15.5)	24 (7.7)
Sample lessons learned	"Older adults are a delight to work with and have a broad and more dynamic spectrum of functionality" "Aging is not synonymous with deterioration of function"					

A283

Education about Palliative Care Services for Patients in a Skilled Nursing Facility

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Background: Staff in our Skilled Nursing Facility (SNF) find it difficult to converse with patients when they become eligible for Palliative Care (PC) services. This is inhibiting or delaying integration of PC services. Stakeholders in our SNF felt that early education about PC is essential for patients to accept services in a timely manner when they become eligible for PC. We designed an educational intervention to improve patients knowledge about PC in our SNF.

Methods: A meeting was conducted with inter-professional providers and it was apparent that there is no consistent mechanism to educate patients about PC in our SNF. A survey was conducted on 30 patients to evaluate their awareness about PC. Literature was reviewed to gather educational material and a hand out with PC information was created. The hand out was tested on 12 patients and a post education survey was conducted to evaluate their understanding of PC. The education material will be modified based on pre and post survey results and patients' feedback about the hand out in the next 3 months. Inter-professional providers will partner to test modified education material on more patients to further enhance uptake of the education in a workflow for patients admitted to the SNF.

Results: Pre-education survey showed that 66% (n=30) did not hear about PC. Majority of patients before and after education agreed that PC helps with pain management, social and emotional support for patients and families. Majority of patients felt that PC does not mean giving up but at the same time majority of patients felt that most treatments must be stopped when enrolled in PC and they related PC with death before and after education. Patients were interested in learning more about insurance coverage and differences between PC and hospice.

Conclusions: PC education in SNF is important for patients to make informed choices about their goals of care. The hand out did not make a significant difference in patients' knowledge gain about PC. There is room for improvement in detailed education about: not relating PC with death, clarifying treatment options available with PC and insurance information about PC. Further modification of the hand out and testing for knowledge gain will ensure success of the educational intervention for patients in the next 3 months.

A284

Bridging Barriers: Assessing an Innovative Virtual Geriatrics Curriculum for Family Medicine Residents during the COVID Pandemic

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Background:

Given the aging US population, a 2008 National Academy of Medicine report called for more geriatrics-trained physicians.[1] Until recently, family medicine (FM) residents at the Institute for Family Health in NYC received sporadic geriatric didactics and rotations in nursing homes and outpatient geriatrics in collaboration with Mount Sinai's Department of Geriatrics. No standardized geriatrics curriculum existed. During the COVID surge, reduced time in the nursing home and transition to virtual learning created barriers to geriatric education. In response, FM residents completed an innovative virtual geriatric curriculum while rotating on the in-patient geriatrics consult service.

Methods:

A needs assessment was developed to measure resident attitudes and confidence in geriatrics.[2] Knowledge was also assessed using questions based on AAFP geriatrics competencies relevant to inpatient care.[3] 24 FM residents completed the needs assessment. Based

on these results, a virtual curriculum used six short video lectures that focused on the residents' geriatric knowledge gaps. Geriatrics attendings and fellows on the consult service encouraged clinical application of virtual learning. Pre- and post -rotation surveys assessed residents' attitudes, confidence, and geriatrics knowledge.

Results:

The results will be discussed.

Conclusions:

A significant number of patients seen by FM physicians are older adults. This project used an innovative approach to improve delivery of geriatric care by adding geriatric knowledge skills to the FM physician's toolkit. It also aimed to foster greater interest in geriatric fellowship training.

Resources:

1. Institute of Medicine (US) Committee on the Future Health Care Workforce for Older Americans. Retooling for an Aging America: Building the Health Care Workforce. Washington (DC): National Academies Press (US); 2008. PMID: 25009893.

2. Kumar, Bensadon, Van Ness, Cooney. Curriculum on Resident Education in Care of Older Adults in Acute, Transitional and Extended Care Settings. Journal of Education and Training Studies. v4 n9 p247-252 Sep 2016.

3. American Academy of Family Physicians. Recommended Curriculum Guidelines for Family Medicine Residents. Care of Older Adults. AAFP Reprint No. 264.

A285

Pandemic paralysis: Stunted Geriatrics Knowledge Acquisition

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Background: The COVID-19 pandemic profoundly impacts post – graduate medical education. Training programs redeploy their residents in various ways, emphasizing on – line curriculum for subsets of trainees held in reserve for medical service coverage should a shortage of providers occur. Block rotations are subject to disruptions due to trainee quarantines and mid – rotation re-assignments. All these factors potentially impact Geriatrics education, arguably one of the most important rotations for trainees confronting a myriad of Geriatric problems during the pandemic such as atypical manifestation of disease, social isolation, deferred chronic disease management and important What Matters issues relevant to serious COVID-19 illness.

Methods: A required block rotation for 3rd year Internal Medicine and Family Medicine residents was evaluated for pandemic – related changes in trainee attendance, didactic engagement, and knowledge acquisition represented by pre and post rotation written examinations.

Results: Resident attendance at the Geriatric clinics was reduced by 50% or more during the pandemic. Internal medicine residents averaged 12 days per month of Geriatric clinics pre – pandemic whereas this attendance decreased to 4 days per month during the pandemic. Similarly, family medicine residents averaged 10 days of attendance per month pre – pandemic and this number declined to 5 days per month during the pandemic. None of the days missed in Geriatric clinic were due to quarantines. The absences were attributed to redeployment to the hospital, increased administrative tasks such as on – line interviewing of resident applicants, interviews for fellowship programs, and un-excused absences. Trainee test performances after the rotation showed no improvement in Geriatrics knowledge and surprisingly rivaled Geriatrics knowledge levels of 3rd year medical students who take the same test.

Conclusions: The pandemic has profoundly disrupted Geriatric Block rotations for post graduate medical trainees resulting in inadequate clinical experiences and failure to achieve incremental improvements in Geriatrics knowledge representative of an independently practicing internist or family medicine provider.

A286

"Looking for harm in all the right places" – a digital scavenger hunt for patient safety

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Background:

In the era of digital learning, the majority of learners now spend their day virtually, though experts agree that learning contextualized in one's personal community is more "sticky" and likely to result in long-term memory. As preclinical medical students have transitioned to learning online, it is important that patient care and safety curriculum continue in a contextualized manner in the community, as medical students can have an essential role in identifying potential harms before they reach patients. In order to educate medical students about lack of environmental adaptations for older adults in the community, we developed and implemented a curriculum utilizing a digital platform in order to identify safety challenges in their homes and neighborhoods.

Methods:

We created a scavenger hunt using a digital program for preclinical medical students as part of a geriatrics curriculum. Students were given information to review about safety hazards for older adults in the community, and then downloaded a free application to their phones to participate. While using the app, participants were instructed to take photos of items in their homes and neighborhoods which corresponded to various prompts– for example, an unsafe chair, a set of stairs with low-lighting which could serve as a potential tripping hazard, or a sidewalk without cutouts for a wheelchair. After completing 20 "missions," students wrote a short narrative reflection about the experience.

Results:

153 preclinical medical students downloaded the ActionBound application and participated in the scavenger hunt, with 20 "missions" completed. On average, students interacted with the app for 152 minutes. In a post-activity reflection, students scored their enjoyment of the activity as a 3.6 out of 5 possible points, and 3.9 (1-5, 1 favors lecture, 5 favors scavenger hunt) regarding their preferences of an interactive hunt to a lecture-based didactic. Qualitative analysis was performed of their narrative reflections to give further dimension to these results.

Conclusion:

Medical students serve an important role in identifying potential patient safety challenges. A digital scavenger hunt is a well-received model of contextualizing learning about safety for geriatric patients in students' communities. Opportunity exists for this digital platform to be utilized for learners in other contexts.

A287 Encore Presentation

Improving the Rate of Cognitive Impairment Screening in an Internal Medicine Residency Clinic

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Background

The rate of cognitive impairment screening of patients over the age of 65 in our internal medicine (IM) residency clinic was below the US national average of nearly 16%. We tested an interactive education intervention to increase the rate of cognitive impairment screening among patients aged 70+ who received primary care at the UPMC McKeesport IM residency clinic in an underserved urban community.

Methods

39 IM residents provide primary care to 166 people aged 70+ in the continuity clinic. We began with a needs assessment which involved a 6-month chart review of older patients who had attended

the clinic to determine the baseline rate of cognitive impairment screening and of diagnosis or treatment of dementia. We gave an interactive skill-building workshop to residents attending noon conference on January 29, 2020 which included a brief didactic overview of the scope of the problem. Residents practiced doing and interpreting the Mini-Cog©. Weekly reminders were sent prior to continuity clinics from January 29th to June 26th of 2020. We measured the rate of cognitive function assessment as well as the rate of diagnoses of any type of cognitive impairment except delirium. This quality improvement (QI) study was exempt from IRB review.

Results

22 residents attended the workshop. Four (2.4%) out of our 166 patients aged 70+ had a diagnosis of cognitive impairment listed in the medical record. During the 6 months before the workshop, 141 (84.9%) of these patients visited the clinic. Three (2.1%) were screened for cognitive impairment. During the 6 months after the workshop, only 105 (63.3%) of all patients aged 70+ visited the clinic. Of these older patients, 31 (29.5%) underwent screening. During the 6-month post-intervention period, the number of clinic patients aged 70+ with a recorded diagnosis of cognitive impairment was 12 (7.2% of 166).

Conclusion

Cognitive impairment screening is a low priority in IM resident primary care clinics. Despite abrupt and major changes to clinical operations imposed by Covid 19, our intervention led to a substantial short term increase in cognitive impairment screening of our older clinic patients. Next steps include a sustainability plan and training to do screening via telehealth.

A288

Giving New Life to Geriatrics: How to Improve Geriatric Medicine Teaching in a Family Medicine Residency

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Background:

With an ever-growing geriatric population, there is an increasing need for excellence of geriatric care starting at the level of resident physician training. This study focused on quality improvement of the geriatric medicine curriculum for the Loma Linda University Health Family Medicine Residency. The assessment aimed to recognize how to engage residents as millennial learners and identify preferred teaching modalities for family medicine residents.

Methods:

A cross-sectional survey with essay questions was distributed to 12 Family Medicine Residents who completed a one-month Geriatric rotation during the 2019-2020 academic year. Survey response rate was 100% (N=12). The survey assessed the perceived effectiveness of several teaching modalities currently incorporated into the geriatric curriculum including 1:1 teaching, shadowing, provided educational resources, and a post-test assessment.

Results:

Overall, 32% of residents answering the survey believed their preclinical training in geriatrics was adequate for clinical rotations, whereas 100% of residents believed their geriatrics rotation prepared them to be more successful in residency. The preferred teaching modality was shown to be summaries of important topics pertaining to the geriatric population that were short and portable (pocket guides) as well as comprehensive search engines such as UpToDate and Dynamed. The most important topics cited by residents that should be included in point of care reference documents were osteoporosis, dementia/delirium, gait assessment, and polypharmacy.

Conclusion:

In conclusion, this survey reaffirmed the importance of a dedicated Geriatric rotation for Family Medicine residency training, as it was clear that Geriatrics was a topic that was not adequately addressed during preclinical training. The point-of-care references that were provided to each resident at the beginning of the rotation including the "Geriatric Medicine Pocket Guide" that was created by Loma Linda University Health Geriatric Medicine Division, as well as the "2019 AGS Beers Criteria" pocket guide were universally regarded as quick and useful resources. From personal experiences, it appeared that a combination of 1:1 teaching, shadowing, administering a post test, and providing educational resources were the specific modalities that provided the most success with all learners during the Geriatric rotation.

A289

An educational approach to implementing Age-Friendly care in the convenient care setting.

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Background: This abstract highlights the educational plan for 3000 advanced practice providers in CVS Minute Clinics (MC) to increase their expertise in Age-Friendly care. This project, a partnership between MC, Case Western Reserve University, and Institute for Healthcare Improvement increases the health care workforce prepared with the 4Ms Framework: What Matters, Medication, Mentation, Mobility. Educational modalities were developed and evaluated.

Methods: Gerontological, simulation, and convenient care experts developed products to introduce MC providers to 4Ms care. Weekly reminders encourage participation. The orientation module differentiates standard and 4Ms care and is required prior to enrollment in other offerings. Twelve grand rounds presented monthly describe common older adult conditions seen at MC. For 20 minutes, interprofessionals discuss 4Ms framework application. Each is presented on WebEx, recorded, and then posted on the Age-Friendly Health System (AFHS) website and MC learning portal. Ten video vignettes describe geriatric principles and methods to implement 4Ms care. The virtual clinic assesses Age-Friendly competency using simulation. Continuing education provides an incentive for completion. Plan-Do-Study-Act was used to test each modality and revisions were made based on feedback.

Results: Data reflects educational modality completion (n, %) and evaluation in the first 3 months: Required 4Ms orientation module (2449, 77); Grand Rounds on cerumen impaction (646, 20), urinary tract infections (470, 15), skin infection (333, 11), Video Vignettes (9). The Virtual Clinic has 2495 providers enrolled, accessed by 279 providers. A primary barrier to completion of the educational activities is making time during or outside the usual work day.

Conclusions: Requiring educational product completion yields higher completion rates. Incentives, such as continuing education credits, increase completion rates. Time for presentation of grand rounds increased from 15 to 20 minutes due to the complexity of specialized care of older adults in addition to 4Ms care. Completion of content increases knowledge of Age-Friendly care, care coordination, and knowledge of assessment tools and actions for improved care of older adults.

A290

Enhancing Geriatric Workforce Competency: Impact of 3 Distinct Geriatric IPE Programs

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Background: Interprofessional education (IPE) in geriatrics provides a way to teach health professional students team care and geriatrics with goals of improving care and health outcomes for older adults. Little agreement exists on the approach or components most

successful to increase competency in care of older adults. Students from 7 health profession programs participated in 3 different experiential IPE-geriatric programs: Interprofessional Geriatric Curriculum (IPGC) a 20 hr/5 session structured didactic and in-person community-based program, Student-Senior Partnership (SSPP) a 14hr/5 session semi-structured in-person program, and Geriatric Assessment Clinic (GAP) a 4 hr observational IP clinical experience.

Methods: Students (n=681) who participated in one or more programs over a 4-yr period completed pre-post online surveys that included rating familiarity with roles and responsibilities of other professions, capability of performing 9 different geriatric assessments and the Geriatric Attitudes Scale (GAS). Changes in pre/post measures were analyzed for each program and for those who completed multiple programs.

Results: Students in the GAP, IPGC and multiple programs showed improved familiarity with roles and responsibilities of other health professions. GAP students became "familiar" or "very" familiar with 0.72 more professions on average, IPGC 1.27 professions, multiple programs 1.55 (all p<=.001). Students in all program reported improved self-reported capability in all 9 geriatric assessments, with largest improvement in mean count of capable assessments in IPGC (3.12 pts, p<.001) and multiple programs (2.77 pts, p<.001). GAS total score increased for students in IPGC, SSPP and multiple programs, mostly in the sub-domains of social value and medical care (p<.001).

Conclusion: Increased familiarity with roles and responsibilities of other health professions can be achieved through a variety of IPE experiences. Most improvement occurs with participation in multiple IP geriatric programs or a program with the most hours of IP and geriatric training. To best improve self-reported competency in geriatric assessment and improve attitudes towards working with older adults, a program that combines didactic and experiential may be most successful.

A291

Reinventing a geriatric interprofessional program in the time of COVID

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Background: The COVID pandemic forced changes in education and practice for all health professions resulting in revisions to an established community-based interprofessional education (IPE) geriatric program. The objective, and challenge, was to maintain the integrity of the program goals and content; community-based training for diverse health professions students in geriatrics and team care in a distance-learning format. In addition the program sought to improve access to telehealth by providing video-enabled technology and student-supported technology experiences.

Methods: The established IPE geriatric program involved 140 students from 7 health profession programs in 14 teams, each team paired with a community-dwelling English-speaking older adult. Student teams met 5 afternoons over 5 mos; a half day orientation, a wrap up, and 3 times for 1.5 hours with the older adult in their home, each visit preceded by a didactic lecture, followed by a faculty-facilitated 1-hour team debrief. The revised remote program retained the 5 half day meeting schedule with orientation, wrap up and 3 afternoons sessions, team meetings and didactic presentations restructured around the 4 M's (what matters, medications, mentation, mobility).

Results: The remote program involves 90 students from the same 7 health profession programs divided into 13 teams. Each student is paired with an older adult (32% non-English speaking) with whom they meet weekly for 30 minutes by phone or video. Student teams meet via web video for a 1.5 hour faculty-facilitated team debrief followed by a 1-hour didactic lecture. 45 (50%) older adults were provided a smart phone as part of the program with use facilitated by their student partner. 43 (86%) successfully learned to use the phone within 2 weeks and 45% of all older adult participants succeeded in video calls within 6 weeks.

Conclusion: Conversion of the IPE geriatric program to a remote platform was achieved with an increase of older adults four fold and increased ability to engage non-English speaking older adults, but a reduction of student participation by a third. The program content was reframed using the 4M's and successfully introduced older adults to video technological communication, supporting improved access to telehealth.

A292

4Ms Forum: Developing a 4Ms Community Curriculum

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Background: Age Friendly Health Systems (AFHS) is a healthcare framework designed to provide quality care to older adults (OAs) by focusing on four domains commonly called the 4Ms: Medication, Mobility, Mentation, and What Matters. To date, educational content on the 4Ms has primarily focused on providers within the context of a healthcare system. Our objective was to use the 4Ms to create remote learning-friendly education for community-dwelling OAs. We describe our curriculum design process, which utilized a community feedback-informed methodology.

Methods: An interprofessional (IP) team collaboratively designed a curriculum using evidence-based content for each of the 4Ms. Following creation, diverse feedback groups consisting of OAs in the community and aging services professionals were assembled via videoconference to participate in each pilot presentation. Feedback sessions included time for audience-generated discussion and survey completion. The initial IP team had four follow-up meetings to discuss results and integration of feedback.

Results: Four community feedback sessions hosted a cumulative total of 25 participants. On a 5-point Likert scale (5= Excellent, 1= Needs Significant Attention), participants rated the overall quality of the presentations (average) as follows: Medications= 5.0, Mobility= 4.4, Mentation= 4.1, What Matters= 4.7. Design, content, length, and cultural competency were also rated. Open-ended participant responses led to significant changes in the presentations, including using fewer words per slide, splitting Mentation into two sessions, and a stronger focus on healthy aging.

Conclusions: Our 4Ms community curriculum is a novelway to introduce OAs to the AFHS movement, 4Ms concepts, and community health resources, that can be delivered virtually. Participant feedback was critical in shifting focus to healthy aging, rather than solely on disease processes. Our feedback-informed approach highlights the importance of engaging the community when developing community-based programming, to ensure utility and cultural relevance of content.

A293

Comparative Perspectives on a Geriatrics Medical Student Curriculum

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Background: Similar to national trends, medical students at our academic institution have low interest in geriatrics. Few take the geriatrics elective, possibly reflecting negative attitudes toward geriatrics, highlighting differences between faculty and student perceptions. We sought to identify areas of synergy and mismatch between medical students' and faculty attitudes toward geriatrics and find ways to increase interest in the elective.

Methods: We convened three focus groups: geriatric faculty, medical students who completed the geriatrics elective (*G+*), and students who did not participate in the elective (*G-*). Topics assessed: positive and negative aspects of geriatrics; how geriatrics could be

better introduced to students; and opportunities to increase interest. We used a constant comparative method for qualitative coding of responses into major themes.

Results:

Attitudes: Both student groups considered geriatrics not prestigious, and all groups noted lower pay than other specialties. Faculty and *G+* students recognized the misconception that specialization is not needed to care for older adults. *G-* students discussed working with families as a negative. Regarding positive aspects of geriatrics, faculty and *G+* students cited satisfaction optimizing quality of life and helping patients with complex problems. Faculty also noted satisfaction in teamwork and the ability to work in different settings.

Increasing interest: All groups found medical students' exposure to geriatrics inadequate, noting that many are not aware of the specialty until late in their education. Both student groups identified an institutional bias promoting more prestigious specialties. Student suggestions to increase interest included: promote geriatrics early; serve as role models; demonstrate value in a geriatric approach to patient care; highlight connections with other specialties; and educate students about career pathways.

Conclusion: Perceptions of students who participated in our geriatrics rotation more closely aligned with faculty than those of nonparticipating students. This may reflect exposure to the field during the rotation and more accurate impression of geriatrics. We cannot rule out selection bias among this group based on prior knowledge or personal interest. All agreed that increasing early exposure to geriatrics and serving as role models are key to increasing interest in geriatrics.

A294

Mini Geriatric Medicine clerkship for MS3

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Background: The ongoing COVID-19 pandemic has adversely affected face-to-face time for teaching and learning of geriatric concepts in undergraduate medical education. To augment learning experiences in older adult healthcare the Geriatrics Department at the North Dakota School of Medicine and Health Sciences developed a case-based curriculum for a 2-week geriatrics elective designed for third year medical students.

Method: Older adult patient cases were developed from multiple sources. Learning objectives were tailored toward undergraduate medical education and mapped to ACGME Core Competencies. Case reports were supplemented with evidence–based medicine from PubMed® citations and made available as reading material. Pre- and post-clerkship assessment multiple-choice questions were developed to cover fundamental core concepts.

Result: Curriculum was implemented using Blackboard® and Zoom® technology. Feedback on the curriculum from both learners and teachers was generally positive. Pre test results showed 70% knowledge of Geriatrics that improved by 8–10% after the mini–clerkship. We did not track trainee engagement of the cited medical literature, thus offering a new round of project analysis regarding how many students are stimulated by case reviews to delve deeper into the Geriatrics clinical research.

Conclusion: An online, case–driven geriatrics elective can be implemented successfully to strengthen 3rd year student's Geriatrics knowledge sans face to face clinical encounters. It remains to be seen if this type of learning augments face to face experiential learning.

A295

Enhancing Interest and Engagement in Evidence Based Medicine Academic Sessions

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Background: Mastery of evidence-based medicine (EBM) skills is especially important in Geriatric and Palliative Medicine, as many studies exclude older and seriously ill patient populations. Geriatrics and Palliative Medicine fellows at Icahn School of Medicine at Mount Sinai attend biweekly journal club where they apply EBM concepts to assess validity and clinical significance of sentinel articles. Curriculum challenges include difficulty engaging the audience and clinical demands that hinder learner preparedness. The pandemic posed further roadblocks when fellowship didactics transitioned to a virtual format. This project aimed to increase engagement and participation in the EBM curriculum.

Methods: EBM curriculum challenges were identified through literature review and interviews with the fellowship program directors and former EBM coordinators. Challenges were addressed with a new format and then piloted in subsequent didactic sessions. Changes included closer collaboration with presenters to increase preparedness and faculty presence to clarify unfamiliar concepts. Preparation burden was reduced by securing in-session article review time. The focus of each presentation was narrowed to a few key learning points. Pre- and post-course suveys were planned.

Results: The EBM curriculum was initiated in a virtual format via zoom in July 2020. Implemented interventions were assessed with direct feedback from participants. Pre-course survey showed most fellows were familiar with EBM concepts but unfamiliar with identifying article types. UpToDate was the most frequently utilized resource with the greatest level of comfort. Prior EBM experience was typically in residency, where allotted in-session reading time and small group discussions were reported as helpful. Most fellows encountered clinical questions daily that required literature review. Additional results will be discussed.

Conclusions: Active participation is essential to quality EBM learning experience, which can be challenging in a virtual learning environment. This project showed that EBM conferences via zoom allow for both small and large group interaction and real time access to online resources. Preparation time can be reduced by structuring in-session reading and analysis. Continued feedback is imperative for effective curriculum development.

A296

Sustainability and Impact of Community Programs for Dementia Education

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Background: Recognizing the challenges local communities have in a large, sparsely populated state with a shortage of health care professionals and educators, the Montana Geriatric Workforce Enhancement Program (MGWEP) established an annual awards program for community organizations to provide dementia education locally. Each year since 2017, a call for proposals has been distributed electronically to our statewide partners and other agencies focused on aging and health.

Methods: Awardees submit a project report at the end of the funding year, but to date there's been no additional follow up. Thus, we are unsure if or how programs have maintained viability or what the long-term impact of the education has been. To determine the ability of these local agencies and programs to sustain their activities and impact their local communities after their funding period expired, we are reaching out to the award recipients with a Qualtrics survey asking how many individuals benefitted from the education as well as

gathering some limited demographics. In addition, we have inquired about the sustainability of the programs, and other funding sources and/or resources used.

Results: A total of 48 local agencies in 25 cities have received 65 awards for community-based projects focused on dementia education. Awardees include Area Agencies on Aging, rural hospitals, local libraries, long-term care and assisted living facilities, county health departments, care managers, and senior centers. Projects had three primary approaches and foci: educational seminars and workshops on dementia for community members and family caregivers; dementia-friendly community events and efforts; and educational materials and training programs on dementia, primarily for direct care workers. To date, a total of 2,431 individuals participated in the projects.

Conclusions: MGWEP has provided over $60,000 since 2017 to support local, community efforts to provide education about dementia to individuals across the lifespan. Through the current survey we will learn how many programs have sustained the projects developed and who has benefitted in each community. The lessons we learn will help us better engage future partners, communities, and individuals as we all strive to better educate Montanans about dementia.

A297

Lessons from Adapting a Geriatrics Workshop for Medical Student Remote Learning

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Background:

With the rising aging population, providing meaningful exposure to geriatric principles remains an important aspect of medical education. This pandemic has forced the transition of medical education to virtual formats for safety reasons. We developed and evaluated a two-part virtual workshop, incorporating multiple teaching modalities, to provide meaningful geriatric exposure to medical students.

Methods:

This three-hour virtual workshop was held in two parts using videoconferencing software. The first half included a didactic covering an introduction to the physiology of aging followed by five domains of geriatric care (medical care, cognition, functional activities, psychosocial status and complexities), a case presentation of a geriatric patient over time, and multiple-choice questions with discussion. For the second half, small group discussions were facilitated by faculty geriatricians with six to ten students. Instructors were given autonomy to lead their session using various teaching modalities including quiz questions, a falls prevention game, structured case presentations, and a video highlighting aspects of nursing home care. Students provided an overall rating out of 5 and qualitative comments. Instructors also provided qualitative comments.

Results:

There were 181 second-year medical students, 20 geriatricians, and 6 fellows who participated in the workshop. Student response rate was 85.1% (154/181) with the geriatrics session having similar scores to ophthalmology and psych/neuro (3.99 vs 3.86 vs 4.08 respectively). Students commented that the first half was thought-provoking, and the case presentation highlighted the aging process; however, they wanted pre-recorded didactics prior to the session, more discussion during the workshop, and an overall shorter session citing "zoom fatigue." For the second half, learners thought the case discussions and roleplaying were most helpful, and the falls prevention game and jeopardy could be improved. Faculty thought the various teaching modalities were helpful, but would incorporate the ability to practice interviewing in the future, potentially with standardized patients.

Conclusions:

This virtual workshop for preclinical medical students was well received by learners and faculty. The lessons learned from this workshop can guide how future virtual medical curricula is developed and delivered to early learners.

A298

A Virtual Geriatrics and Palliative Care Immersion Course for Inter-professional Teams

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Introduction

Older adults suffering from multiple progressing illnesses and geriatric syndromes need interprofessional teams to optimize care. There are insufficient number of trained geriatrics experts to serve the ageing population; it is critical to devise practical ways to train front-line clinicians in geriatrics and palliative care principles. During the COVID-19 pandemic, with support from a HRSA grant, the authors adapted an Immersion Course modeled on the successful CRIT program (Chief Resident Immersion Training in the Care of Older Adults). The virtual course focused on the Age Friendly Health System's 4Ms (What Matters, Mentation, Medication, and Mobility) to coach a wide range of trainees and professionals in the care for older adults.

Methods

The 1.5-day virtual course interspersed mini-lectures with 3 interactive breakout case module discussions depicting a patient with progressing dementia. Lectures were taught by interprofessional faculty pairs and discussion groups were structured to maximize interprofessional learning. Didactic sessions included dementia, depression, deprescribing, non-pharmacological pain management, falls, frailty, community resources, telehealth etc. On day two, attendees were introduced to the principles of an Age Friendly Health System with support from Institute for Healthcare Improvement and participated in interactive quality improvement (QI) breakout exercises with coaching focused on potential QI projects.

Results

Fifty-seven people attended the course including doctors, MAs, RNs, social workers, chaplains, PAs, NPs, pharmacists and representatives from community-based organizations. The average pre-test score was 66%; the post-test average rose to 80%. Scores improved consistently across all professions and experience levels. The evaluations and comments in the group feedback session were uniformly enthusiastic; they all reported that the content was at the right level.

Conclusion

We have successfully conducted a 1.5-day virtual immersion course for interprofessional trainees and clinicians. The course was well accepted and successfully imparted core geriatrics, palliative care and quality improvement content while fostering interprofessional teamwork. This conference could serve as a model for training the existing workforce to better care for vulnerable adults during this unprecedented pandemic time and beyond.

A299

Innovative Approach to Addressing Perioperative Geriatric Education Gaps

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Background

There is variability in geriatric training across the spectrum of perioperative care providers. With an aging surgical population, it is essential that perioperative health care providers have sufficient geriatrics competencies.

To address this gap, we designed a five-part education series to provide our perioperative clinic providers with a comprehensive geriatric education curriculum consistent with the IHI's Age-Friendly Health Systems (AFHS) model incorporating the 4Ms: Mobility, Medications, Mentation, and What Matters. The AFHS initiative aligns with providing evidence-based, person-centered geriatric care.

We hypothesize that this geriatric education curriculum will improve confidence and knowledge of geriatric principles and increase the use of these assessment tools in our perioperative clinic. This is an important step in improving geriatric surgical outcomes consistent with the American College of Surgeons Geriatric Surgery Verification Program.

Methods

A needs assessment completed by 73 perioperative clinic members identified five gaps to address in an education series including 1) Frailty and 4M's 2) Mobility: gait assessment and timed up and go test 3) Medications: Polypharmacy and Nutrition 4) Mentation: Mini-Cog 5) What Matters.

The study population includes nurses, APPs, residents and attendings who work at our perioperative anesthesiology clinic. Participants were de-identified and completed a pre, post, and delayed post-education survey via REDcap.

Each session consists of a 30 minute pre-recorded education session focused on each geriatric topic. The aims to be assessed are 1) the impact of geriatric focused education curriculum by asking learners to rate their self-efficacy before and after completing the education curriculum, globally, and in each of the 4Ms 2) compare the impact of geriatric focused education between physicians and non-physicians.

Primary analysis will focus on the changes in global self-efficacy between pre and post education. Secondary analysis will focus on specific changes in each of the 4Ms and whether there is any difference between physician and non-physician outcomes.

Results & Conclusions

The education curriculum will be disseminated to participants over a 10 week period with pre, post, and delayed post surveys. Data will be analyzed with results and conclusions presented at AGS21.

A300

Death Rounds: Copying with Death and Dying in Residency

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Background

Residents report minimal education prior to their training years to deal with the emotional and psychological aspects of caring for dying patients. Our intervention, Death Rounds, expands on the current literature citing the effectiveness of monthly 1-hour debriefing support sessions with a multidisciplinary team of experts (Palliative Care, Pastoral Care, Intensive Care) to facilitate resident-led discussions. In our current medical environment, where physician stress and burnout rates are high, opportunities such as Death Rounds can promote physician competence in end-of-life care as well as physician wellbeing.

Objectives

To implement and evaluate a series of facilitated debriefing and support sessions for residents to provide support on the emotional psychological aspects of caring for dying patients.

Methods

Trainees on their critical care rotation were invited to attend monthly Death Rounds. A survey consisting of 10 questions directed towards the impact of perceived insufficient end-of-life care competencies and the role of Death Rounds in resident education were distributed and collected at the conclusion of the discussion.

Results

Preliminary date include 19 trainees spanning all training levels attended at least 1 Death Rounds session and also completed the questionnaire. Of those attendees, 74% (14) had been actively involved in the care of a dying patient. 95% (18) of trainees perceived Death rounds to be at minimum a very valuable experience. 68 % (13) of respondents felt at most moderately comfortably breaking bad news. 37% (7) of residents felt that death moderately affected their diet, sleep, relationships, or mental health.

Conclusions

Overall, trainees found these debriefing sessions to be a rewarding and valuable experience. The sessions provided a unique opportunity to discuss issues raised during care of dying patients. They also provided a space for trainees to explore their feelings, emotions, and insecurities in a supportive environment. We conclude that this intervention is a valuable addition to resident curriculum.

A301

New Pathways: Creating a Geriatric Fellowship Curriculum and COVID-only Skilled Nursing Facility

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Background: With the second surge of the COVID-19 pandemic in the NY metropolitan area, inpatient hospital wards have again become occupied by those with severe disease. Many are older adults (OA) with baseline frailty and impaired function who originally resided in a skilled nursing facility (SNF) or sustained hospital-acquired disability (HAD) and now need nursing and rehabilitation before returning home. A significant number of these OA are medically stable but remain COVID-19 positive, preventing transfer to SNF. Academic medical systems have redeployed residents and fellows inpatient to cover COVID-19 patients. In an effort to prevent HAD and iatrogenic complications a large health system has taken the innovative step of designating one of its SNFs as a "COVID-Positive Only" facility. This presented an opportunity to develop a novel curricular experience for geriatric fellows and improve care of a vulnerable population. **Methods:** The Division of Geriatrics and Palliative Medicine (GAP) collaborated with administration in a clinical initiative to deploy geriatric fellows to assist in covering the facility. **Results:** Within seven days a schedule was developed spanning 3 months and a curriculum drafted. The facility medical director (GAP faculty) is the site rotation director. Fellows rotate in pairs for two-week blocks and observing ACGME and NYS work hour restrictions. Within the first week of deployment, the team admitted 97 patients to the 120-bed facility, an average of 13.9/day. 3.1% were transferred back to hospital within 6 days. 17.5% were COVID negative on admission and able to be discharged. 86% lived at home prior to index admission. Fellows and faculty meet weekly to review progress, revise curriculum and address issues. Fellows are gathering clinical metrics on this population, including change in COVID-19+ status, readmissions, and functional status as a clinical initiative/scholarly project. **Conclusions:** The COVID-19 pandemic has created a unique opportunity to develop a novel model of care within a geriatric fellowship program with implications for training, scholarship and public health policy. Data on curriculum innovation and patient outcomes will be presented.

A302

Feasibility of Implementing the Patient-Priorities Care Approach Within a Geriatric Fellow Consult Clinic.

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Background: Patient Priorities Care (PPC) is an approach to health care decision-making for older adults with multiple chronic conditions, driven by values-defined, goal driven and measurable outcomes. The purpose of the study was to assess the feasibility of integrating the PPC approach to the geriatric fellow training through formal education and real time practice.

Methods: Two online focus groups were held with eight fellows. In the pre-intervention focus group, we introduced the PPC approach in a formal educational session and conducted a needs assessment. Based on the feedback, we held a revised PPC education session and created a workflow to implement PPC in the fellows' clinic. After ten weeks, we held a post-intervention focus group to seek feedback and evaluate feasibility. Audio review of transcripts from focus groups were performed for thematic analysis.

Results: In the pre-intervention focus group, the following needs were identified for PPC implementation in the clinic: additional time for the visits, identification of appropriate patients, specific language to be used, and strategies for buy-in from patients and other providers. These needs were addressed through creating separate PPC encounters and having a devoted person for identifying/inviting patients for PPC visits, including in the educational material a conversation guide, an online decisional guidance tool and material to educate other providers. In the post-intervention focus group, fellows identified the experience as an opportunity to validate patients' values and preferences, empower patients to become their own health advocates and promote prognostic awareness. The PPC approach was seen as uniquely different from routine geriatric care in that it required shifting the focus from symptom and disease to values, goals and tradeoffs. Main challenge was the coaching and prompting of patients needed throughout the visits to avoid reverting to a traditional problem-based approach. Patient primers could be developed to overcome this barrier.

Conclusion: Teaching PPC to geriatric fellows through formal educational sessions and clinic time devoted to practice is feasible but requires flexibility and continuous evaluation of the strategies adopted.

A303

Advanced Care Planning in the COVID-19 Era

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Background: The COVID-19 pandemic has highlighted the critical role for advance care planning (ACP). Many Americans lack advance directives due to patient, provider and systemic barriers. Additionally, with COVID-19, telehealth has increased, and providers often must facilitate ACP virtually. Physician education can improve ACP in clinic and in virtual settings, resulting in an improvement of patient centered care. We aim to assess the need for a comprehensive ACP curriculum in primary care and in telehealth platforms in the setting of COVID-19.

Methods: We offered a voluntary, anonymous needs assessment survey to 37 Family Medicine residents and attendings at an academic center in November 2020. The survey of 16 questions queried participants' in the following domains: the presence of ACP education in didactics; the prevalence of ACP in virtual platforms; associated challenges in obtaining directives during the COVID-19 pandemic; and provider confidence level in ACP discussions in clinic and virtual platforms.

Results: 30 physicians completed the survey (response rate of 81%), and all recognized the critical role of ACP. 60% said they did not have a formal ACP curriculum, and 30% did not feel confident in understanding ACP. 30% of providers facilitated ACP discussions over telehealth in 2020, and 28% felt confident on this platform. 76.67% have facilitated ACP discussions in their clinic, and 56.7% felt confident with in-person discussions. Barriers to ACP in clinic were time (90%), followed by limited education and communication skills (53%). Telehealth barriers included challenges regarding tech literacy and establishing rapport (90%). 90% of physicians anticipated an increase in ACP discussions due to COVID-19. 23% felt confident in discussing ACP in relation to COVID-19. Lastly, 80% of respondents stated there isn't sufficient training in facilitating ACP over telehealth.

Conclusions: All physicians surveyed reported ACP as a critically important component of their practice. However, there are significant barriers, including time constraints and limited training in both clinics and virtual platforms. As a result, we plan to implement a comprehensive ACP curriculum in a family medicine residency, comprising of didactics and skills practice components in February 2021. We aim to enhance the prevalence and quality of ACP both in person and in virtual settings, which will be measured by a post-assessment survey.

A304

Vitamin D Supplementation After Fracture

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Background: Prior studies have found that there is a correlation between vitamin D deficiency and increased risk of frailty, increased risk of fracture, and decreased healing after a fracture.[1,2] Additionally, we know that frailty and subsequent fractures are associated with increased morbidity and mortality in the aging population.[3] The purpose of this project is to assess if vitamin D supplementation is utilized by patients after sustaining a fragility fracture.

Methods: This study will be conducted by giving participants enrolled in the Own the Bone program (a secondary fracture prevention quality improvement initiative) at AdventHealth Orlando an opportunity to complete two surveys regarding their use of vitamin D supplementation. Surveys will be administered by phone at approximately 30 and 60 days after the occurrence of the fracture. Besides the questions, the surveys will contain the date of administration and the patient's unique study number.

Survey Questions:

1. What was the date of your fracture?
2. Were you taking a vitamin D supplement prior to your fracture?
3. Are you currently taking a vitamin D supplement?

Results: The results will be discussed.

Conclusions: This study will add to the scientific knowledge about the use of vitamin D supplementation in people after a fragility fracture, and can possibly be used to evaluate a secondary fracture prevention educational program.

References:

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A305

Quality Improvement Curriculum During COVID Pandemic for Geriatric Fellows

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Background: Each year geriatric fellows in our program conduct Quality Improvement (QI) projects in Long Term Care (LTC) facilities. Visitor restrictions, infection control and social distancing measures in LTC due to COVID 19 challenged QI educators to design QI curriculum using innovative instruction platforms while considering the impact of the pandemic on the LTC facilities.

Methods: Faculty coached fellows on choosing projects with buy-in from LTC facilities and 6 fellows brought 4 QI project ideas to an ½ day online workshop. The workshop included QI content in minilectures spaced with group work focused on writing an aim

statement, creating a process model and designing a PDSA cycle. Faculty conducted a weekly ½ hour online sessions to discuss all 4 projects and fellows were coached on writing IRB proposals, interacting with stakeholders, creating time lines, conducting Plan-Do-Study-Act (PDSA) cycles and overcoming barriers. Fellows attended a lecture on how to write an abstract and revised abstracts together in a ½ day virtual workshop. Retrospective pre-post survey will be used to evaluate fellows confidence on QI concepts. Qualitative responses to open ended questions will be analyzed for fellows' understanding of QI concepts and program evaluation. Project outcomes will also be tracked and reported. Results: Three fellows completed IRB submission and 4 abstracts were submitted to national meetings. The QI projects included: Improving advance care planning for patients, Family and patient education about palliative care, implementing opioid stop dates, and implementing socially engaging activities for residents during COVID social isolation. Survey data and QI project outcomes will be reported in the poster. Conclusion: This curriculum allowed fellows to interact with stakeholders and make progress on their QI projects during the challenging times of the pandemic. Weekly mentoring provided motivation and support to the fellows and helped them take baby steps to keep the projects moving during the pandemic.

A306

Tech Allies for Health: A Digital Literacy Intervention for Isolated Older Adults during COVID-19

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Background: Due to the COVID-19 pandemic, healthcare providers are increasingly using telehealth, while many older adults are unable to access care and information because of limited digital literacy and access to technology. In response to the urgent and critical need to facilitate older adults' utilization of telehealth, we developed an educational intervention, Tech Allies for Health, to train 50 isolated older adults to access online health information and their patient portal/electronic medical record (EMR). This intervention was designed by the UCSF Geriatric Workforce Enhancement Program in partnership with Little Brothers Friends of the Elderly-San Francisco (LBFE-SF), a non-profit volunteer organization that provides social visits to isolated older adults.

Methods: LBFE-SF recruited the study population via a solicitation email to its older adult members and volunteers who have Wi-Fi internet access. Older adults and volunteer trainers have been paired to cover a seven-session series that ranges from setting up an email account to accessing health information and their EMR. To minimize COVID-19 risk, all intervention and evaluation activities occur via phone or video conference. Before training, immediately after, and 3-months post completion, enrolled older adults complete a survey to self-assess their performance of online health-related tasks. A subset is also interviewed on the same schedule about their experience. Trainers complete one retrospective survey that measures their pre/post self-assessment of confidence on training older adults to engage with health care online. A subset of this group will also be interviewed to delve deeper into their experiences and lessons learned.

Results: To date, we have baseline survey data from all enrolled older adult participants to date (30) and interview data from 13 of this group. Collectively, the elders are engaged with eight different health systems and represent diverse races and ethnicities. Preliminary review of baseline survey data shows that 12 of 29 respondents missed medical appointments due to COVID-19. Additionally, 9 of 19 respondents reported no confidence at all using their health system portal. Additional results will be discussed.

Conclusions: This study will inform investment in programs that promote digital literacy to improve older adults' health and access to care through extended crises such as the COVID-19 pandemic.

A307

Milestone-Specific Feedback Tool for Geriatric Education in Clinical Settings

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Background: The ABIM Mini-Clinical Evaluation Exercise for Trainees (Mini-CEX) tool has previously been used by faculty within the Duke University Geriatrics fellowship program to provide feedback to fellows after observing their performance during patient encounters. The compliance in using the Mini-CEX among fellows and faculty has been low over the past five years as users have not been satisfied with the length and formatting of the tool, as well as the lack of geriatric-specific domains of evaluation. Fellows and faculty therefore met to design a new tool focused on curricular milestones specific to geriatric fellowship training.

Methods: Fellows and faculty identified important elements to be included in the new feedback tool in the context of ACGME core competencies and geriatric curricular milestones. All agreed that a tool housed on an online platform, accessible through a mobile application (app), would be desirable. The resulting feedback tool was then piloted in small groups of faculty and fellows to gauge its ease of use and utility during real patient encounters. Their feedback will be incorporated along with further suggested modifications to the tool during an ongoing iterative process from January – March 2021. During these three months, the six current Geriatric fellows will be seeking feedback from faculty using the tool two times per month. A post-use survey will be administered in April to all participating faculty and fellows to measure perception of effectiveness and user satisfaction of the tool. In addition, the frequency and quality of the feedback from the new tool will be compared to historical feedback provided through the Mini-CEX.

Results: Fellows and faculty have responded positively to a streamlined feedback tool within a mobile app specifically designed for immediate use after a patient encounter. Frequent feedback will be used to modify the tool to ensure that it will be both user-friendly for faculty and meaningful for fellows. More detailed results, including those from the post-use survey, will be available after the first three months of use.

Conclusions: Content specific, actionable feedback is a crucial aspect of medical training. Pending further results, we hope this tool can be utilized as a straightforward way to provide significant and domain-specific feedback to Geriatric Medicine fellows.

A308

Evaluation of a Virtual Simulation for Geriatric Team-Based Care

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Background: The majority of adults 65 and older have at least one chronic condition (85%) and/or geriatric syndrome (65%). These are best managed using an interprofessional (IP) team approach. We designed a successful multi-step interactive simulation training for in-person learning. This model was modified to a fully online format necessitated by the COVID-19 pandemic.

Methods: The pre-pandemic training model included online didactics with in-person progressive activities with a poster session to apply assessment skills, professional huddles to introduce a case and set priorities, and then an interprofessional (IP) simulation of a team care planning meeting. Midway, a standardized patient playing the caregiver, joined the meeting. Pandemic limitations led to modifications of the in-person components to virtual format for posters, huddles, and the team simulation. Students of both in-person and virtual simulations completed a pre and post IP collaboration

competency ISVS survey, and post-education satisfaction survey for within and between group comparisons. Student and faculty provided qualitative quality improvement feedback.

Results: There were 74 students in each group from eight health disciplines ($n = 148$). Paired t tests showed increased total ISVS scores within group changes (pre post) that were statistically significant for both groups ($p < .05$). There was no significant difference between training groups for ISVS individual items ($p > .05$). Satisfaction results revealed a higher overall evaluation for the in-person training (M 3.9, SD .89) compared to virtual (M 3.4, SD.93) on a 1-5 scale with a score of 3=Good, 4=Very good ($p < .01$).

Qualitative comments suggest improvements in communications regarding expectations, organization, time allowances, process of moving students to breakout rooms, and ensuring all professions' information was shared in the team. Reported benefits of virtual teaming included improved communication within the team and convenience.

Conclusions: Both training formats were successful at improving IP collaborative competencies and for earning good or very good learning satisfaction ratings. The ability to team virtually will only enhance team care. Our education model demonstrates an effective way to train students to practice in virtual IP teams.

A309

Bridging the Age-Friendly Health System Knowledge Gaps through ECHO

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Background: About two-thirds of older adults will require assistance in two or more activities of daily living and choose a variety of settings and care providers to meet their needs. In addition to increased use of long-term nursing home care, there has been rapid growth in utilization of assisted living and home care, hospice and other community services; all part of Long-Term Services and Supports (LTSS). Background and training for LTSS care providers vary, with some having very little formal geriatric education. The 4M's Framework of Age Friendly Health Systems can be used by care providers in these settings to ensure quality care with good outcomes.

Methods: In June 2020, the Utah Geriatrics Education Consortium (UGEC) transitioned from a monthly Learning Community webinar to an Age-Friendly LTSS ECHO (Extension for Community Healthcare Outcomes) series. The purpose of this program is to train and support existing LTSS healthcare providers and direct care workers to utilize the 4M's framework mentation, medication, mobility, and what matters). An interdisciplinary group of faculty from the University of Utah along with our local QIN-QIO, Comagine Health, form the Hub and community partners form the Spokes and submit cases monthly for discussion and learning. Session attendees represent interprofessional and interdisciplinary groups, who work in both urban and rural settings.

Results: Prior to implementing the Age-Friendly LTSS ECHO, the average attendance at monthly Learning Communities was 29.67; after implementing the ECHO, average attendance is 36.83. Total attendance over 6 months is 221 compared to 178 for the prior 6 months of the Learning Community. While 88 individuals have attended only 1 session, 15 individuals attended 2 sessions, and 25 attended 3 or more sessions. Sessions continued to be rated highly, 5-item Likert scale, 1=Strongly Disagree and 5=Strongly Agree, Useful for my work: 4.11; Effective: 4.52 (n=27)

Conclusion: UGEC Age Friendly Health ECHO is a successful method for engaging LTSS with the 4Ms Framework and Age-Friendly health care practices. Further, the ECHO format models interprofessional teams and encourages all LTSS care providers to engage in care planning to ensure that patients' preferences are recognized and honored.

A310

Education in Geriatric Sites of Care for Internal Medicine Residents

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Background: Internal medicine residencies are seeking innovative geriatric medicine experiences for their trainees. A foundational knowledge in geriatrics includes an understanding of these different levels of care and environments that support the well-being of older adults. ACGME recently increased their requirements for geriatric education for internal medicine residents. Our institution has had a successful two-week inpatient geriatrics rotation that provided a high-quality experience in caring for the hospitalized older adult. We implemented an additional rotation to provide experience in a variety of post-acute geriatric care settings.

Methods: Starting in July of 2020, second year internal medicine residents spent two weeks working with a geriatrics attending on her visits at a subacute rehab, assisted living, memory care, and independent living at a retirement community, and saw patients in our university's memory clinic and outpatient geriatric clinic. They also met for one half-day with our clinic social worker. The objectives of the rotation were: to become familiar with the various settings in which geriatric patients are treated; to develop a framework for approaching patients with memory disorders; to appreciate the ways in which patients can be cared for in their own homes; and to understand the nuances in the transitions of care. Online evaluations were completed by residents at the end of the rotation.

Results: Evaluations are currently being reviewed for the 2020-2021 academic year. Verbal feedback and early review of written evaluations indicate the rotation has been well received. According to one resident, "being able to see and manage patients in different parts of the facility finally gave me an understanding of ILF, ALF, SAR and dementia units."

Conclusions: Our preliminary data suggests that residents have gained a better understanding of the sites of care in geriatrics as a result of this rotation. This knowledge will be important regardless of what specialty they choose in order to care for their older adult patients appropriately. We plan to continue this rotation and add one day of home visits to further expand resident exposure to non-institutional care.

A311

VIONE: A Deprescribing Program for Older Adults and its Cost Implications

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Background:

Polypharmacy in older adults remains a high risk for adverse events due to drug interactions, non-adherence and unnecessary healthcare costs. The Vital, Important, Optional, Not Indicated and Every medication has an indication (VIONE) program utilizes a simple and practical EHR based deprescribing tool that categorizes each medication in the VIONE categories based on patient's mortality and morbidity risk.

Methods:

The data from older adults enrolled in the VIONE discontinuation program at a primary care geriatrics clinic of a large academic veteran's affairs medical center was obtained for the year 2020. The inclusion criteria for VIONE program included patients age 65 and older, taking 15 or more medications. Data was analyzed for the number of patients enrolled and projected cost savings based on price of discontinued medications and days of cost avoidance annually. Only the chronic, non-antimicrobial, non-supply medications were included in the annualized cost avoidance calculations.

Results:

The study included 2,109 patients with 3,252 discontinued prescriptions. The median number of medications removed for each patient was one (mean = 1.54) with the minimum and maximum number ranging from 1 to 7 medications. The average cost savings was $433 per patient with the total estimated cost savings of $912,805 annually.

Conclusion:

The VIONE methodology is efficacious in reducing polypharmacy and healthcare costs. More research is needed to evaluate the impact of deprescribing on patients in other health care settings using the VIONE approach.

A312

Wellness Curriculum in Geriatric Medicine Fellowship

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Background

Physician burnout is prevalent and plays a significant role in wellbeing. Fellowship can be a high-risk time for burnout and there is an inverse relationship between resiliency and burnout. Modifying practice and increasing support can be effective at reducing burnout. Our objective was to develop and incorporate a curriculum, the Wellness, Empathy and Philanthropy (WEP) program, to give Geriatric Medicine Fellows skills to identify markers of wellness, enhance resiliency and reduce burnout.

Methods

The curriculum included wellness education, activities and interventions blended with core Graduate Medical Education and Geriatrics Medicine topics led by Geriatric Fellowship faculty. Fellows anonymously completed a pre-program Abbreviated Maslach Burnout Inventory (aMBI), Brief Resilience Scale (BRS) and met 1-2 times monthly. Topics included culture, work/life balance, fatigue, sleep deprivation, empathy, burnout prevention, resilience, philanthropy, coping and communication in interactive formats. Sessions incorporated fieldtrips, mindfulness and meditation, philanthropic events, guided de-briefing, gratitude and writing exercises. Feedback and joy sharing were included in each session. The aMBI and BRS were repeated at the end of the academic year after completion of the curriculum for comparison.

Results

The WEP Program took place in the 2019-20 academic year. N=3, participants were women, 2/3 completed Internal Medicine and 1/3 Family Medicine residency. Pre-program resiliency average score was 3.61 (normal), post program resiliency score 3.39 (normal). Pre and post program aMBI results showed low burnout. Average emotional exhaustion scores decreased and personal accomplishment scores decreased. Feedback was positive and the program was felt to be valuable. Recommendations were to continue the WEP curriculum.

Conclusions

We successfully developed and incorporated a wellness curriculum for Geriatrics Fellows. In this small group, we demonstrated the feasibility/acceptability of this program. Markers of resiliency, burnout, exhaustion and personal accomplishment give a foundation for comparison as we use feedback to improve the program. The decrease in resiliency and sense of personal accomplishment may be due to the COVID19 pandemic during the program. The pandemic increased physician burnout globally. We hope that creating a foundation of burnout recognition can help physicians in training protect wellness in their futures.

A313

Geriatric undergraduate pharmacy education : Mapping of skills laboratories

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Background: Older adults provide unique challenges in delivering pharmaceutical care. Skills laboratories are a mandatory component of pharmacy curriculum and therefore they represent an important opportunity to increase student exposure to geriatric cases and related issues. The objective of this project was to describe geriatric cases included in skills laboratories of an undergraduate pharmacy program.

Methods: A retrospective review of all case-based 2018-2019 skills laboratories (years 1-3) from the Pharm D. program of the Faculty of Pharmacy of University of Montreal was conducted. Laboratory sessions of patient cases aged 65 years and older were selected for analysis. Content was extracted for characteristics relating to the patient, health, medications, and context for care.

Results: 108 skills laboratories were reviewed that included a total of 210 cases. Patients aged 65 years and older represented 51 cases (24% of cases), 8 cases (3.8% of all cases) were patients aged 80 years and older. Geriatric syndromes were present in 4 patient cases. Functional status was available for 10% of cases, and mobility described for 12%. The median number of comorbidities and medications were 4 and 7 respectively. Ten patient cases included more than 10 medications and none included more than 15 medications. Potentially inappropriate medications were present in 24 of geriatric cases (47%) but were specifically discussed in 7 cases only.

Conclusions: Very old patients and geriatric problems were present in a minority of patient cases included in pharmacy skills laboratories. Cases including older adults were incomplete for characteristics related to geriatric care.

A314

Leveraging a Local Online Aging Resource Guide in Rapid Response to the COVID-19 Pandemic

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Background

The University of Chicago GWEP created the South Side Aging Resource Guide (RG) in Spring 2018 to meet a need for centralized access to information on local aging resources identified by community stakeholders. An online version (ORG) provides up-to-date resource information, bridging the gaps between annual pressings of the RG. With the onset of the COVID-19 pandemic in March 2020, broad uncertainty created an urgent need for reliable information, prompting the expedited creation of a COVID-19 addition to the ORG.

Methods

Using the structure of the existing ORG, the COVID-19 category was created to be a hub of information for Chicago's older adults and aging services providers. In the days following the first stay-at-home orders, a small team of researchers began searching for reliable information about the outbreak and local resources. A collaborative public spreadsheet created by local academics, social workers, and providers became a vital source for collecting these resources. Sub-categorization of COVID-19 resources was deductively devised after compiling a list of resources. Promotional efforts included social media posts and radio spots. Google Analytics was used to evaluate web traffic.

Results

COVID-19 resources were organized into 8 categories (For Providers, Caregiving, Financial, Life at Home, Food, Information & Resource Pages, Mental Health, Local). In a 3 month window (3/20/20 to 6/20/20), the ORG received 1,210 views, a 5-fold increase compared to the same 3 month window in 2019, representing the largest spike in traffic to date. The most visited COVID-19 sub-category within this time was Food (388 views).

Conclusion

Having an existing online delivery method for local resources proved critical in responding to this unforeseen crisis. The collection and distribution of community health resources with a small team was made possible by building the initial ORG to be adaptive to the needs of the community. An uptick in page views during the first 3 months of the pandemic helps illustrate the need for resources and information as well as the role of promotion through social media and radio. Building adaptive community resource hubs such as the ORG can foster resiliency and create informed communities in uncertain times.

A315

The Effectiveness of Using Video Communication as an Alternative to Face-to-face Interviews in the Fellowship Application Process

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BACKGROUND: The interview is an integral component of the application process for graduate medical education programs. It allows for the evaluation of the applicants' communication and interpersonal skills, as well as their understanding of professional behavior. Prior to the COVID-19 pandemic, many medical fellowships have interviewed their candidates via face-to-face processes. As a result of the necessity to incorporate contact-free interactions, many programs have shifted their interview process to a video communication approach with the use of platforms such as Zoom or Skype. The purpose of this study was to explore the effectiveness and barriers of using Zoom video communication for the interview process of a geriatric medicine fellowship program.

METHODS: This is a descriptive survey study addressing the experiences during the USC Geriatric Fellowship application process. Electronic or paper surveys were directed to five USC geriatric medicine faculty, one geriatric fellow, and thirty fellowship applicants. Each survey consisted of six questions rated on a 5-point Likert scale from "strongly disagree" to "strongly agree". The survey addressed aspects including overall experience, the effectiveness of the platform, logistical efficiency, and whether the participants would recommend the option of video interviews in future application cycles. The data was processed anonymously to minimize any possible bias.

RESULTS: There was a total of 23 surveys that were returned. Overall, participants felt that their zoom experience was positive with a mean score of 4.6 and a median score of 5 on the 5-point Likert scale. Similarly, participants on average recommended offering the option of video interviews in future application seasons with a mean score of 4.6 and a median of 5.

CONCLUSIONS: In 2020, the world was impacted with the COVID-19 pandemic, and as a result, graduate medical education programs were forced to adjust their application processes. The transition to allow for video interviews has created a modern opportunity that may result in an overall improvement in the application process by addressing classic barriers such as financial and time requirements. This is especially important in geriatric medicine which is a budding field which requires strong interpersonal skills.

A316

MOV-ing FREE-ly Goes Virtual: Acceptance and Efficacy of a Virtual Fall Prevention Group Education and Exercise Program

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Background: Group-based fall prevention programs can reduce falls and are recommended by the Centers of Disease Control. MOV-ing FREE-ly (Multicomponent Otago Virtual Fall Reduction Education and Exercise Program) combines evidence-based fall prevention interventions and has been successfully implemented at VA Puget Sound since 2017. Given COVID restrictions, this program was transitioned from in-person to a virtual platform (VA Video Connect (VVC)) to Veteran Homes. Thus purpose of this quality improvement project was to obtain Veteran acceptance of the virtual platform and capture self-reported improvement in fall risk factors.

Methods: MOV-ing FREE-ly' is a virtual fall prevention exercise and educational program that consists of six, weekly sessions conducted over the VVC, with participants engaging with education and exercises remotely from home. Content included education, exercises and behaviors addressing fall risk factors. Recruitment was based on the following criteria: history of falling, unsteadiness with walking or fear of falling; not wheelchair bound; not cognitively impaired. Qualitative feedback about Veteran perceptions of falling risk, mobility, and acceptance of a virtual platform was collected with phone follow-up one week post class.

Results: Since September, 2020, 7 have completed 'Moving FREE-ly' virtual class. No falls occurred during program or in interim follow up. Nearly all Veterans reported increased awareness of their environment, stated they would continue doing Otago-based exercises and make home safety improvements. Additionally, most participants felt they had learned tools to improve their strength, modify their home environment and reduce their risk of falls. All stated they would recommend the class to others and over 70% preferred the Virtual platform citing better accessibility and decreased travel burden.

Conclusion: Despite the transition of our fall prevention program to an all virtual platform, Veterans still reported a reduction to risk factors to falling. Additionally, most Veterans prefered a virtual format for its ease of accessibility suggesting that post-pandemic, our virtual MOV-ing FREE-ly program will continue to support many Veterans, including those whom are rural and home-bound.

A317

Telementoring to Improve Response to COVID-19 in Rural Oklahoma Nursing Homes

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Background: According to the Oklahoma State Department of Health, as of January 7, 2021, 2642 Oklahomans have died from COVID-19, including 807 long-term care residents and 6 staff (31% of all deaths). On November 9, 2020, in an effort to improve state nursing home response to the COVID-19 pandemic, we launched a state hub for the AHRQ ECHO National Nursing Home COVID-19 Action Network. Our hub provides free virtual training and telementoring to nursing homes across the state, and approximately 2/3 of the homes in Oklahoma are in rural areas. Here we describe feedback from nursing home staff about topics of greatest concern in the COVID-19 pandemic.

Methods: Feedback was gathered from nursing and administrative staff during the first 15 ECHO sessions over a 3-week period in November-December 2020. The topics for these sessions were *Preventing and Limiting the Spread of COVID-19 in Nursing Homes, Guidance and Practical Approaches for Use of PPE during*

COVID-19, and *Approaches to Cohorting during COVID-19*. We sought feedback to ensure our hub ECHO sessions were as relevant and engaging as possible to promote attendance and active participation during sessions.

Results: Results identifying common themes and describing how this information was used to improve participation and educational delivery of infection control and quality improvement content will be presented.

Conclusions: Project ECHO is an educational platform new to the Oklahoma nursing home community and has the potential to increase peer-to-peer learning and support as well as improve the rapid dissemination of best practices for response to COVID-19. Moreover, this project creates an ECHO network of largely rural nursing homes, which if successful, could be used to improve nursing home quality of care beyond the COVID-19 pandemic.

A318

Coordinating Care Workshop- a Lesson on Empathy

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B: Increasingly, physicians encounter older patients with multiple chronic conditions (MCC) that need proper care coordination. Often, these patients are overwhelmed by recommendations regarding each condition and have difficulty navigating complex care.[1] Trainees are taught to treat conditions individually, without consideration to medication interactions & specific dietary restrictions with significant conflicting recommendations.[2] An activity was designed to recognize challenges associated with care coordination and utilization of the American Geriatrics Society multimorbidity toolkit (AGT) for evaluation and management of older patients with MCC.[1]

M: An educational activity was designed as part of a 1-week Geriatrics course in the 1st year of medical school to simulate the experiences of an older patient with MCC navigating the complex healthcare system. Due to COVID-19, a virtual platform was utilized (Zoom Video Comm, Inc., San Jose, CA). The 2.5hr workshop consisted of a pre-lecture, roleplay and debrief with creation of a care plan. Students were divided into groups and given a role (patient, spouse, etc). Physician advisors played the role of the specialists and were provided a script. *Patients* were given questions to ask as they were recently discharged from the hospital and had appointments for Cardiology, Orthopedics, and Endocrinology. Conflicting information similar to real-world experiences were given by specialists. Follow-up appointments were arranged. After the roleplay, debrief occurred with an advisor and utilization of the multimorbidity toolkit to create a care plan. Surveys were administered with a 5-point Likert scale.

R: 53/139 (62%) responded. 85% responded 4 or 5 on gaining a better understanding of the complexities of patient care. 81% responded 4 or 5 on patient empathy. 92% recommended the workshop for the subsequent class.

C: This educational workshop enlightened the trainees to the complexities of patients with MCC and successfully promoted empathy towards patients. They learned how to utilize the multimorbidity toolkit which allowed them to recognize conflicts when creating a care plan for patients. Continued implementation of this workshop among trainees will help promote improved recognition of the healthcare challenges facing older patients with (MCC), which will ultimately allow for more patient-centered, goal-directed care for these patients in the future.

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A319

Mismatch in hospitalists' rating of importance of geriatric skills and confidence and frequency performing them

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Background

Older adults are at high risk of hospital-related complications, and acute care geriatricians are needed. However, there is a national shortage of geriatricians, and hospitalists fill this need. Though the Society of Hospital Medicine considers geriatric care a core competency, many hospitalists have no prior training.

Method

We anonymously surveyed hospitalists at a large academic tertiary referral hospital to assess institutional needs using an adapted survey from the University of Chicago CHAMP course. On a 5-point Likert scale, hospitalists rated the importance of performing 23 different geriatric assessment & management skills (1=not important; 5=extremely important), their confidence performing them (1=very low;5=very high), and frequency of use (1=never;5=always). We conducted descriptive analyses.

Results

Eighteen of 35 hospitalists responded. Across all skills, mean ratings were: importance 4.7±0.5, confidence 3.5±0.2, and frequency 3.4±0.6. Table shows highest/lowest rated skills.

Conclusions

Our institutional needs assessment revealed a mismatch in how important hospitalists rated specific geriatric skills, how confident they were performing them, and how often they used them. Mean importance rating across skills was *more than 1 Likert point higher* than confidence and frequency ratings, suggesting an opportunity to enhance geriatric clinical competence. Hence, we designed a 13-session, flipped classroom Geriatric Acute Care Certificate Program for hospitalists.

Hospitalists' highest and lowest rated geriatric assessment and management skills by importance, confidence, and frequency of use

	Importance (Mean±SD)	Confidence (Mean±SD)	Frequency (Mean±SD)
Highest Rated Skills	Assess risk & prevent delirium (4.9±0.4) Reduce polypharmacy (4.9±0.3) Determine appropriateness of urinary catheter (4.9±0.4) Appropriate use of criteria to treat UTI (4.9±0.3) Screen for & manage constipation (4.9±0.3) Mobilize patients (4.9±0.4) Document advance directives (4.9±0.4) Assess capacity (4.9±0.4) Give bad news (4.9±0.4) Discuss hospice (4.9±0.4) Develop safe & effective discharge plan (4.9±0.4)	Determine appropriateness of urinary catheter (4.2±0.8) Appropriate use of criteria to treat UTI (4.2±0.5) Assess capacity (4.0±0.6)	Determine appropriateness of urinary catheter (4.1±0.8) Appropriate use of criteria to treat UTI (4.2±0.7) Screen for & manage constipation (4.3±0.7)
Lowest Rated Skills	Complete skin exam (4.0±1.0) Screen for depression (4.4±0.7) Assess Cognition (4.5±0.6) Identify fall risk factors (4.5±0.7)	Diagnose frailty (2.5±0.9) Complete skin exam (2.7±0.9) Screen for depression (2.9±0.9) Assess pain in dementia (2.9±0.9)	Complete skin exam (2.2±0.9) Diagnose frailty (2.3±1.1) Screen for depression (2.3±0.7)

UTI: Urinary tract infection

A320

Interprofessional Student Hotspotting: A team-based approach to geriatric complex care

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Background: Interprofessional Student Hotspotting addresses patients with complex medical and social needs. In 2015, Johnson et al found that 82% of these patients have multiple comorbidities, 41% have a serious mental health condition, and 30% report homelessness. High utilization patients have four times more inpatient admissions, four to eight times more readmissions, 30% longer and more expensive hospital stays than the average patient. Our project, a collaboration between the Camden Coalition, University of Montana, Montana Geriatric Education Center and Partnership Health Center, aims to decrease emergency department (ED) visits and increase primary care engagement. By using student teams, we aim to increase understanding of interprofessional collaborative practice (IPCP).

Methods: Through home-based, non-clinical interventions to address social determinants, teams worked for 6 months to improve patients' quality of life, integrate medical, behavioral, and social care, and increase utilization of primary care. At the onset of COVID-19, faculty determined that ending services for these vulnerable older adults could be determinantal. Thus, students continued the program in a virtual format through mid-June. Patient utilization of the ED and primary care and PHQ-9 depression scores were monitored before, during and after program participation. The student outcomes were assessed using the Student Perception of Interprofessional Clinical Education – Revised (SPICE-R).

Results: Patients decreased ED utilization, increased appropriate use of primary care, and improved depression scores. During the first months of the pandemic, patients in the virtual hotspotting increased their comfort in using technology for medical appointments as well as engaging in online social interactions. The students improved their understanding of and skills for IPCP as demonstrated by increased SPICE-R scores.

Conclusion: Student Hotspotting is an educational tool to support IPE and training in patient-centered care while improving health outcomes and decreasing healthcare expenditures in patients with high utilization.

A321

Teaching Frailty to Residents: Exploration of Needs Assessment of Geriatric Faculty

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Background: Teaching frailty to medical residents is a critical part of their education for managing older adults. Knowledge of frailty is essential for meeting the ACGME geriatric core competencies, as it is expected that family and internal medicine residents appropriately modify care plans and help make patient-centered decisions, while incorporating diagnostic uncertainty in older adults with complex needs. However, little is known about the current needs in frailty education for residents. We developed a needs assessment to inform effective frailty education for residents. We report here perceptions among geriatrics faculty about the frailty education needs of residents.

Methods: We received responses from 24 geriatric fellowship-trained physicians from multiple academic medical centers in Boston. Responses were collected via standardized questionnaires (n=18) and semistructured interviews (n=6). A geriatric fellowship-trained reviewer coded the transcripts and responses via mixed qualitative grounded and framework analysis coding. Data was then analyzed and coded for common themes related to frailty education and their frequencies.

Results: 54 codes were initially identified and then the most common themes were deduced from responses of the 24 geriatric faculty. Table 1 shows the most common themes and representative quotes.

Conclusions: Geriatric faculty were in general agreement about the challenges faced by medical residents when managing frail patients but had marked differences in what or how to teach about frailty. They also had significant differences in preference of frailty screening tool used in their practices. This study illustrates the challenge in developing frailty education curricula due to the need for better consensus among geriatric educators on what is needed for this critical part of medical resident education in the care of older adults.

Table 1

Most Common Themes for Interview Questions (n)	Representative Quotes
Question 1: Briefly state 2 challenges you believe residents have when it comes to managing frail patients	
-Residents underdiagnose frailty or fail to recognize heterogeneity. (n=8) -They are used to disease-specific training/approach. (6) -They have trouble with prioritizing care in complex frail patients and can feel overwhelmed with number of problems and in goals of care conversations. (5)	-"Frailty is too ambiguous for them to understand and they get overwhelmed." -"They are used to disease-oriented training since interns." -"Emphasis on evidence-based algorithms for care that do not include frail complex patients."
Question 2: Please state 2 objectives you think are most important for residents to learn about frailty.	
-Residents should be able to recognize and measure it. (7) -They should understand more than one definition of frailty and that it is multidimensional. (6) -They should understand that it is a strong predictor of adverse outcomes, including mortality, hospitalization, and delirium. (5)	-"Residents should use an objective validated screening tool." -"They should define frailty and understand the concept of physiologic reserve." -"The incredible power of functional status in determining patient outcomes."
Question 3: Do you think residents should be familiar with deficit accumulation frailty or phenotypic frailty or other? And why?	
-Phenotypic model is faster and easier for residents to use. (8) -Deficit model/Frailty index (7) -Residents should be familiar to both models. (7) -Other: Neither model as this is too advanced for residents. (4)	-"Most situations do involve providers from other disciplines, so I prefer the clinical frailty scale for interdisciplinary teams." -"Deficit accumulation is more intuitive for medicine-trained residents. The more things wrong with you, the higher the risk of adverse outcomes." -"Too much detail for residents. They will get overwhelmed."
Question 4: Do you use any specific frailty screening tool or severity measurement tool in your daily practice? If so, please mention practice setting and tool used.	
-Frailty index – both inpatient and outpatient settings. (6) -Clinical Frailty scale in outpatient settings. (4) -None since doing full comprehensive geriatric assessment anyways in inpatient and outpatient settings. (4) -Other: gait speed. (4)	-"I use the FRAIL scale, frailty index and gait speed in inpatient and clinic." -"Pretty much all my patients are frail, so I'm not screening anymore." -Most of my patients are frail so I do not use any specific tool."

A322 Encore Presentation

Exploring Nurse Practitioners' Preferences for Learning about Dementia and Driving Cessation

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Background

The decision to stop driving and the transition to non-driving pose significant challenges to people with dementia (PWD) and their families as well as healthcare providers, including nurse practitioners (NPs) who support them through this process. NPs in many provinces in Canada are now expected to report potentially unsafe drivers to transportation authorities. Based on our literature review, no interventions have been aimed at educating NPs on the driving-related issues faced by PWD and there is limited research on their experiences with addressing such issues. The objective of this study was to understand NPs' knowledge about driving cessation with PWD as well as their preferences on the content and format of an interactive online educational program (e-learning).

Methods

An online survey was distributed to NPs across Canada via newsletters, Facebook, a virtual conference and email distribution lists. Descriptive statistical data was summarized and a content analysis of open-ended questions was conducted.

Results

A total of 90 NPs participated in the survey. E-learning content topics identified as most important were fitness to drive assessment tools, strategies on communicating about driving cessation and its emotional implications, as well as, information on how dementia affects driving. Most respondents preferred an asynchronous format and favoured case study vignettes, didactic talks from experts and videos that feature scenarios with PWD.

Conclusions

Survey results will inform the content and format of an e-learning program. Incorporating the preferences of NPs will ensure that NPs gain the knowledge and skills they identified as being most important in supporting PWD and families in their decision-making and transition to non-driving.

A323

The ASSIST Program

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Background: Older adults (OA) disproportionately account for over 80 percent of mortality from the pandemic. Public Health safety recommendations for this vulnerable group includes social distancing and staying home, resulting in isolation and loneliness. UC Irvine Division of Geriatrics and School of Nursing developed the Assisting and Supporting Socially Isolated Seniors via Telephone or ASSIST Program to provide emotional support, community resources, and COVID-19 information by pairing OA with trained medical and nursing students for regular telephone check-ins during the pandemic. **Methods:** OA participants were recruited through health and community agencies including Meals on Wheels and low-income residential communities. Medical and nursing students were trained by UCI faculty/staff on COVID-19 guidelines, program procedures, and support services. Students called their paired OA and submitted Call Logs summarizing each conversation for faculty/staff review. Call Logs were analyzed to identify recurring themes. Staff conducted an OA participant satisfaction survey by phone. Students participated in an anonymous web-survey to identify learning experience and program satisfaction. **Results:** For 8 months during the pandemic, 43 OA participated in the program (living status - 51% alone, 16% with others, 16% with family; 70% female; 63% aged 65-84). 45 students were paired to provide calls for about 30-minute weekly, averaging 9 calls per participant. An analysis of the combined 332 Call Logs identified frequent OA concerns: 'worries regarding health', 'family support and caregiving,' 'feelings of isolation,' 'COVID-19 education,' and 'needing community resources.' Satisfaction with the program was high with 95.2% of OA stating that ASSIST had been helpful; 90.5% said that their student communicated effectively and provided helpful resources; and 95.2% said their student helped them feel less isolated during the pandemic. Mean student learning satisfaction was 4.3 of 5 (SD=0.43) with 94.7% reporting improved communication skills. **Conclusion**: The results from the project demonstrated satisfaction with the ASSIST program in vulnerable OA living in the community during the pandemic and positive geriatric education outcomes for healthcare students.

A324

Responding to geriatrics learning needs amid COVID-19: An ECHO for Indiana Area Agencies on Aging

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Background: With the advent of COVID-19, Area Agencies on Aging care managers (CM) began serving their adult clients in a virtual environment. CM expressed learning needs on how to address exacerbated geriatric-related issues while also balancing self-care. The Indiana Geriatrics Education & Training Center (IGETC), partnering with the Indiana Family Social Services Administration Division of Aging, developed an Extension for Community Healthcare Outcomes (ECHO) series to address these needs.

Methods: An interdisciplinary team of IGETC facilitators trained in the ECHO model developed and delivered 12 sessions for CM, Adult Protective Service providers, and direct care workers across Indiana. Team members included a geriatrician, internal medicine physician, social worker, wellness educator, and representatives from community-based organizations. Each session included: a didactic topic identified by CM; a case presentation; discussion on how to address barriers and identify resources; and a brief self-care didactic. Didactic topics included how to conduct a telehealth visit, depression, substance use, dementia, communication skills, and social isolation.

Results: A total of 806 unique participants joined one or more of the 12 sessions (average of 336 participants per session). Each ECHO session was recorded with more than 1118 views to date. The majority of participants were CM (67%), with supervisors (13%), adult protective services personnel (3%), direct care workers (1%), and other (16%). In feedback collected after each session, greater than 90% of respondents said the content was applicable to their work, the ECHO session was a helpful addition to their training during the time of COVID-19, and they had a better understanding of the topics discussed as a result of attending the session. Participants reported the content level was appropriate for their level of expertise (86-98%).

Conclusions: Use of the ECHO model provided a helpful forum for engaging CM across the State in learning sessions on important geriatric topics and resources identified as needs as a result of COVID-19.

A325

Creating Interprofessional Readiness to Advance Age-Friendly Healthcare

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Background: Bronfenbrenner's (1979) ecological systems theory stresses the importance of understanding a person in relation to other systems, such as family, workplace, healthcare systems, and culture. To improve healthcare for older adults, change can be initiated in any of these systems. The effects of such change can reverberate inward or outward, providing an excellent framework for addressing health inequities among older adults. The Plan-Do-Study-Act (PDSA) model (Langley et al., 2009) generates ideas for change and expands successful innovations related to systems change.

Methods: Using PDSA to improve healthcare responsiveness to social determinants of health (SDOH), we transformed a successful interprofessional faculty development program into a more clinically-focused development opportunity for faculty and clinicians. We aligned competencies from nine disciplines (dentistry, medicine, nursing, occupational therapy, patient counseling, pharmacy, physical therapy, social work, and speech pathology) to the 4Ms framework (what matters most, medication, mentation, and mobility). The goal of the resulting program, Creating Interprofessional Readiness for Complex and Aging Adults (CIRCAA), was to advance age-friendly health systems. An interprofessional team employed a multidimensionality approach to create age-friendly, person-centered practitioners. CIRCAA Scholars implemented practice-based projects to address identified needs in their work settings. Projects included improving communication for diabetes self-management, de-prescribing in home health, and ageism in health professions training.

Results: Findings from qualitative analysis indicate that participants successfully incorporated age-friendly principles in their practices through implementation of their capstone projects.

Conclusion: Our findings suggest that programs like CIRCAA have the potential to improve older adults' health by addressing SDOH, advancing age-friendly and patient-centered care.

A326

Going Virtual: Interprofessional Learner Evaluations of In-Person and Virtual Observed Structured Clinical Examinations

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Background

Observed Structured Clinical Exams (OSCEs) have been used for years to assess learners' clinical competencies. The sudden transition to virtual medical education during the COVID-19 pandemic has necessitated rapid development of innovative teaching strategies, including the creation of virtual OSCEs. Converting OSCEs to a virtual format poses unique technical, communication, and clinical challenges, especially when focused on the older and seriously ill patient population. Our institution has been performing interprofessional in-person OSCEs in geriatrics and palliative care for many years, and has undertaken an analysis to compare the previous in-person format to the new virtual format.

Method

In September 2020, interprofessional fellows, faculty, and standardized patients participated (SP) in a virtual OSCE. Preparatory didactic sessions included best-practices for telehealth with older adults. The OSCE consisted of 4 stations (falls, delirium, deprescribing, and advance care planning) hosted in zoom breakout rooms that included a fellow, SP, and a faculty observer. Fellows completed post-OSCE evaluations including feedback on perceived usefulness of individual stations (UIS), perceived overall importance (OI) and innovation in teaching methods all rated on a 5-point Likert scale. This was then compared to the in-person OSCE from 2019.

Results

The 2019 and 2020 OSCEs consisted of 17 and 21 interprofessional fellows respectively. UIS ranged from 4.33-4.91 in 2019 and 3.9 to 4.6 in 2020. OI was rated 4.7±0.46 in 2019, and 4.3±0.59 in 2020 (0.02). Innovation in teaching methods was rated as 4.6±0.5 in 2019 and 4.0±0.8 in 2020 (0.009). Learner comments cited a lack of sufficient preparation to effectively conduct a virtual encounter, and concerns about virtual fall evaluations.

Conclusion

Compared to the previous year's in-person OSCE, the virtual OSCE was scored lower in usefulness, importance, and surprisingly in innovation; however, overall ratings were still high. Performing a virtual OSCE is feasible, and increased education and practice of virtual visits may improve fellow perceptions. Further methodological refinement will produce an invaluable teaching tool for the physicians of tomorrow who will likely perform virtual visits throughout their careers.

A327

What Matters for Frail Older Adults during a Global Pandemic

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Background: Older adults (OA), especially those with comorbid medical conditions such as heart or lung disease, are at high risk for developing serious complications from COVID-19. It is critical to ask OAs What Matters (WM) to them regarding healthcare wishes and advance care planning (ACP). The Baystate Geriatrics Workforce Enhancement Program's primary clinical initiative, Baystate House Calls (BHC) received HRSA (Health Resources and Services Administration) funding to council patients and caregivers on WMs and ACP, provide remote ACP education across Baystate Health (BH) and to improve access to virtual care for vulnerable OAs in Springfield during the COVID-19 pandemic.

Methods: BHCs NP, 2 RNs, and SW called OAs to discuss WMs if they become sick with COVID-19; ACP documents were completed when appropriate. They hosted daily ACP calls for BH staff to provide real time support, held multiple live virtual ACP didactics, and created ACP video vignettes and tip sheets for Nursing home (NH) staff. In addition, 2 CHWs provided extensive technical assistance to OAs and their caregivers to ensure connectivity to scheduled virtual visits.

Results: All active BHC patients (n=95) had either a WMs or more specific Goals of Care (GOC) conversation documented in their chart and were provided education on social distancing, hand hygiene and continuously monitored for social isolation and need for community resources. ACP support was given to over 40 BH RNs during daily calls, formal didactic education was provided to 60 BH primary care providers and over 90 Baystate Home Health and Hospice staff, NH video vignettes have been viewed 75 times thus far. In addition, BHCs NP has successfully completed 119 telephonic and 110 video visits since March 2020.

Conclusions: We found that most OAs are open to discussing WMs and GOC, especially to discuss how COVID-19 may impact them should they get sick and were willing to utilize telehphonic or virtual visits for this. Many BH clinicians and staff were not comfortable having these discussions. The BHC team was honored and privileged to provide much needed ACP education to our colleagues across the BH system. The impact of training efforts is difficult to quantify, but the fact that so many took time out of their schedules during a global pandemic to attend training speaks volumes to the value of ACP education and support.

A328

Narrative Medicine in Geriatric Education: Thematic Analysis of Medical Student Reflections on a Patient Story Assignment.

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Background: In our hectic clinical environment, medical students are all too often exposed to the traditional biomedical model of patient care which at times lacks humanism. We implemented a narrative medicine activity for students during their required geriatrics rotation based on students eliciting a patient's story. We present the results of our thematic analysis of students' reflections on this activity.

Methods: Students receive a 5-minute introduction to the Patient Story assignment. They invite a patient to share their story and elicit what matters most. Students are asked to share this story with the team and to write it up with a brief reflection on their experience with this

activity. We analyzed the reflections of 114 students who elicited the story from one of their older adult patients. We used an inductive and iterative approach to thematic analysis starting with the development of codes from which broader themes were constructed.

Results: We constructed 4 main themes 1) Student reactions to the experience (positive, emotionally challenging, negative); 2) Getting to know the patient (appreciation for the patient's lived experiences, learning about the patient's personality/coping/values, viewing the patient as more than their illness, recognition of patient's resilience in the face of hardships, the impact of the non-medical domains on patient well-being, insight into patients labeled as "difficult", and the value of the patient's story to the team); 3) Building blocks of the physician-patient relationship (forming a connection, patient trust and willingness to share, importance of listening, and empathy); 4) Student personal insights (take-away messages for their future medical practice, reflections on values/priorities for their personal life, recognition of time as a barrier).

Conclusions: Overall, the experience was overwhelmingly positive and impactful for our students. Our findings show that narrative medicine with reflective practice can challenge the traditional biomedical model of patient care our students are exposed to, remind them that their older adult patients are more than their illnesses, and bring back humanism in the practice of medicine.

A329

Interprofessional Student Hotspotting (SH) Learning Collaborative: Analysis of Goals, Interventions, and Barriers Facing SH Teams

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BACKGROUND

The top 5% of patients with complex health and social needs drive disproportionate shares (50%) of medical care costs.[1] Hotspotting directs intensive, hands on interventions toward "high utilizers" with the aim of improving health and reducing costs. Student Hotspotting is a curriculum developed by the Camden Coalition of Healthcare Providers, which trains a generation of health professionals to work within interprofessional teams to understand healthcare system problems via patients' perspectives. Students assist vulnerable patients in setting goals, navigating healthcare systems, and connecting with community resources.

Thomas Jefferson University became 1 of 4 national "Hotspotting Hubs" in 2017 and trains multi-institutional cohorts of ~80 students annually. At year end, teams present capstone posters highlighting patient narratives and team experiences.

METHODS

This study analyzed 32 posters produced by SH since the program's inception. Independent reviewers analyzed the posters and identified major themes related to (1) patient goals, (2) team interventions, and (3) barriers.

RESULTS

Final outcomes will be presented.

CONCLUSION

This study is the first of its kind to identify targeted goals of hotspotting patients, team interventions, and barriers. It provides examples of the added value of students as part of healthcare teams, highlights approaches to addressing social determinants of health, focuses on the needs and priorities of high-risk patients, recognizes barriers impeding optimized outcomes, and creates opportunities to refine SH curricula. Lessons learned include the importance of patient driven goal setting, standardizing documentation of patient goals/interventions/outcomes, and supporting team resiliency.

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A330 Student Presentation

Impact of educational whiteboard videos on healthcare provider knowledge and self-efficacy to deprescribe

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BACKGROUND

Self-efficacy and knowledge can drive behavior change, however, it is unknown whether brief educational whiteboard videos can increase healthcare providers' self-efficacy or knowledge about deprescribing.

METHODS

A pre- post-study was conducted to assess changes in healthcare providers' knowledge and self-efficacy for deprescribing after watching four, 3-minute whiteboard videos in French or English on: "Why deprescribe?", sedatives, proton-pump inhibitors (PPIs), and opioids. Each video addressed the barriers to deprescribing, how to engage patients, implementation of effective alternative treatments and how to taper. Healthcare providers were recruited using convenience sampling and social media. Knowledge and self-efficacy were determined with multiple choice questions and a self-efficacy scale (0-10) respectively. A McNemar's test was used to assess mean differences in the proportion of respondents identified as having high self-efficacy (≥70%). Paired t-tests were used to assess the mean change in knowledge score for each video.

RESULTS

Pre and post questionnaires were completed by 368 participants, of whom 82,3% (n=303) were women and 45,9% (n=169) watched the video in French. After watching the "why deprescribe?" video, 27.8% more participants were "very confident" in deprescribing. Self-efficacy and knowledge increased significantly after watching each video (Table 1).

The majority of participants stated they gained new knowledge and skills, 90.4%, 94.3% and 86.0% and had increased motivation to deprescribe, 93.0%, 96.6% and 90.7% for sedatives, PPIs and opioids respectively.

CONCLUSION

Brief educational whiteboard videos increase health care provider knowledge and self-efficacy for deprescribing sedative-hypnotics, PPIs and opioids. Each video produced an increased motivation to deprescribe.

	Self-efficacy: engaging patients (% very confident)			Self-efficacy: implementing alternatives (% very confident)			Self-efficacy: tapering (% very confident)			Knowledge (average score, %)		
	Pre	Post	Change	Pre	Post	Change	Pre	Post	Change	Pre	Post	Change
Sedatives (n=115)	40.0	73.0	33.0 (p<0.001)	26.1	66.1	40.0 (p<0.001)	27.0	61.7	34.7 (p<0.001)	53.0	80.9	27.9 (p<0.001)
PPIs (n=88)	40.1	77.3	37.2 (p<0.001)	37.5	81.8	44.3 (p<0.001)	38.6	77.3	38.7 (p<0.001)	59.4	90.1	30.7 (p<0.001)
Opioids (n=43)	30.2	67.4	37.2 (p<0.001)	25.6	67.4	41.8 (p<0.001)	23.3	69.8	46.5 (p<0.001)	64.3	90.7	26.4 (p<0.001)

A331

Utilization of geriatrics online case-based clinical scenarios to enhance pharmacy experiential education during the COVID-19 pandemic

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Background: The COVID-19 pandemic led to displacement of many healthcare trainees from experiential sites, requiring rapid exploration and deployment of novel methods to simulate patient care and advance clinical competencies. In response to this urgent need, we applied geriatrics online case-based clinical scenarios, developed in

accordance with medical education competencies, to pharmacy experiential education. This project aimed to assess pharmacy students' knowledge, comfort and attitudes before and after completion of scenarios.

Methods: Fourth professional year pharmacy students displaced from experiential sites completed a total of 20 case-based clinical scenarios focused on disease state management and geriatric syndromes. Scenarios were completed in a virtual group format over the course of a 6-week Advanced Pharmacy Practice Experience (APPE). Students completed anonymous pre- and post- surveys during weeks 1 and 6, respectively. Student attitudes and comfort were assessed using a 1-5 rating scale. Knowledge was assessed using validated, expert-generated clinical questions. Pre- and post-survey item statistics were compared using a one-tailed t-test.

Results: Eighteen students completed the pre-survey with one student lost to follow-up on the post-survey. Comfort ratings improved in management of 11 clinical areas following completion of scenarios ($p<0.001$). Knowledge application improved in management of falls, frailty, depression, PK/PD, dementia, BPSD, delirium and urinary incontinence, however, in aggregation this improvement was not statistically different ($p=0.22$) likely due to small sample size. Student attitude ratings were positive with most recommending use of online scenarios to enhance experiential education (4.53±0.12/5) and feeling that opportunities for pharmacists were well represented (4.12±0.21/5).

Conclusions: Pharmacy students' knowledge and comfort with geriatric care improved following completion of geriatrics online case-based scenarios. Student attitudes towards completion of scenarios were positive. Results suggest that clinical scenarios developed for medical education may be used to enhance pharmacy experiential education particularly during remote/hyprid APPEs.

A332

The Covid19 Nursing Home Challenge: Mission Impossible?

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Introduction

We redid our medical school's required annual interprofessional (IP) geriatrics week in an all-virtual format because of Covid19. We describe the design, implementation, and outcome of the **Covid19 Nursing Home (NH) Challenge**, an interactive, team-based, service-learning project introducing students to NHs and the challenges that led to the high mortality rate of Covid19 in NH residents.

Methods

In October 2020, students from 10 health sciences programs were assigned to IP teams that received the case of a resident in a NH with Covid19. Each team researched and proposed a solution to 1 of 5 Challenge Questions (cohorting, advance care planning, transfer of residents to hospitals, testing of staff and residents, the ethics of pitting public health v. the impact of social isolation) using P-D-S-A quality improvement methodology. Students took a video tour of a NH and its Covid unit, interviewed a NH resident and the medical director of the first NH in PA with an outbreak via Zoom, and had a lecture on Covid19 health policy in NHs. Teams uploaded to YouTube™ video posters of their proposals for panels of judges to review and score. Judges met teams in virtual Q&A sessions and selected a winner for each challenge question. The 5 winners met with another panel of judges who then selected an overall winner. Winning teams received prizes.

Results

230 students (157 MS3s and 73 students from 9 other professions) were assigned to 24 IP teams which uploaded 24 video posters. Judges' panels consisted of 5 ER docs, 5 community members, 8 geriatricians, 3 NH staff. 172 (75%) students submitted evaluations. 61.8% agreed or strongly agreed that the project contributed to learning about IP geriatric concepts. 65.7% agreed or strongly agreed that they had enough time to prepare. 75-95% of students rated the 4 sessions on Covid in NH as "good" to "outstanding" (5-point Likert scale from poor to outstanding). 75% would prefer visiting NHs in person to doing the project next year. The students' ratings of the overall quality of the course jumped from 13% "very good"-to-"outstanding" in 2019 to 70% in 2020.

Conclusion

This module provided virtual learning that was experiential, interactive, interprofessional, and impactful, teaching 230 students the seismic impact of Covid19 on a vulnerable population living in a unique, under-resourced, misunderstood health care setting.

A333

Virtual frailty assessment in older adults with blood cancers

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Background: Frailty and geriatric assessments (GA) in oncology practice remain limited, and the COVID-19 pandemic has reduced the number of in-person visits. We aimed to develop and validate a virtual frailty assessment that incorporates both patient-reported and objective performance measures.

Methods: The Older Adult Hematologic Malignancies Program at Dana-Farber is a clinical and research collaboration between geriatricians and oncologists. We have conducted screening GAs in over 800 patients since 2015. From this GA, we assess frailty via the phenotypic and deficit accumulation approaches based on 42 health deficits spanning the domains of function, mobility, comorbidity, and cognition. We adapted the measurement of these deficits to a virtual format, delivered through either videoconference or telephone.

Patient-reported items were readily converted to the virtual format. Of the objective performance measures (7), grip strength was replaced with self-reported grip strength. The Clock-in-the-Box test was changed to a simple clock draw that the patient completes on a piece of paper and displays to the camera for scoring. Four-meter gait speed is collected by training a caregiver to administer with a stopwatch and a 4-meter strip of ribbon (mailed to patients).

Geriatricians (C.D., T.H., and J.D.) and an oncologist (G.A.) reviewed the virtual GA for content validity. Feasibility will be measured as the proportion of patients who agree to participate and complete the virtual assessment. For reliability, two virtual frailty indices will be measured one week apart and compared. For agreement, the virtual frailty index will be compared against formerly collected in-person frailty indices from age- and gender-matched patients. In a subset of patients, the validity and reliability of virtual gait speed will be assessed by comparing our virtual tests administered in-home by the caregiver with in-person tests administered in-clinic by our research team.

Results: Currently enrolling.

Conclusions: A virtual frailty assessment that is valid and reliable will expand the delivery of the GA to older adults with blood cancers during and after the pandemic.

A334

Approach to Management of Pelvic Organ Prolapse by Age and Specialty

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Background: The number of women with pelvic organ prolapse (POP) is expected to increase with the growth of the aging population. Management of POP may vary based on age and provider specialty. We aimed to assess the approaches to POP management in women 50-69 years old compared to women ≥70 years by provider specialty in a large academic health system. We hypothesized that women ≥70 would be more likely to have expectant management and/or pessary management and less often be referred to a subspecialist for POP care.

Methods: We performed a retrospective cohort study of women aged ≥ 50 years who received a new diagnosis of POP (based on ICD-9 and 10 codes) at a large academic medical center between 2015 and 2017 in two groups: 1) women aged 50–69 years, and 2) women ≥70 years. Demographics, co-morbidities, and POP care management plans were abstracted from the electronic medical record. POP care (including expectant management, pessary, pelvic floor physical therapy, surgery) and referrals to subspecialists were assessed by provider specialty. T-tests and chi-squared tests were used in analyses.

Results: There were 2973 women (age 50-69) and 2322 women (age ≥70) with new diagnoses of POP. Mean age was 61.6±5.6 years for women age 50-69 and 78.3±6.1 for age ≥70 years old. Women were mostly white (93.7%, n=5295). Compared to the age 50-69 group, a greater proportion of women in the age ≥70 group had heart disease ($p<0.001$) and hypertension ($p<0.001$). Women ≥70 received pessary management more often (29% versus 15.6%, $p<0.001$), pelvic floor physical therapy less often (4.3% versus 9.5%, $p<0.001$) and referral to urogynecology less often (2.9% versus 4.3%, $p=0.008$). There was no difference in the proportion of women who underwent surgery for treatment between groups (2.5% versus 2.1%, $p=0.37$). Time to surgery from first POP diagnosis did not differ (238.4±307.1 days (50-69 years) versus 186.5±272.4 days (≥70 years), $p=0.33$).

Conclusions: POP in older women is more often managed conservatively with pessary, and they were less often referred to a subspecialist compared to younger women. There is an opportunity to improve POP care in older women by increasing collaborative, interdisciplinary care by medicine/geriatrics providers and subspecialists by referring to subspecialists earlier in order to learn about all treatment options and how these relate individually to patient preferences, quality of life, and ongoing co-morbidities.

A335

Intravenous cetirizine versus intravenous diphenhydramine in the prevention of infusion reactions in elderly patients

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Background: Pretreatment with antihistamines for drug-induced hypersensitivity infusion reactions (IRs) is recommended for certain biologics, chemotherapies, and other treatments.[1] There are currently no antihistamines approved for pretreatment. Cetirizine is the first injectable second-generation antihistamine recently approved for acute urticaria.[2] Diphenhydramine was previously the only available IV antihistamine but has safety warnings in the elderly and is considered potentially inappropriate for elderly patients by the Beers Criteria® and NCCN® Older Adult Oncology guidelines.[3-5]

Methods: A phase 2, randomized, controlled trial (RCT) evaluating premedication with IV cetirizine 10 mg versus IV diphenhydramine 50 mg was conducted in 34 patients. The main objective was comparing the incidence of IRs during treatment with an anti-CD20 (rituximab, its biosimilar or obinutuzumab) or paclitaxel after premedication with IV cetirizine or IV diphenhydramine. These data were analyzed in all patients and in those ≥65 years. No formal statistical analyses were planned given the exploratory nature of the study.

Results: Overall, the median age was 65 years in the IV cetirizine group and 67 years in the IV diphenhydramine group. Patients with IRs were 2/17 (11.7%) with IV cetirizine versus 4/17 (23.5%) with IV diphenhydramine. Mean sedation scores (standard deviation) with IV cetirizine were 0.47 (0.80), 0.63 (0.89), and 0.18 (0.39), versus 1.00 (1.46), 0.76 (1.13), and 0.35 (1.00) with IV diphenhydramine at 1 hour, 2 hours, and discharge, respectively. There were fewer treatment-related adverse events with IV cetirizine (3 events) versus IV diphenhydramine (5 events). Additional analyses in patients ≥65 years will be presented once available.

Conclusion: This study is the first RCT to provide important efficacy and safety data in the elderly for pretreatment of IRs with IV antihistamines.

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A336

Seasonal variation of Calcium, Parathormone and Vitamin D in hip fracture patients

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Background:

Seasonal variation of vitamin D (vit D) level has been demonstrated in many studies. The aim of this study is to explore whether there is seasonal variation of Calcium (Ca) and Parathormone (PTH) levels in hip fracture patients.

Methods:

Retrospective analysis of consecutive hip fracture patients admitted in a 14 months period to an Orthogeriatric Unit in a UK teaching Hospital. Electronic records were reviewed. Demographic data and bone profile on admission; [(ionized and adjusted Ca, PTH, 25 OH vit D, Phosphate (PO^4) and Alkaline Phosphatase (ALP)] were collected, exported into MicroSoft Excel® and analysed using IBM SPSS® v24.0. Two-tailed Pearson's correlation statistic was used to examine the relationship of unadjusted *versus* albumin-adjusted serum Ca levels with PTH level. Multinomial regression modelling was used to explore relationships between bone profile and the potential influence of seasonality.

Results

560 patients were admitted in the study period; 169 males and 391 females with a mean age of 81.1 and 83.1 years respectively. Preliminary analyses identified that PTH correlated more with ionized Calcium (r^2-0.249, $p<0.001$) compared to adjusted calcium (r^2-0.184, $p=0.002$). Therefore, the unadjusted serum calcium level was factored into later analyses.

There was statistically significant seasonal variation of both serum vitamin D levels ($P= 0.03$) (higher in the summer) and serum calcium levels ($P=0.006$) (higher in the winter).

There were no seasonal variation in Parathormone level, phosphate and alkaline phosphatase.

Multivariate regression modelling demonstrated physiologically expected relationships between the available laboratory variables (serum calcium, phosphate, ALP, PTH, vitamin D). Renal function correlated significantly with hyperparathyroidism only (P=0.03).

Females had higher serum calcium levels and also tended to have higher phosphate levels.

Limitations:

Limitations include the relatively short study period, the lack of potentially relevant demographic data (e.g. ethnicity), functional status, co-morbidities and relevant medications (e.g. vitamin D, Calcium and bisphosphonates)

Conclusions:

In this study there were seasonal differences in Calcium and 25 OH D level, but not in Parathormone level. Parathormone was correlated to ionized Calcium level more than albumin adjusted Calcium level.

A337

Relationships among caregiver-oncologist concordance in patient prognosis, caregiving esteem, and caregiver outcomes

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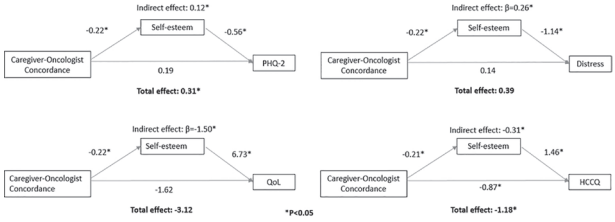
Background: Caregiver-oncologist concordance regarding the patient's prognosis is associated with worse caregiver outcomes but mechanisms underpinning these associations are unclear. We explored whether caregiving esteem mediates these associations.

Methods: In a cluster-randomized trial, we recruited patients aged ≥70 with incurable cancer, their caregivers, and oncologists. At enrollment, caregivers and oncologists estimated the patient's prognosis; same response was considered concordant. At 4-6 weeks, caregivers completed an assessment of the extent to which caregiving imparts self-esteem. Outcomes assessed included Patient Health Questionnaire-2, Distress Thermometer, 12-Item Short Form Survey for quality of life (QoL), and Health Care Communication Questionnaire (HCCQ). Mediation analysis with bootstrapping was used to estimate the direct and indirect effects of concordance on caregiver outcomes through caregiving esteem.

Results: Prognostic concordance, which occurred in 28% of the 369 dyads, was associated with greater depression (β=0.31; p=0.05) and lower HCCQ scores (β=-1.18; p=0.004), but not distress (β=0.39; p=0.23) or QoL (β=-3.12; p=0.08). Lower caregiving esteem significantly mediated the positive associations of concordance with depression and distress, as well as the negative associations of concordance with QoL and HCCQ (see Fig). Caregiving esteem partially mediated 39%, 67%, 48%, and 26% of the associations between concordance and depression, distress, QoL, and HCCQ, respectively.

Conclusions: Interventions designed to improve caregiving esteem may have the potential to alleviate the negative effects of caregiver-oncologist concordance on caregiver outcomes.



A338

Feasibility of Implementation of Geriatric Assessment Screening Tool in Outpatient Oncology Clinic

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Background: The American Society of Clinical Oncology recommends that all adults age ≥65 evaluated for cancer treatment undergo Geriatric Assessment (GA) to identify non cancer vulnerabilities and develop an individualized treatment plan. A Comprehensive Geriatric Assessment (CGA) is time and resource intensive. A quick assessment tool is needed to determine who may proceed with usual care and who may benefit from a CGA. The G8 tool is highly sensitive for functional decline and overall survival, can be quickly administered, and may help identify those that would benefit from a CGA.

The purpose of this study was to assess the feasibility and acceptability of implementing the G8 screening tool by nurses with new patients presenting to two outpatient cancer clinics.

Methods: Four nurses completed an online asynchronous training module. A pre/post survey assessing knowledge of geriatrics, the ASCO guideline, and comfort administering the G8 tool was completed online. The G8 tool was built into the EHR. Nursing workflows were adjusted to accommodate telemedicine due to the COVID 19 pandemic. Medical assistants placed reminders in the schedule. A positive G8 score (≤14) triggered a referral to our Senior Adult Oncology Center for a CGA.

Results: Four nurses completed the training module and the pre/post survey. Three of the four showed improvement in knowledge after the module. All 4 reported comfort in administering the G8 tool after the module. All reported needing more training in geriatric oncology. All believed that our institution was already compliant with the ASCO recommendation. Initial results revealed an inability of nursing to perform the G8 during telehealth encounters which was addressed. Over 5 months, 40 patients were screened; 20 screened positive, triggering a referral to SAOC.

Conclusions: This pilot demonstrated the feasibility and acceptability of implementing the G8 screening tool by nurses in two outpatient clinics, addressing the ASCO guideline to provide GA for older cancer patients. Success with this pilot will inform plans to expand G8 screening to all outpatient medical oncology offices at our institution. Nurses reported a need for more geriatric oncology training. Our pilot improved telemedicine workflow, leading to improvement in interdisciplinary patient care

A339

Improving Outcomes in Older Veterans with Chronic Low Back Pain and Comorbid Depression: Preliminary Data from the MOTIVATE Pilot Trial

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Background:

Chronic low back pain (cLBP) and depression are common and debilitating. We developed a novel 8-session telephone-delivered behavioral intervention targeting older adults with cLBP and depressive symptoms. MOTIVATE (Moving to Improve Chronic Back Pain and Depression in Older Adults) is delivered by a health coach using motivational interviewing and value-concordant goal setting to increase physical activity. The ultimate goal is to improve back pain-related pain interference, disability, and depressive symptoms.

We conducted a pilot randomized controlled trial (RCT) to assess feasibility and preliminary trends in outcomes among older Veterans with cLBP and depressive symptoms assigned to receive MOTIVATE vs. waitlist control.

Methods:

Outcomes were assessed at baseline, mid, and endpoint (12 weeks). Primary outcomes consisted of feasibility measures; secondary outcomes included step counts, PEG-3, Roland Morris Disability Questionnaire (RMDQ), and PHQ-9. We present descriptive statistics including mean outcome values, confidence intervals, and preliminary effect sizes with Hedges' g.

Results:

Of 45 subjects (mean age of 71 years, 87% men, 51% White, 40% African American, 9% Hispanic), 24 were randomized to MOTIVATE, and 21 to the control. Thus far, 386 patients have been screened with a recruitment rate of 12%. Selected outcomes are listed in Table 1. While still actively enrolling, we are observing average step counts among MOTIVATE participants increase from 1618 at Session 2 to 3149 at Session 5. Preliminary trends show that final PEG-3 and PHQ-9 scores are lower in MOTIVATE subjects. MOTIVATE has effect sizes of 0.85 for PEG-3, 0.22 for RMDQ, and 0.81 for PHQ-9.

Conclusion:

Preliminary findings show that MOTIVATE is feasible with trends towards clinically meaningful improved outcomes. Further research is needed to evaluate MOTIVATE in a fully powered RCT.

Table 1: Key Outcome Measures (MOTIVATE vs. Waitlist Control)

Key Outcome Measures	Mean (95% Confidence Interval)					
	Baseline		Midpoint (~ 5 weeks)		Endpoint (~12 weeks)	
	MOTIVATE (n=23)	Control (n=21)	MOTIVATE (n=14)	Control (n=16)	MOTIVATE (n=9)	Control (n=16)
PEG-3 (out of 10)	6.75 (5.97-7.53)	6.76 (6.01-7.51)	5.71 (4.64-6.78)	6.35 (5.22-7.49)	5.59 (4.18-7.00)	6.58 (5.59-7.58)
RMDQ (out of 24)	17.22 (15.18-19.25)	17.52 (16.19-18.86)	15.00 (12.28-17.72)	17.25 (14.91-19.59)	13.44 (9.85-17.03)	16.38 (14.12-18.63)
PHQ-9 (out of 27)	14.52 (12.45-16.60)	12.95 (10.68-15.22)	8.21 (5.67-10.76)	12.13 (9.02-15.23)	7.44 (3.98-10.91)	10.06 (7.44-12.69)

A340

Infrequent recommendations to stop colonoscopy in older adults

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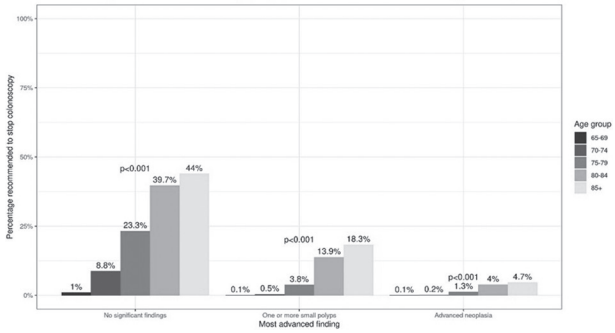
Background: Whether age is considered in recommendations after colonoscopy in older adults is unclear. We aimed to evaluate endoscopists' recommendations for follow-up colonoscopy among older adults.

Methods: We examined colonoscopy findings and recommendations for adults aged ≥65 in the New Hampshire Colonoscopy Registry (NHCR). The primary outcome was a recommendation to stop colonoscopy, defined as selection of "no further colonoscopy" on the data NHCR collection form.

Results: There were 42,611 colonoscopies in patients age ≥65 between 4/1/2009-3/31/2019: 45% surveillance, 41% screening, and 14% diagnostic. Median patient age was 70 years [IQR 6.9], 49% were male, 97% were non-Hispanic Caucasian. Across all indications, 0.7% patients had cancer, 9% advanced polyps (>1 cm, villous features, or high grade dysplasia), 33% small polyps, and 58% no significant findings. Among older adults with no significant findings, recommendations to stop colonoscopy increased with advancing age (1 to 44%; **Figure**). Among those with small polyps, recommendations to stop colonoscopy increased with age to a lesser extent (0.1 to 18%). Among older adults with any advanced neoplasia, recommendations to stop colonoscopy were uniformly rare across all age groups (0.1% to 4.5%).

Conclusions: Endoscopists recommended explicitly stopping colonoscopy in only a minority of older adults, regardless of age, raising concern for potential overuse of colonoscopy in older adults with no findings or only small polyps in whom colonoscopy is likely of limited value.

Figure. Among older adults age ≥65 undergoing colonoscopy, the percentage told to stop further colonoscopy by age and current colonoscopy finding.



A341

Prevalence of Geriatric Conditions in Older Men with Stress Urinary Incontinence

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BACKGROUND

Approximately 70% of male SUI operations are performed in men 70 or older. Many older adults have geriatric conditions that could complicate treatment options and cause adverse outcomes. As a first step towards improving patient-centered treatment decision-making, we sought to describe the prevalence of geriatric conditions in this patient population.

METHODS

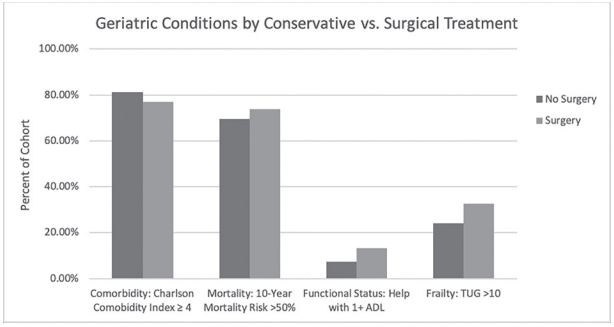
Males age 65+ seen at the UCSF Medical Center and the San Francisco VA Medical Center for initial SUI consultation from June 2015 - 2019 were identified. Patient demographics and geriatric conditions were ascertained using retrospective chart review and telephone interviews. Bivariate analysis examined the association between geriatric characteristics and treatment choice.

RESULTS

130 participants (mean age 75) completed the interview and were included for analysis (mean time since consultation 31.6 ± 15.8 months). The mean Charlson Comorbidity Index was 5.2, with 79% having a score ≥4. Nearly three-quarters had a 10-year mortality risk greater than 50%. One in ten needed help with 1 or more activities of daily living and 22% had a timed-up-and-go test of > 10 seconds. None of these geriatric characteristics were found to be significantly associated with treatment choice (Figure).

CONCLUSION

Geriatric conditions are common among older men with SUI but are not associated with treatment choice. It is important to identify these conditions, along with patients' goals and values, to provide individualized treatment counseling.



A342

Acceptability and Usability of the Palliative Care and Rapid Emergency Screening (PCaRES) tool among ED Nurses

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Background: The Palliative Care and Rapid Emergency Screening (PCaRES) tool is a validated clinical decision aid to help Emergency Department (ED) physicians identify unmet palliative care needs. While ED nurses play a critical role in palliative care, use of the PCaRES tool by nurses has yet to be explored. The objective of this study was to survey ED nurses about the feasibility of nurse-led palliative care screens in the ED. **Methods:** We conducted a brief, mixed methods survey among a convenience sample of ED nurses at a single academic medical center. The survey was adapted from previously published literature on PCaRES. ED nurses were asked to voluntarily and anonymously complete a survey about PCaRES. Quantitative questions were reported on a 5-point Likert scale (5=strongly agree, 1=strongly disagree). Six open-ended questions were included to elicit qualitative feedback. **Results:** 17 of 22 nurses completed the survey (response rate = 77%). Prior to any education about the PCaRES tool, 100% of respondents denied difficulty understanding how to use PCARES, though they displayed variable knowledge about palliative care concepts: 40% reported that palliative care was synonymous with terminal illness, and 70% reported that it should not be provided alongside curative therapy. 95% strongly agreed "that ED care does not always relieve suffering for those with life-limiting illness" (mean response 4.1, SD= 0.7). Similarly, 93% of nurses were willing to use PCaRES to trigger a palliative care order set (4.25, SD=0.86) or palliative care consult (4.25 SD=0.77). The majority of nurses (71%) agreed to use PCaRES if it were in the Electronic Medical Record (EMR) whereas most nurses (83%) disagreed to its use if it were not. Overall, respondents did not recommend major changes to optimize the PCaRES tool for nursing practice. **Conclusion:** In a convenience sample of ED nurses at a single institution, the PCaRES tool was highly acceptable to ED nurses and they were willing to use it to initiate palliative care workflows as long as it could be easily accessed in the EMR. Nursing education against misconceptions about palliative care will be important prior to implementation of nurse-led palliative care screens in the ED.

A343

Age is a risk factor for recurrent diverticulitis in a population-based cohort

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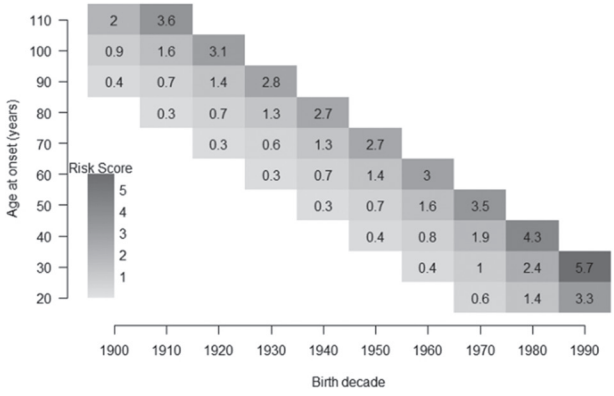
Background: The risk of recurrent diverticulitis is an important consideration when deciding to treat patients medically or with elective colectomy after recovery from diverticulitis. The relationship between age and the risk of recurrent diverticulitis is unclear.

Methods: The Utah Population Database was used to identify individuals with incident diverticulitis requiring an ED visit or hospitalization from 1998-2018. The association between age and recurrent diverticulitis was estimated after adjusting for sex, urban/rural status, BMI, birth decade, and interaction between age and birth decade. Using the same model, adjusted recurrence risk scores were stratified to explore the separate effects of aging and birth decade.

Results: The cohort included 8606 individuals, median age 61 years at index diagnosis. Increasing age was associated with recurrent diverticulitis (HR per 10 years of age 10.9, 95% CI 10.7, 11.1). To a lesser degree, more recent birth decade was associated with recurrent diverticulitis (HR per decade 2.59, 95% CI 2.22, 3.01). Adjusted recurrence risk scores are shown in the Figure.

Conclusions: Among individuals born in the same decade, the risk of diverticulitis recurrence increases with age at onset. Age-specific treatment strategies for diverticulitis may be warranted.



Adjusted diverticulitis recurrence risk scores

A344 Encore Presentation

Allow me to enjoy my last days of life with dignity.

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Background.

Providers are often entrusted the task of meeting standards of care including clinical practice guidelines. But there is more to geriatric medicine than to follow best practices of care.

Case.

78 years old community male was under a PCP for decades; the PCP retired during the COVID-19 pandemic. Patient decided to come to our geriatrics ambulatory clinic to establish care. History was relevant for atrial fibrillation, hypertension, hyperlipidemia, Merkel cell carcinoma of upper arm. He had discontinued his PCP follow up for months. Around the time of his visit to our clinic, a courtesy call remainder for his appointment suggested he was sick on the phone. During these times a respiratory infection always entertained

the suspicion for COVID-19. We advised he go directly to ED as the symptoms persisted for over 2 weeks. As expected, he was diagnosed with bacterial pneumonia and needed and recommended hospitalization. Unfortunately, he was also pancytopenic, with a hemoglobin <5 g/dl, ANC of 0.2 and Platelets 6,000; evaluation confirmed a diagnosis of acute myelogenous leukemia through bone marrow biopsy. He was recommended aggressive chemotherapy as only option for survival. Further w/u also diagnostic of bacteremia due to Staph endocarditis. After 7 days of hospital stay and assessment of decision-making capacity patient decided to sign AMA from the hospital. We call him the day after to understand reason of AMA and he replied "I know I'm going to die soon; I just want to spend the last days of my life in peace at home"

Discussion.

This case represents an interesting story about a patient with many treatable conditions who decided to take the "conservative measures" for conditions in which reasonable treatment options were available to prolong and even improve quality of life. As physician we often recommended what in our opinion is "the best treatment option". As manifested in this case we should always consider and respect every patient's perspectives of life and inquire about goals of care for any condition.

Lesson learnt.

Even though treatment guidelines does represent a safe way to practice medicine they are meant to be followed by most of the population and sometimes conservative measures should be offered to patients regardless of life expectancy.

Always communicate with patients in regard to their goal of care. Many patients will have different goals of care depending on their individual's situations or beliefs.

A345

Preoperative cognitive impairment as a perioperative risk factor in patients undergoing total knee arthroplasty

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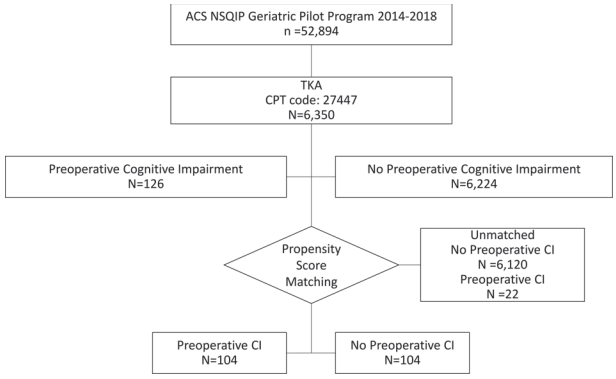
Background: The study assessed whether pre-existing cognitive impairment (CI) prior to elective total knee arthroplasty (TKA) is associated with worse postoperative outcomes such as delirium, in-hospital medical complications, 30-day mortality, hospital length of stay and non-home discharge.

Methods: A retrospective database analysis from the NSQIP Geriatric Surgery Pilot Project was used. There was an initial cohort of 6350 patients undergoing elective TKA, 104 patients with CI were propensity score matched to 104 patients without CI.

Results: Analysis demonstrated a significantly increased incidence of post-operative delirium (POD) in the cohort with pre-op CI (p = < .001), a worsened functional status (p = < .001) and increased nonhome discharge postoperatively compared to the group without CI (p = 0.029).

Conclusion: CI in patients undergoing TKA is associated with an increased risk of POD, worsened postoperative functional status, and discharge to non-home facility. Early identification of patients with CI and preemptive interventions such as multidisciplinary care involving geriatricians and/or neurocognitive specialists may decrease adverse outcomes for these high-risk patients. This analysis was based on data acquired through the NSQIP dataset and is therefore limited by the study's retrospective nature and limitations of data collection. However, a large and diverse group of hospitals with different practice models submit their noncontrolled data to the NSQIP, therefore we still believe that this study's findings are broadly generalizable to current practice.



Study Flow Diagram

A346

Population Health for Fall Prevention Through the Geriatric ED

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Background: Each year, one third of community dwelling older adults (>65 years of age) sustain a standing level fall, approaching almost half in adults 80 years and older. Patients presenting to the emergency department (ED) with a fall are a high-risk group for a subsequent fall. Community programs for fall prevention like A Matter of Balance can be beneficial in providing evidence-based practical strategies to reduce fear of falling and improving home safety.

Methods: Retrospective data from an American College of Emergency Physicians (ACEP) accredited Geriatric Emergency Department (GED) of a large academic medical center was analyzed for older adults who presented to the GED with falls from August 2019-October 2020. Demographics including age, gender, race and residential zip codes were obtained. Descriptive statistics were used to describe the study variables and heat maps were used to identify high-risk zip codes.

Results: The study included 13,704 visits by older adults to the GED. The incidence of falls was 9.1% (n=1,243). The median age (Inter Quartile Range) was 73 years (68-80) and 52% (n=7,196) were females. The incidence of falls increased with age (p <0.0001) and was significantly more in females compared to males (10.6% vs 7.3%, p<0.001). Non-Hispanic Whites (9.9%) had a higher rate of falls than Hispanics (8.7%) and Blacks (7.4%). The top three residential zip codes with excess fall presentations were 85016(14.9%), 85013 (14.5%), and 85004(14.1%).

Conclusion: Incidence data of geriatrics focused issues like falls, from the GED could be utilized by community partners to identify higher risk populations where focused fall prevention interventions can be provided, enhancing their effectiveness. The goal of the GED is to effectively utilize outpatient community resources for improving the health of our geriatric population, our study demonstrates an application to meet this goal.

A347

Association between Age-related Macular Degeneration and Frailty in older Veterans

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Background: Frailty is a state of vulnerability in older adults that decreases the capacity to cope with stressors and predisposes to poor health outcomes. Research shows that vision loss is associated with frailty. Age-related macular degeneration (AMD) is a leading

cause of irreversible blindness in older adults. The purpose of this study was to determine if there is an association between AMD and frailty in older Veterans.

Methods: This is a cross-sectional study with case-control matching of veterans 65 years and older from the Miami Veterans Affairs Healthcare System (VAHS) who had a primary care visit between October 2018 and September 2019. A modified 30-item VA Frailty Index (VA-FI) was generated from electronic health records (EHR) as a proportion of morbidity, function, sensory loss, cognition/mood and other variables (the vision loss variable was removed from the calculation). The VA-FI categorized veterans into non-frail (FI<.21) and frail (FI≥.21). Patients were matched for age, gender, race, ethnicity, BMI, smoking, and area deprivation index (ADI). Based on the International Classification of Diseases (ICD) codes, we identified AMD from the EHR. The association between AMD and frailty was evaluated using binomial logistic regression (BLR) models, and odds ratios (OR) with 95% confidence intervals (CI) were calculated with non-frail as the case-control matching group, frailty as the outcome variable and AMD as the independent variable.

Results: After case-control matching, the final sample consisted of 8720 Veterans (non-frail 4360 and frail 4360), mean age 68.63 (SD=10.29) years, 96.40% male, 66.20% White, and 84.61% non-Hispanic. From the total of 411 (4.70%) veterans with AMD, a larger number in the frail group had AMD, n=227 (5.20%) than in the non-frail group, n=184 (4.22%), p=0.030. Using BLR, AMD was cross-sectionally associated with frailty, OR=1.24 (95% CI=1.02-1.52), p≤ 0.030.

Conclusions: This cross-sectional study shows an association between AMD and frailty in veterans. Screening for frailty may be necessary for optimal management of older adults with AMD. Future research may determine whether early detection and prevention of AMD may avoid the onset of frailty.

A348

Characterizing Abdominal Pain in Older Adults Presenting to the Emergency Department

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Patients over 65 years old account for 20% of all emergency department (ED) visits and at least 30% of these visits end in hospitalization. Abdominal pain is the single most common chief complaint among patients over 65, representing 1.4 million visits in 2017, and carries high morbidity and mortality. Yet there is little research on how older patients with abdominal pain are managed. Our goal was to assess the evaluation and disposition of older patients with abdominal pain in the ED.

We combined 2013-2017 data from the National Hospital Ambulatory Medical Care Survey, a chart abstraction of US ED visits. Survey weights were applied to descriptive statistics to ensure national representativeness. The survey design is described on the Center for Disease Control and Prevention's National Center for Health Statistics.

For patients aged 65+, 3,545,852 (7.0% [95%CI 6.4-7.6%]) presented with a chief complaint of abdominal pain in this 5-year period. Abdominal pain chief complaints were less prevalent in the oldest old (7.2% for 65-to-84-year-olds vs 5.7% for patients over 85 years old), with a trend (p=0.08) towards a higher proportion of women (3.2 percentage points). Abdominal pain patients 65+ were 5.0% less likely to suffer from multi-morbidity at baseline. They were not statistically more or less likely to be discharged home, die, or be admitted to critical care, but were 4.5 times more likely to be admitted directly to surgery (3.6% vs 0.8%). Among discharged patients, 52.7% received an abdominal CT, 35.1% received an EKG/ECG, 8.6% received an ultrasound, and 30.6% received an x-ray.

Despite the minimal utility of plain films in the diagnosis of abdominal pathology in older patients, plain films without cross-sectional imaging are common in this population. Cardiac ischemia is the leading cause of death after ED discharge in ED abdominal pain patients 65+, yet two out of three patients did not receive an EKG. These results suggest an imperfect alignment of ED evaluation patterns with knowledge of outcomes for older adults presenting with abdominal pain. Given documented higher mortality and morbidity for older adults presenting with abdominal pain to EDs, quality improvement measures such as clinical pathway development should be considered.

A349

Non-Cardiac Multimorbidity and Clinical Outcomes in Older Adults with Heart Failure

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Background: Despite high burden of non-cardiac comorbidities due to aging and shared risk factors, clinical care of patients with heart failure (HF) is often focused on cardiac diseases. Common patterns of non-cardiac comorbidities and their prognostic significance with respect to the risk of mortality and hospitalization are not well known in older patients with HF.

Methods: This retrospective cohort study was conducted using a random sample of Medicare fee-for-service beneficiaries (n=49,849) who were diagnosed with HF before January 1, 2016. We assessed 8 prevalent non-cardiac chronic conditions: dementia, cancer, chronic kidney disease (CKD), chronic lung disease, depression, diabetes (DM), musculoskeletal diseases (MSK), and stroke. Using latent class analysis and Bayesian information criterion, we classified HF patients into clusters based on non-cardiac comorbidities. We used Cox proportional hazards model to compare the rates of mortality and hospitalizations in 1 year across non-cardiac multimorbidity classes after adjusting for age, sex and race.

Results: Five distinct multimorbidity patterns were identified: minimal class (20.8% of population), DM-CKD-MSK (16.7%), lung-depression-MSK (31.5%), dementia-depression-MSK (19.0%), and multi-system class (12.0%). Mortality rates per 100 person-years were highest in the multisystem class (24.2; HR 3.21) and the dementia-depression-MSK class (24.7; HR 2.80) (Table). Rates for non-cardiovascular (CV) hospitalization as compared to CV hospitalizations were higher across all classes.

Conclusion: In older adults with HF, non-cardiac multimorbidity patterns are associated with increased risk of mortality and hospitalizations. Non-cardiovascular hospitalization rates are twice higher than cardiovascular hospitalization among those with multi-system and dementia-depression-MSK comorbidities. These results underscore the importance of comprehensive care.

	Minimal class		DM-CKD-MSK		Lung-depression-MSK		Dementia-depression-MSK		Multi-system class	
	Rate per 100 PY	HR (95% CI)	Rate per 100 PY	HR (95% CI)	Rate per 100 PY	HR (95% CI)	Rate per 100 PY	HR (95% CI)	Rate per 100 PY	HR (95% CI)
Mortality	6.8	Ref	11.2	1.60 (1.42-1.81)	12.1	1.73 (1.54-1.94)	24.7	2.80 (2.49-3.14)	24.2	3.21 (2.86-3.61)
CV hospitalization	15.2	Ref	20.6	1.33 (1.21-1.45)	21.4	1.39 (1.28-1.51)	20.6	1.25 (1.14-1.37)	24.9	1.57 (1.43-1.73)
Non-CV hospitalization	22.0	Ref	32.8	1.57 (1.46-1.68)	38.6	1.88 (1.76-2.01)	44.7	2.25 (2.10-2.42)	53.8	2.89 (2.70-3.10)

PY, person-years; HR, hazard ratio; CI, confidence interval

A350

Utilization of a Standardized Functional Assessment Tool in a Large Health System Electronic Health Record

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Background: Loss of function is a key marker of morbidity and an indicator of early palliative care needs, yet screening tools for functional status are not widely available as standardized data elements in the Electronic Health Record (EHR). We implemented an EHR-based Older Adults Resources and Services (OARS) functional flowsheet assessment tool, to describe utilization of the tool, degree of functional impairment, and mortality trends in a large academic health system.

Methods: Cross-sectional study of adults aged ≥ 60 from an academic healthcare system with a completed OARS assessment between 2018-2020. The OARS consists of 7 physical activities of daily living (PADLs) and 7 instrumental activities of daily living (IADLs) items, score range 0-28, with lower score equating to greater functional impairment. Demographics, OARS collection sites, and date of death were extracted from the EHR. Descriptive statistics were used to describe the outcomes.

Results Total of 5332 older adults had ≧1 OARS survey, 20% had two or more surveys; mean age 76.5 (SD:8.5), 61% female, 67% Caucasian. Top collection sites were outpatient visits (72%), and telephone encounters (15%), and the majority of collection was done by nurses (47%), physicians (12%) and social workers (12%). Mean baseline OARS composite score was 21.1 (SD:6.6); Mean PADL score was 11.6 (SD:3.0); Mean IADL score was 9.7 (SD:4.1), with 20% older adults having no functional deficits, and 5% with 7 total PADL and 14% with 7 total IADL deficits. The 1-year mortality rate was 7% for the adults with no impaired PADL, and 26% for those with 7 impaired PADLs. The 1-year mortality rate was 4% for no IADL impairment and 20% for 7 impaired IADLs. People with self-feeding deficits had the highest 1-year mortality rate (23%).

Conclusion: A standardized OARS flowsheet tool was integrated into the EHR, allowing functional assessment data to be collected by multiple healthcare team members in different clinical settings. The cohort with completed OARS assessments demonstrated relatively high level of function. Those with more functional loss had higher mortality rate, which may help determine the needs for early palliative care within a health care system.

A351

Frailty, Microbial Etiology, and Mortality in Hospitalized Older Adults with Pneumonia

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Background

Older adults with frailty may have different microbial etiology for pneumonia, which may help treatment decision and prognostication. We investigated the association of frailty with microbial pathogens and mortality in older hospitalized patients with community-acquired pneumonia (CAP) and nursing home-acquired pneumonia (NHAP).

Methods

This single-center prospective cohort study enrolled 201 patients who were ≥65 years old and hospitalized with pneumonia (CAP: n=163, NHAP: n=38). We assessed frailty using a 50-item deficit-accumulation frailty index (FI) (range: 0-1; not-frail <0.24, mild-to-moderately frail 0.25-0.44, and severely frail ≥0.45) on admission. Microbial etiology was determined from the sputum culture. The Kaplan-Meier estimates and Cox proportional hazards model were used to examine mortality over 6 months.

Results

Microbial pathogens were identified in 33 (35.5%) non-frail, 17 (45.9%) mild-moderately frail, 21 (63.6%) frail patients with CAP and 27 (71.0%) patients with NHAP (**Table**). *Acinetobacter baumannii* (12.4%) was the most common pathogen, followed by *Klebsiella pneumoniae* (11.4%), *Pseudomonas aeruginosa* (10.0%) and *Methicillin-Resistant Staphylococcus Aureus (MRSA)* (10.0%). After adjusting for age, sex, history of chronic lung disease and diabetes, the microbial etiology of severely frail patients with CAP resembled that of patients with NHAP. The 6-month mortality rates were 12.1% (reference), 27.4% (HR, 2.36; 95% CI, 1.00-5.65), and 32.0% (HR, 2.76; 95% CI, 1.17-6.54) among non-frail, mild-moderately frail, and severely frail patients with CAP, respectively, and 52.0% (HR, 5.04; 95% CI, 2.36-10.78) among patients with NHAP.

Conclusion

Severe frailty and nursing home residence are associated with higher prevalence of gram-negative bacilli and MRSA and higher mortality. Empirical treatment of CAP should cover these pathogens in community-dwelling older adults with severe frailty.

A352

How comorbidity and COVID-19 outbreak affected hospice referral and inpatient hospice admission

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Background: Hospice provides supportive care to people focusing on comfort with a projected life expectancy of less than 6 months. The General inpatient hospice (GIP) is a specialized part, focusing more on intensive management of uncontrolled symptoms. Utilization of hospice and GIP during COVID-19 as well as referral pattern has not been well studied.

Objectives: Assess utilization of hospice referral and admissions at HUMC during first COVID-19 surge, from 3/1/2020—6/30/2020 in comparison to pre-COVID use from 11/1/2019—2/29/2020, and to see if demography and comorbidities affected GIP admissions for COVID-19 patients.

Methods: Retrospective chart review was done for all GIP admissions from 11/2019 to 6/2020 at HUMC, a 775 bed academic hospital in New Jersey. Data was collected for demographics, number of comorbidities and admission diagnosis. Descriptive statistics are presented as number (%). To assess whether hospice referral and admission rates differed during the time period of COVID-19, the difference in proportions was calculated and chi-square tests were performed. All analyses were conducted in SAS version 9.4.

Results: Hospice Referrals out of Total Hospitalizations: pre-covid:353/13440(0.0263%) and during covid:347/11480 (0.0302%), p-value: 0.0592. Hospice Admissions out of Total Hospitalizations: pre-covid:122/13440(0.0091%), during covid: 146/11480 (0.0127%); p-value: 0.0055.

Total GIP admissions for COVID-19 were 54. Descriptive statistics showed male and female distribution was almost equal 53.70% vs 46.30%, age range <65 : 7.41%, 65—75: 9.26%, 76—85: 44.44%, 86—95: 35.19%, >95: 3.7%, White was 66.67%, Black/African American 7.41%, other 22.22%, unknown 3.7%. Number of Comorbidities ≤ 3 was 85.19% and > 3 was 14.81%, Hypertension: 42.59%, Diabetes: 31.48%, CHF: 24.07%, Kidney Disease: 24.07%, Cancer: 20.37%, COPD: 11.11%.

Conclusions: COVID-19 outbreak increased both hospice referral and admission. In GIP more white patients were admitted than any other race. Majority of GIP patients were 76—95 years old. More patients in GIP had <3 comorbidities, about half with hypertension,

next common was diabetes. Our study though a single center study, does suggest that hypertension and diabetes alone can significantly increase risk of mortality in patients with COVID-19. Larger, multi-center studies are needed to confirm the association.

A353

Validation of the Pictorial Fit Frail Scale in a thoracic surgery clinic- preliminary results

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Background: The Pictorial Fit Frail Scale (PFFS) is a self-reported assessment of frailty, which uses visual images to measure vulnerabilities in 14 health domains. This instrument was previously studied in general geriatric and memory clinics, where it was shown to be feasible. We aimed to examine the feasibility and validity of this tool in a population of older surgical patients

Methods: Patients age ≥65 years old who were evaluated in-person, in a multidisciplinary thoracic surgery clinic during November and December 2020 were included. Patients completed the PFFS and Vulnerable Elders Survey (VES-13) during their visit. A geriatrician then performed a comprehensive geriatric assessment from which a Frailty Index (FI-CGA) and FRAIL scale were obtained. To assess the construct validity of the PFFS in this population, the Spearman's correlation of PFFS with VES-13, FI-CGA, and FRAIL was calculated.

Results: All 23 patients invited to participate agreed, of which 20/23 (87%) fully completed the PFFS questionnaire. The cohort was mainly female (60.9%), white (90.9%), with a median age of 77 (range: 67-90). The median number of comorbidities was 6 (range: 4-14) and median number of medications 9 (range: 3-20). The median PFFS was 0.29 and 0.27 for FI-CGA. There was a strong correlation between the PFFS and VES-13 ($r_{spearman}$=0.74, p<0.001) and a good correlation between the PFFS and FI-CGA ($r_{spearman}$ 0.70, p<0.001). The PFFS and FRAIL scale demonstrated a significant but weak correlation ($r_{spearman}$ 0.45, p=0.034) (Table 1).

Conclusions: In our preliminary results, PFFS was feasible and demonstrated good construct validity among older patients evaluated in a thoracic surgery clinic. We believe the PFFS is a novel tool that can overcome language and cultural barriers in patient-reported geriatric assessment. Future work will focus on implementation in geriatric-specific pathways and its predictive ability in surgical patients.

Table 1. Spearman's Correlation with Pictorial Fit Frail Scale (PFFS)

	Correlation with PFFS	p-value
VES-13	0.74	<0.001
FI-CGA	0.70	<0.001
FRAIL	0.45	0.034

A354

Vascular Burden Impact Across Neurodegenerative Diseases

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Background: Neurodegenerative diseases severely impair mobility, cognition brain health. However, it is unclear whether and how the individual's vascular burden is associated with neurodegenerative diseases and their deleterious conditions. We hypothesized that vascular risk burden would be prevalent in neurodegenerative diseases and associated with worsened global conditions. We also assessed potential mediation and moderation roles of the APOE4 allele carrier in this association. **Methods:** A total of 576 individuals from the Ontario Neurodegenerative Disease Research Initiative (ONDRI) and the Gait and Brain Study were assessed for clinical, neuropsychological, genetic, gait and neuroimaging using standardized protocols. The vascular risk index score (VRI) was a sum of five diagnosed risk factors: hypertension, diabetes, dyslipidemia, obesity and smoking history; and calculated for six clinical groups: Alzheimer's disease/amnestic mild cognitive impairment(ADMCI), Amyotrophic lateral sclerosis(ALS), Frontotemporal dementia(FTD), Parkinson's disease(PD), Cerebrovascular disease(CVD) and healthy older persons (Controls). Multinomial logistic regression models adjusted for age, sex, years of education investigated associations between the VRI, APOE4 and each neurodegenerative disease. Multivariate models tested associations between VRI as well as individual risk factors with mobility, cognition and white matter hyperintensities volumes. **Results:** Higher vascular burden and APOE4 allele were more prevalent in all diseases compared with controls. VRI was significantly and exclusively associated with worse mobility in FTD and CVD. Some individual vascular risk factors and their interactions were inconsistently associated with low cognitive performance and with larger WMHs volumes across ADMCI, PD and CVD. **Conclusions:** The deleterious impact of neurodegenerative conditions on mobility and dementia risk may be aggravated by the vascular burden with some modifiable vascular risk factors being more important than others. Cause-effect of these associations remain to be determined.

A355

Implementing a Fracture Liaison Service for Osteoporosis Treatment

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Background:

Osteoporotic fractures remain a significant cause of morbidity and mortality in the geriatric patient population. Yearly estimated costs of osteoporotic-related fractures are upwards of $20 billion, yet osteoporosis treatment rates do not improve. One major barrier to treatment after a fragility fracture, including at our own institution, is related to transitions of patient care post hospitalization with a lack of medication initiation after discharge from the hospital. Treatment of women with an osteoporotic fracture is included in the Center for Medicare Services quality improvement measures in an effort to improve population health. This project will implement a Fracture Liaison Service, which is a secondary fragility fracture prevention multidisciplinary team. We have seen in previous studies that this type of service can prevent new fractures in the at-risk population and lower the mortality rate. [i] [ii]

Methods:

After investigating by a review of our EHR, there are a significantly low number of patients treated for osteoporosis after hospital discharge. After chart review of 100 patients discharged from our hospital just 15 were started on treatment. A team of multidisciplinary and multi-specialty healthcare professionals will close this treatment gap by implementing a system to enforce treatment and patient education before discharge from the hospital and during a follow up visit outpatient.

Results:

We anticipate that implementing a treatment plan during the hospitalization or soon after discharge, will address the common problem regarding the lack of treatment and detect the best time during transitions of care to make an impact. Data will be represented showing the difference in osteoporosis treatment before and after our intervention.

Conclusion:

A Fracture Liaison Service institutes secondary preventative care and lowers mortality rates. We have seen from other studies that it can be done and we would like to implement this in our institution. We also recognize that treating osteoporosis works, benefiting the patient and healthcare system, yet the lack of treatment remains. We plan to achieve treatment as our primary outcome and detect the best time during transitions of care to make an impact to close the gap for lack of treatment.

References:

Orthogeriatrics: The Management of Older Patients with Fragility Fractures

[i] (2011) Osteoporos Int 22(7):2083–2098

[ii] (2016) Value Health 19:A347–A766

A356

Cognitive and physical function in adults 60 years and older prior to hematopoietic cell transplantation.

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Background: Prior to hematopoietic cell transplantation (HCT), older patients often experience significant physical deconditioning and cognitive impairment. Cognitive function is associated with physical performance measures and predicts both disability and future dementia in older people in the non-cancer population, but the relationship between cognitive and physical function in this patient population is unknown. The objective of this study is to examine the relationship between cognitive and physical function in older adults prior to HCT.

Methods: Cognitive impairment was defined as a Montreal Cognitive Assessment (MoCA) score <26. Physical function impairment was defined as a Short Physical Performance Battery (SPPB) score of <10. Pearson correlation was used to examine the relationship between global cognitive function and three domains of cognitive function measured by the MoCA, and physical function.

Results: Fifty-six older adults were evaluated prior to HCT at two transplant centers. All patients had received chemotherapy. The median age was 66 (range: 60-74; SD= 4). Over 50% of older adults had cognitive impairment (mean MoCA score of 25.1; SD= 3), 39% had impaired physical function (mean SPPB score of 9.4; SD of 2.4), and 29% of older adults had both. Higher global cognitive function and memory ability were correlated with higher SPPB score (*r =.37, p-value .005* and *r = .30, p-value .027*, respectively). Higher visuospatial and executive function showed only a trend for higher SPPB score (*r = .22, p-value .097*).

Conclusions: Our findings emphasize the need to screen for cognitive impairment and impaired physical function in this population. Cognitive dysfunction may affect functional ability and increase risk of further cognitive decline following HCT. Patients who have cognitive and physical function impairment may be at higher risk for poor functional outcomes because these factors contribute to their underlying frailty. In order to identify populations at high risk for poor functional outcomes, future studies should examine the trajectory of cognitive and physical function in patients who experience both impairments at baseline compared to those who experience isolated cognitive or physical function impairment.

A357

Assessing the impact of Comprehensive Geriatric Assessment directed interventions in Asian Geriatric Oncology patients

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Background:

There are limited studies investigating the use of the CGA in the geriatric oncology population in Singapore. Most oncologists are not familiar with of the use of the comprehensive geriatric assessment (CGA) in guiding cancer care in older cancer patients.

A Geriatric Oncology service was piloted in the National University Cancer Institute, Singapore (NCIS), with CGA done in the elderly patients and multidimensional interventions tailored to improve the outcomes in these patients.

Methods:

All patients seen in the NCIS outpatient clinic aged ≥ 70 were accrued in our study. They received a CGA and EORTC QLQ 30 QOL survey at accrual and 3 months later. A geriatric oncology multidisciplinary team then recommended interventions for the patients based on the initial CGA findings. The study endpoints were i) the presence of issues of concern identified on the CGA not identified by the primary oncologists. ii) Improvement in the patient's QOL for patients provided with tailored multidimensional interventions.

Results:

A total of 230 patients were recruited over a period of 18 months. Of which, 60% of the patients (n=138) had issues of concern requiring at least one intervention after the CGA that were not identified by their primary oncologist. The use of assistive device (p=0.044), need for financial assistance (p<0.001), time up and go >12s (p=0.048), mini cog <4 (p<0.001), social support < 11 (p<0.001) and weight loss > 10% (p<0.001) were associated with a need for intervention. There was a significant improvement after the CGA tailored interventions in the following EORTC QLQ C30 domains: Emotional functioning (OR 3.94; 95% CI 1.83 - 6.05; p <0.001), Social functioning (OR 12.17; 95% CI 5.45 - 18.89; p <0.001), and symptoms of insomnia (OR -9.05; 95% CI -14.12 - -3.98; p <0.001) and constipation (OR -11.30, 95% CI -16.15 - -6.45; p <0.001)

Conclusion:

Early identification and tailored interventions in this group has shown to benefit and improve various domains of the patients' QOL while they are undergoing cancer treatment. CGA is a vital tool in identifying gaps in care and optimizing patients for cancer treatment.

A358

Association Between the Use of Strong Anticholinergic Medications and Congestive Heart Failure in Older Veterans

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Background: Anticholinergic medications are widely prescribed to older adults. Research has shown that these medications may cause physical and cognitive impairment in older adults. Anticholinergics harmful cardiovascular effects include pro-arrhythmic (tachycardia), and pro-ischemic events (coronary ischemia and myocardial infarction), which may lead to congestive heart failure (CHF) and cardiac death in susceptible older adults. This study aim was to determine the cross-sectional association between the use of strong anticholinergic medications and congestive heart failure in older Veterans.

Methods: Retrospective cohort study of community dwelling Veterans aged 65 years and older who had a primary care visit at the Miami VA Medical Center between October 2018 and September 2019. Use of strong anticholinergic medications according to the anticholinergic burden scale (ACB3), ICD diagnostic codes for CHF, and relevant socio-demographic and clinical information were obtained from the VA electronic health records database. Odds ratios and 95% confidence intervals were calculated using binomial logistic regression models with anticholinergic medications as the independent variable and CHF as the dependent variable, with adjustment for age, gender, race, ethnicity, and frailty as covariates.

Results: A total of 21,105 Veterans were included in the analysis, mean age 68.84 (SD=10.73) years, 95.60% male, 63.26% Caucasian, 80.62% non-Hispanic, 2,160 (10.23%) had a diagnosis of CHF, 5,415 (25.65%) were frail, and 7,171 (33.97%) had used a strong anticholinergic medication. Use of strong anticholinergics medications was associated with CHF, OR:1.352 (95% CI 1.227-1.489), p=.0001.

Conclusion: Our study showed a cross-sectional association between a diagnosis of CHF and strong anticholinergic medication use. Further longitudinal studies may be warranted to determine the association between the baseline use of strong anticholinergic medications and the development of CHF and whether deprescribing anticholinergics may prevent the onset of CHF.

A359

Recognizing Oropharyngeal Dysphagia as a Marker of Frailty in the Emergency Department.

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Background

Early recognition of dysphagia in frail, older adults reduces high risk eating or drinking and related complications. Despite this, swallow screening in frail and older adults is not routinely performed in the Emergency Department. We sought to identify the prevalence of oropharyngeal dysphagia in frail, older adults presenting to ED.

Methods

Patients aged over 75 years undergoing comprehensive geriatric assessment (CGA) in ED, over a 5 day period, were included. A dysphagia assessment and swallow screen was performed by a registered speech and language therapist (SLT) using a novel, non-invasive screening tool based on components of other validated screening tools. This evaluation consisted of a 3 step process;

1. Identification of risk factors.
2. Specific clinical indicators.
3. Water swallow test.

Data including patient demographics, Clinical Frailty Scale (CFS) score, and outcome measures such as hospital admission rates and length of stay were collected.

Results

Dysphagia assessment was completed for 33 patients. Mean age was 83 years. Median CFS score was 5, indicating mild frailty. Evidence of oropharyngeal dysphagia was detected in 39% (n=13) of patients using our screening tool. Hospital admission was more common in patients with dysphagia (76.9% vs. 40%). The median length of stay (LOS) for patients with dysphagia was longer (1 vs 14 days). All patients with dysphagia required further SLT input during admission.

Conclusions

Our findings highlight a high prevalence of dysphagia in frail and older adults presenting to ED. Patients with dysphagia are more likely to have adverse outcomes, with higher rates of hospitalisation and substantially longer median LOS. Early identification through screening of older and frail adults is critical to allow early intervention and optimize outcomes. This also emphasizes the importance of the development of a validated swallow screening tool for patients with frailty.

The spectrum of frailty presentations continues to evolve and it is imperative that we recognise the concept of oropharyngeal dysphagia or 'oral frailty' as an aging syndrome.

A360

A retrospective study of the prevalence of anticholinergic poly-pharmacy use and its associated outcomes among Medicare patients with overactive bladder

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Background: Antimuscarinics, drugs with anticholinergic properties, are the most prescribed pharmacotherapy for overactive bladder (OAB). Increasing anticholinergic (ACH) burden is associated with adverse events, especially among older adults. Recently, the "Polypharmacy: use of multiple anticholinergic medications in older adults" (Poly-ACH) was developed by the Pharmacy Quality Alliance to quantify ACH burden and adopted by the Centers for Medicare and Medicaid Services for Medicare Part D reporting efforts. Poly-ACH has not been studied among patients with OAB. The objectives were to: 1) assess the prevalence of Poly-ACH among Medicare patients with OAB, and 2) determine associations between Poly-ACH and medical conditions, care, and spending.

Methods: This was a retrospective cohort study of older adults with OAB with Medicare coverage during 2006–2017. Poly-ACH was defined as concurrent use for ≥30 cumulative days of ≥2 unique anticholinergics, each with ≥2 prescription claims on different dates. Logistic regression was used to assess change in the annual frequency of Poly-ACH. Dynamic panel regression models were used to assess associations between Poly-ACH over three years and outcomes, including falls, fractures, altered mental status, and total medical care spending.

Results: N=226,712 patients contributed 940,201 person-years of follow-up subsequent to OAB diagnosis. The adjusted share of patients meeting the Poly-ACH definition was 3.3% in 2006 and 1.7% in 2017. Women and those in nursing homes had higher risks of Poly-ACH. Having year of Poly-ACH in the prior three years was associated with higher rates of all outcomes (Table 1).

Conclusions: Poly-ACH was uncommon in older adults with OAB; prevalence was higher among certain groups. Poly-ACH was associated with subsequent negative outcomes, drawing attention to the longitudinal implications of ACB.

Differences in the annual rates of outcomes and medical spending by Poly-ACH (N=105,608; 405,343 person-years)

	1+ years Poly-ACH	0 years Poly-ACH	Difference	95% Confidence Interval
Any fall	4.8%	3.8%	1.0%	(0.7, 1.3)
Any fracture	4.2%	3.7%	0.4%	(0.2, 0.7)
Any altered mental status	3.4%	2.6%	0.8%	(0.5, 1.0)
Annual Medical Care Spending (2017 USD)	$9,762	$8,645	$1,116	($667, $1,556)

A361

The association between mental health and technology use: Results from the Canadian Community Health Survey

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Background: The past few decades have seen a large shift with the digital divide between younger and older individuals quickly closing. Technology use has been associated with inactivity, lower life satisfaction, higher BMI, and mental health. However, within the Canadian population, more information is still required about high technology use and its effect on mental health in older adults. The objective of this study is to examine whether high technology use is associated with mental health disorders and indicators.

Methods: The Canadian Community Health Survey (CCHS) 2015-2016 was utilized for this study, with a total of 44, 807 participants being included after applying the inclusion criteria. Participants were categorized according to the following age groups: total population (18 years of age or older), younger adults (18-64 years of age), as well as older adults (65 years of age or older), and additionally further sub-categorized into low technology users (<14 hours) and high technology users (≥14 hours). Mental health disorders and indicators that were included were mood disorder, anxiety disorder, people to help, emotional wellbeing, mental health professional, and suicidality.

Results: A higher prevalence of mental health disorders and other mental health indicators in high technology users was found in the total population and younger adults. Some mental health indications (i.e. mental health professional and suicidality) were positively associated with high technology use in the total population and the younger adult population. Furthermore, mood and anxiety disorders were positively associated with high technology use in all age groups.

Conclusions: In conclusion there is an association between mental health disorders and high technology use in both younger and older adults. Moreover, there is an association between other mental health indicators and high technology use in younger adults and the total population.

A362

Cost and resource utilization in frail patients with overactive bladder treated with mirabegron or an antimuscarinic

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Background: Population-based data on frail older adults with overactive bladder (OAB) who take antimuscarinics (AM) or mirabegron (MIRA) are lacking. The objectives of this study were to compare costs, healthcare resource use (HCRU), treatment persistence and adherence in frail patients with OAB who initiated treatment with either AM or MIRA.

Methods: We identified patients in the MarketScan Medicare Supplemental database aged ≥65 years with ≥1 MIRA or AM dispensation between October 2016 – September 2018, with ≥1 year pre- and ≥1 month post-index continuous enrollment, and a Claims-based Frailty Index (CFI) score ≥0.25 in the 1-year pre-index period. Propensity score matched MIRA and AM groups were followed up to 1 year and compared for median per patient per month (PPPM) costs, HCRU (encounters), persistence and adherence. Persistence was estimated as time to discontinuation (>30 days without a refill) using Kaplan Meier methods. We estimated adherence as proportion of days covered (PDC) through 365 days.

Results: Among 11,140 frail patients with OAB, 516 patients initiating MIRA (64.3% female, mean [SD] age: 81.3 [7.3] years, CFI≥0.35: 21.7%) were matched to 1,032 initiating AM (61.8% female, mean [SD] age: 80.5 [7.9] years, CFI≥0.35: 22.9%). Median differences between the matched pairs were higher for MIRA versus AM (Table 1). Median (Q1, Q3) persistence was 103 (30, 360) days for MIRA and 90 (30, 326) days for AM. Median (Q1, Q3) PDC was 65% (25%, 94%) for MIRA and 51% (17%, 92%) for AM.

Conclusions: Frail patients with OAB treated with MIRA showed higher costs, largely for prescriptions, and similar HCRU compared to AM initiators. MIRA users showed potentially better prescription-taking behavior.

All-cause healthcare resource use and costs over the follow-up period for matched patients initiating MIRA or AM treatment

	Median PPPM healthcare costs			Median PPPM resource use		
	MIRA (n=516)	AM (n = 1,032)	Median Difference (MIRA-AM), (95%CI)	MIRA (n=516)	AM (n = 1,032)	Median Difference (MIRA-AM), (95%CI)
Overall	$1,581	$1,197	$308 ($178 - $470)			
Inpatient visits	$0	$0	$0 ($0 - $0)	0	0	0 (0 - 0)
Outpatient visits	$549	$498	$25 ($-24 - $68)	3	3	0 (0 - 0.5)
Prescription claims	$536	$255	$218 ($169 - $263)	5	5	0.25 (0 - 0.5)

Abbreviations: AM: antimuscarinics, CI: confidence interval; MIRA: mirabegron; PPPM: per patient per month.

A363

Association of Operative Stress on Long-Term Function

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Background: Postoperative functional status is an important patient-centered outcome among older adults. However, surgeries vary in levels of physiological stress and few studies have examined the predictors of functional decline/recovery across these levels. This study aims to describe the long-term functional outcomes after surgeries encompassing varying operative stress scores (OSS). We also examined the functional, cognitive, and psychological risk factors associated with long-term functional outcomes.

Methods: A cohort study was conducted using the Health and Retirement Study (HRS) from 1995-2016. We identified subjects who were ≥65 years old at the time of having a non-cardiac surgical procedure using linked Medicare claims. These surgeries ranged in OSS from 1-5. Using data from the interview preceding the surgery and the first interview ≥ 6 months after the surgery, we determined the proportions of patients who had a functional decline in activities of daily living (ADL), independent activities of daily living (IADL), or regained independence.

Results: A total of 9739 HRS subjects ≥ 65 years of age were identified. 80.58% had a low stress surgery as characterized by OSS (1-2), 16.45% had a moderate stress surgery (3) and 2.97% had a high stress surgery (4-5). The proportion of those who experienced a decline in ADL function were 23.17%, 36.58%, 35.64% for low, moderate, and high stress surgeries. The proportion of those who experienced a decline in IADL function were 25.34%, 35.27%, 36.68% for low, moderate, and high stress surgeries. Among those in the low OSS strata, the probabilities of regaining ADL/IADL independence were especially low for those who were ≥ 85 years old (5.50% for ADL, 10.00% for IADL), cognitively impaired (6.65% for ADL, 9.75% for IADL), depressed (8.31% for ADL, 22.27% for IADL), or had higher comorbidity burden (11.19% for ADL, 14.55% for IADL).

Conclusions: Declines in long-term function were observed across OSS levels. The rates of regaining functional independence were low and worse for patients who were older, had multiple comorbidities, depressed, or cognitively impaired, even among those who had the least stressful surgeries. Preoperative assessment of functional, cognitive, and psychological risk factors should be implemented for all surgeries for older adults to further enhance shared decision making and risk stratification.

A364

Cognitive Impairment in Older Adults with Peripheral Arterial Disease

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Background:

Peripheral arterial disease(PAD) is common among older adults and is a risk factor for vascular dementia, yet there remains a paucity of data about cognitive impairment(CI) prevalence in PAD. This study's aim was to estimate CI prevalence in adults with PAD and identify independent risk factors.

Methods:

The U.S. Health and Retirement Study dataset with Medicare Linkage and CI assessment was used for years 2000-2015. PAD was identified using ICD/CPT codes. CI was defined using the Langa-Weir classification and CI assessment within 2.5 years prior to PAD diagnosis. Bivariate analysis for CI was performed appropriate to the data followed by multivariable logistic regression for CI.

Results:

Overall, 4,266 cases were included and 39% had CI. Mean age was 74.8(SD 9) with 53% female, 74% white, and mean Charlson score 3.0(SD 2.1). On multivariable analysis major risk factors included education<high school(OR 5.7, 95% CI:4.5-7.2), Black (OR:3.3, 95% CI: 2.7-4.1) and Hispanic ethnicity (OR 3.3 95% CI:2.5-4.4)(Table).

Conclusion:

CI is common in adults living with PAD and is associated with age, ethnicity, education and diabetes. This data can be used to risk stratify patients for CI screening. Future study should evaluate how CI may impact care and outcomes in PAD.

Multivariable Analysis for CI

Variable	OR (95% CI)
Age (continuous per 10 years)	2.21 (2.02, 2.41)
Race	Ref: white
Non-Hispanic Black or African American	3.34 (2.74, 4.07)
Non-Hispanic Other	2.51 (1.57, 4.00)
Hispanic	3.34 (2.54, 4.39)
Education	Ref> High School
High school	1.80 (1.43, 2.25)
	5.70 (4.53, 7.17)
Diabetes	Reference: None
Diabetes	1.22 (1.02, 1.45)
Diabetes with sequelae	1.33 (1.02, 1.73)

Adjusted for Charlson score and comorbidities

A365

Correlation between Charlson comorbidity index and COVID-19 illness outcomes in geriatrics population.

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Background and objective: Charlson comorbidity index (CCI) is a simple tool that has been widely used in measuring the impact of comorbid conditions on the risk for mortality. Our objective was to assess the accuracy of the CCI in predicting mortality and adverse outcomes in geriatric patients with COVID-19.

Methodology: All geriatric's adults age ≥ 65 years who were admitted for COVID-19 between March 2020 till July 2020 were enrolled. Patients were divided into terciles based on CCI into low, medium and high score based on 1st, 2nd and third terciles respectively. The primary outcome was all-cause in hospital mortality. Categorical variables were compared using Pearson's chi-square ($\chi 2$) test and presented as percentages. Continuous variables are expressed as medians with interquartile ranges and compared using Wilcoxon Rank Sum Test. logistic regression with adjustment for age, gender, and race were used to identify CCI related risk for study outcomes.

Results: A total of 657 patients were enrolled. Median age was 74 (Interquartile range 69-81). Majority where of African American race (77.6%) and both genders were equally represented. The median CCI was 5 (IQR: 4-6). The most prevalent chronic conditions included Hypertension (85.1%), Diabetes Mellitus (40.6%), coronary artery disease (23.1%), chronic obstructive lung disease (22.5%) and dementia (21.4%). CCI has a significant correlation with increased risk for mortality 35.7%, 49.0% and 58.3% for patients with low, moderate and high CCI respectively. CCI had no significant association with risk for ICU admission or use of mechanical ventilation. ROC curve analysis for association of CCI with mortality shows an area under the curve (AUC) = 0.61. Following adjustment for age, gender and race, Stepwise increases in CCI correlated with increased risk for mortality odd ratio: 1.13 (95% confidence interval: 1.05-1.22), $p< 0.001$ but no correlation with risk for ICU admission or use of mechanical ventilation.

Conclusion: CCI can be useful, easy to calculate tool for prediction of COVID-19 mortality in geriatric population. However, the score lacks accuracy and fail to identify patients who need admission to ICU or need of mechanical ventilation.

A366

Behaviors of older adults and caregivers preparing for elective surgery: What do they do, why do they do it, and what helps?

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Introduction: Older adults are pursuing increasingly complex elective surgeries; and, are at higher risk for postoperative complications. Patients and caregivers frequently struggle with postoperative management, which may contribute to complications. We aim to identify opportunities to intervene during the preoperative period to improve postoperative outcomes by understanding the preparatory behaviors of older adults and their caregivers before a complex elective surgery.

Methods: Beginning July 1, 2020, we conducted semi-structured qualitative interviews of 10 patient-caregiver dyads before and 3 weeks after an elective colorectal surgery at a large university hospital. Preoperative interviews focused on identifying preparatory behaviors and the motivators for these behaviors. Postoperative interviews focused on the benefit of their preparations. Patients and caregivers were interviewed independently utilizing videoconferencing. Three independent researchers iteratively coded transcribed interviews and conducted thematic analysis.

Results: Preliminary data indicates that patient preparations focus on physical exercise, stress management, and household organization. Caregiver preparations include arrangements to be at bedside, learning about the surgery, and identifying additional caregiving support. Some caregivers do not prepare for their caregiving role and rely on patients to relay information. Motivators for preparations common to both include surgical team recommendations, prior surgical experiences, and the perceived complexity of the surgery. Patients also desire to lessen the postoperative caregiving tasks. All preoperative preparations were perceived as beneficial. Patients cite caregiver engagement during the preoperative period and caregivers cite arranging for additional caregiving support as the most beneficial.

Conclusion: There is wide variability in caregiver preparations, which directly affects the patient's postoperative experience. Interventions to better prepare and support caregivers for their caregiving role may improve postoperative outcomes.

A367

Correlation between initial chest X-ray findings and COVID-19 disease severity in geriatric populations. A tertiary center experience.

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Background and objective: We sought to analyze the clinical and radiological features of all geriatric patients diagnosed with COVID-19 infection and identify the radiographic patterns that correlate with critical hospitalization course.

Methodology: A retrospective chart review of all geriatric's adults age ≥ 65 years who were hospitalized for SARS-CoV-2 infection at a tertiary level hospital in Detroit city during the initial pandemic phase from March 2020 till July 2020 were enrolled. The primary goal was to identify the radiology patterns on initial chest X-ray that correlate with critical hospitalization course. Critical hospitalization course was defined based on the presence of either mortality, need for mechanical ventilation or intensive care unit (ICU) admission. Categorical variables were compared using Pearson's chi-square ($\chi 2$) test and presented as percentages.

Results: A total of 681 patients were included (354 with critical course and 327 with non-critical course). The median age was 74 (Interquartile range 69-81), 50.1% of patients were females. The majority were of African American race 77.4% followed by Caucasians 7.0%. Overall, 45.1% of total patients died during hospitalization, 32.4% were hospitalized in the ICU and 17.0% required the use of mechanical ventilation. Overall, 75.6% of CXR had bilateral findings. The most frequent acute CXR findings were Airspace opacities (28.0%), Multifocal Pneumonia (17.3%), Nonspecific infiltrate (15.6%), Atelectasis (15.1%) and Interstitial Opacities (11.5%). A total of 7.6% of CXR of patients with critical course were normal compared to 12.2% in patients with non-critical course, p=0.044. Compared to those with non-Critical course, patients with critical course had higher prevalence of multifocal pneumonia 21.8% vs 12.5%, p=0.002, pleural effusion 9.6% vs 4.0%, p= 0.004, consolidation 5.6% vs 1.5%, p= 0.004 and features of congestive heart failure 2.0% vs 0.3%, p= 0.043.

Conclusion: Despite the limited sensitivity of CXR in predicting adverse hospitalization course, a specific radiological pattern including presence of multifocal pneumonia, consolidation, and congestive heart failure changes can help in early predicting patients with higher risk for adverse hospitalization outcomes

A368

Screening the Occupational Therapy Needs of Older Adults during an Emergency Department Visit

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Background: Occupational therapy (OT) is a profession that is well-suited to address the functional needs of older adults, but there are few tools to assist emergency department (ED) physicians in deciding which patients are most appropriate for OT services. The purpose of this study was to examine the feasibility and utility of two tools that can be implemented to screen the functional needs of patients in the ED setting: the Barthel Index (BI, 10 questions) and the Modified Blaylock Tool for Occupational Therapy Referral (MBTOTR, 23 questions).

Methods: We used a cross-sectional approach to administer the BI and MBTOTR with a convenience sample of older adults who presented to the ED at a large academic medical center. The BI is a 100-point self-report scale that examines functional independence in 10 daily activities (e.g., toileting, ambulation). Higher BI scores indicate greater independence. The MBTOTR is a scale that is used to identify patients at risk of decline in 11 functional areas (e.g., cognition). BI scores of ≥80 indicate minimal-to-no functional impairment (i.e., no OT services needed). MBTOTR scores of ≥10 indicate the need for OT services post-discharge to address functional independence concerns. We used descriptive statistics and correlational analyses to compare the extent to which the BI and MBTOTR identified older patients' risk of functional decline and need for home- or community-based OT services.

Results: Of 128 patients approached, 76 agreed to complete the BI and MBTOTR. The average patient age was 71.2 years (SD = 8.0), and non-specific pain (18.4%) was the most common complaint upon ED arrival. Average BI and MBTOTR scores were 89.2 (SD = 17.3) and 12.7 (SD = 7.9) respectively. BI scores were inversely correlated with MBTOTR scores (r = -.79, p <.001). Fifty-four percent of patients were identified as having OT needs per the MBTOTR compared to 25% of patients per the BI.

Conclusions: A large portion of older adults in the ED have unrecognized OT needs. While both the BI and MBTOTR can be feasibly implemented in the ED setting, the MBTOTR appears to be more sensitive to identifying functional impairments in older ED patients than the BI. This study serves as a first step towards identifying quick tools that can examine the functional needs of older patients who present to the ED and can benefit from OT services in the home and/or community.

A369

Correlation between FRAX UK with and without Bone Mineral Density (BMD) in predicting the 10-year fracture risk

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Introduction:

Bone mineral density (BMD) has long been recognized as a diagnostic tool for osteoporosis. It has also been known to predict fracture risk in a similar way to how hypertension predicts risk of stroke. Incorporation of clinical risk factors in fracture risk assessment tool (FRAX) has allowed 10 year risk prediction of major osteoporotic and hip fractures.

Aims:

To determine if there is correlation between FRAX UK with and without BMD in predicting the 10-year fracture risk and to assess the impact of gender and age

Methods:

A retrospective cross-sectional study of patients with previous fragility fractures attending a Fracture Prevention Clinic in a 16 months period was carried out. Patients were included if they were between 40 and 90 and had sustained a fragility fracture. Data was extracted from electronic records. SPSS 27 software was used with descriptive statistics, Pearson correlation and linear regression analysis.

Results:

198 patients were included; 172 females and 26 males. Mean age was 69.7 +/- 10 years. There was moderate but very significant correlation between FRAX with BMD and without BMD in predicting the10 year probability of major osteoporotic fracture (r=.57; p<.001) and also the 10 year probability of hip fracture (r=.54;p<.001). This persisted in females in predicting major osteoporotic fracture and hip fracture (r=.53;p<.001) and in males in predicting hip fracture (r=.48;p<.05) but not in predicting major osteoporotic fracture (r=.32;p=.11).

Correlation between FRAX with and without BMD remained significant regardless of age, in predicting major osteoporotic fracture in patients under 65 (r=.60;p<.001) and those 65 and over (r=.47;p<.001). This was also seen in predicting hip fracture in patients less than 65 years (r=.39; p<.01) and in those 65 and over (r=.50 p<.001).

Conclusions:

There was moderate and significant positive correlation between FRAX with and FRAX without BMD in patients with prior fragility fractures. This was not influenced by age but male gender failed to show significant correlation in major osteoporotic fracture 10-year risk prediction.

A370

Perioperative Optimization of Senior Health (POSH): Descriptive Analysis of Community-based Dissemination

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Background: Geriatrics surgical co-management is known to improve surgical outcomes for high-risk older adults. This analysis describes both patient and program features during expansion from a single-site academic hospital to a partnering community hospital within the same health system.

Methods: Retrospective chart review of the first 6 months of the new POSH program at Duke Raleigh Hospital was performed for patient characteristics in comparison to the standard **pre-admission testing (PAT)** clinic. Functional status, cognitive status, and high-risk medication use were assessed. The OARS questionnaire was used for evaluating physical activities of daily living (PADLs) and instrumental ADLs (IADLs). Cognitive screening was performed using the MoCA and medications were reconciled during visits to assess for potentially inappropriate medications per the Beers Criteria and anticholinergic burden scale (ACB).

Results: Patients referred to the POSH clinic were significantly older with the mean age of 75 years in comparison to 64 years for those seen in the usual PAT clinic. Eighty percent of POSH patients had some functional status deficit; 47% required assistance for at least one PADLs and 73% required assistance for at least one IADLs. Eighty-four percent of the patients had an abnormal MoCA score (<26 points). The POSH population had a high rate of Beers Criteria medication use: 65.2% utilized an opioid prescription; 44.6% a benzodiazepine prescription; 42.4% a gabapentin prescription; and 22.8% a muscle relaxant prescription.

Conclusions: Dissemination of an interdisciplinary program from a large academic hospital to a community hospital is feasible and geriatricians can play a role in perioperative medicine, serving the older, at-risk population. The data demonstrate appropriateness of patient referrals for POSH clinic, including older adults with functional impairment, concern for cognitive impairment, and polypharmacy, all of which place patients at higher risk for delirium, functional decline, and potentially poor outcomes in the perioperative setting. The medication burden suggests significant opportunity for risk reduction via deprescribing. There are opportunities to improve education regarding geriatric syndromes across surgical subspecialties that could subsequently increase the appropriateness of patient referrals.

A371

Urinary Incontinence and Hip Muscle Strength in Older Women

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Background: Urinary incontinence (UI), osteoporosis, and falls are prevalent among older women. This study aims to compare bone mass, bone quality, and muscle strength (hip and pelvic floor) in postmenopausal women with and without UI.

Methods: Women ≥55 years undergoing osteoporosis screening were recruited from 6/2018 to 6/2020. UI was defined as having 1) at least moderate UI (scores ≥3 on a validated UI severity index), 2) positive cough stress test, or 3) history of UI treatments. Bone mass and quality were assessed by bone mineral density and trabecular bone score, respectively. Maximum hip muscle and pelvic floor muscle strength were assessed using a hand-held dynamometer and a perineometer, respectively. The mean outcomes of 3 trials were analyzed. Hip muscle strength was compared using generalized linear models.

Results: Of 41 women, 18 had UI, 23 had no UI. No differences in characteristics were noted between groups; age (UI 67.9 ± 5.5 vs no UI 66.0 ± 4.5, p=0.24), White race (67% vs 44%, p=0.14), low bone mass (osteopenia/-porosis, 50% vs 40%, p=0.37) or low bone quality (56% vs 30%, p=0.11), as well as body mass index, comorbidities, estrogen use, vaginal delivery, or smoking (all p>0.05). There were no differences in pelvic floor muscle strength (UI 32.1 ± 18.6 cm/H_2O vs no UI 37.6 ± 22.4 cm/H_2O, p=0.25). Women with UI had lower hip flexion, abduction, adduction, external and internal rotation, compared to those with no UI controlling for age and race (Table), and additionally controlling for bone mass and quality (p<0.01).

Conclusion: Women with UI had significantly lower hip muscle strength. Targeting an increase in hip muscle strength with pelvic floor muscle strength may improve pelvic floor function. A combined hip and pelvic floor intervention may be warranted in older women with UI.

Hip Muscle Strength in Women With vs Without UI

	UI	No UI	Adjusted Difference (95% CI)*	p*
Flexion	43.9 (33.1, 54.6)	66.8 (57.3, 76.2)	22.9 (8.3, 37.5)	0.003
Extension	69.7 (57.0, 82.3)	73.7 (62.5, 84.8)	4.0 (-13.2, 21.2)	0.640
Abduction	43.6 (31.6, 55.6)	76.7 (66.1, 87.2)	33.1 (16.8, 49.3)	<0.001
Adduction	44.7 (33.1, 56.3)	79.1 (68.9, 89.4)	34.4 (18.6, 50.2)	<0.001
Internal Rotation	44.2 (32.5, 55.8)	66.9 (56.7, 77.2)	22.8 (7.0, 38.6)	0.006
External Rotation	49.1 (37.2, 61.1)	72.3 (61.8, 82.8)	23.1 (6.9, 39.4)	0.007

Strength unit: lbs force. *Via generalized linear models adjusting for age and race. Data shown of right hip (similar in left hip).

A372

Feasibility of measuring Frailty and Patient-Reported Outcomes after Post-Acute Skilled Nursing Facility Rehabilitation

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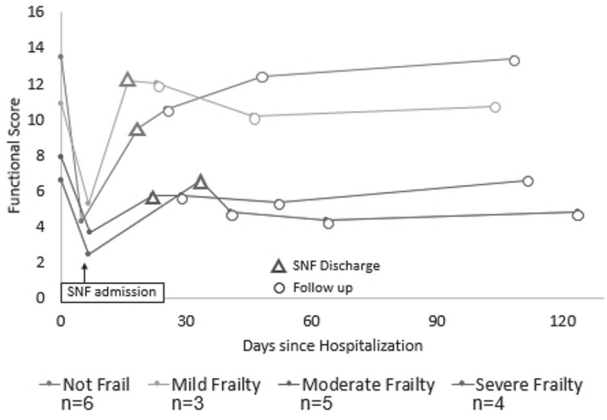
Background: Older adults prioritize functional status and quality of life, yet these are not routinely captured after discharge from post-acute care at skilled nursing facilities (SNF). Frailty may predict these outcomes.

Methods: This feasibility study enrolled 24 adults ≥65 years from a SNF after acute hospitalization. We conducted a comprehensive geriatric assessment and calculated a deficit-accumulation frailty index (range: 0-1; non-frail [≤0.25], mild frailty [0.26-0.35], moderate [0.36-0.45], and severe [>0.45]). After SNF discharge, we conducted telephone interviews at 7, 30, and 90 days to measure the ability to perform 15 daily activities and physical tasks without help (0-15, higher is better) and Patient Reported Outcome Measurement Information System (PROMIS) (standardized score with mean 50 and SD 10, higher is better).

Results: Mean age was 83.3 years (SD 8.0), and 17 (71.8%) were female. Frailty assessment was completed in all patients (mean administration time 32 minutes [SD 23]), with 17 (70.8%) moderate or severely frail. Over 90 days, 3 patients died, and 3 were lost to follow up. Post-discharge functional status varied by frailty [Figure], with those with moderate to severe frailty having persistent impairment. PROMIS scores were lower among those with moderate-to-severe frailty than those with no or mild frailty on SNF admission (35.9 [10.7] vs. 39.8 [7.2]) and 90 days post-discharge (38.2 [13.7] vs. 47.3 [8.1]).

Conclusions: Frailty and patient-reported outcome measurement are feasible during and after post-acute care. A larger study is needed to assess the utility of frailty assessment to predict low functional status after SNF discharge.



A373

The profile of patients with sequential bilateral osteoporotic hip fracture

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Background:

The aim of this study is to characterize patients with a prevalent hip fracture who develop a second contralateral osteoporotic hip fracture.

Methods:

Consecutive patients admitted with a second osteoporotic hip fracture over a 16-month period were identified and the hospital notes and electronic records were retrospectively analysed.

Results:

39 patients with a second hip fracture were identified. Full notes were available and analysed for 23 patients: 20 female and 3 male; mean age 83.5 and 79 years respectively. Mean duration between 1st and 2nd fractures was 38.3 months (range 3–160 months).

Proportion of patients admitted from own homes was 65%, residential home 17% and nursing home 9%. 22% were mobile unaided, 30% with a stick and 30% with a frame. Prior to admission 39% were independent, 35% partially dependent, and 26% were dependent. 81% of patients had at least one fall in the 6 months prior to admission. Co-existing conditions included: hypertension 48%, CVD, stroke or TIA 43%, AF 35%, dementia 45%, cancer 30%, osteoarthritis 26%, previous joint replacement 17%, rheumatoid arthritis 13%, depression 22%, IHD 17%, thromboembolic disease 13, DM 9%, hypothyroidism 9%, COPD 9%, CKD 9%, visual impairment 50%, hearing impairment 38%, and urinary incontinence 19%.

After the 1st hip fracture 57% and 63 % of patients were prescribed anti-resorptive and vit D respectively. On admission for the 2nd hip fracture Polypharmacy (> 4 drugs) was prevalent in 95% of patients. 57% were taking anti-hypertensive, 36% diuretics, 25% antidepressants, 9% antipsychotics, and 9% cholinesterase inhibitors. Mean AMT on admission was 5.8/10 and 35% of patients had extrapyramidal hypertonia.

The 2nd hip fracture postoperative complications included anaemia 80%, AKI 25%, delirium 14%, UTI 14%, chest infection 10%, TIA/Stroke 5% and DVT 5%. The mean length of stay was 18.9 days. Discharge destinations were: usual residence 59%, twenty-four hour care 27%, rehabilitation 14%and there was no inpatient mortality. The 5-year survival was 26% with mean survival of 18 months (range 1-56 months).

Conclusions:

In our study of patients admitted with a second contralateral osteoporotichip fracture, the majority were older women with much comorbidity and polypharmacy. The 5-year survival was 26% and the mean post 2nd hip fracture survival was 18 month.

A374

Prevalence of frailty in people living with HIV aged 50 or older: A systematic review and meta-analysis

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Background: Since the life expectancy of people living with HIV has dramatically improved, there is an emerging population of older people with HIV. Frailty is an increasingly recognized clinical state of vulnerability, associated with increased disability, hospitalization, and mortality. However, there is a paucity of studies assessing its prevalence in HIV infected elderly persons.

Methods: PubMed was systematically searched in October 2020 for studies published between January 2000 and September 2020 reporting prevalence of frailty in community-dwelling people living with HIV aged 50 or older. Two investigators screened the studies identified by the systematic review and extracted data for analysis. Pooled prevalence of frailty was synthesized using a random-effects meta-analysis.

Results: Of 425 studies identified, 26 studies were included in analysis with a total of 6,584 people aged 50 or older living with HIV. The included studies were published between 2012 and 2020 and all studies used the frailty phenotype to define frailty. Overall pooled prevalence of frailty and prefrailty was 10.9% (95% confidence interval [CI], 8.1-14.2%) and 47.2% (95% CI, 40.1-54.4%), respectively. High degree of heterogeneity was observed (I^2=93.2%). In subgroup analysis, HIV-related variables, such as current CD4 count, nadir CD4 count, proportion of undetected viral load, duration from HIV diagnosis, duration of HIV treatment, as well as other demographic variables were examined, and heterogeneity disappeared only in a group with longer duration from time of HIV diagnosis (I^2=0%).

Conclusions: This is a first systematic review and meta-analysis providing the pooled prevalence of frailty and prefrailty in older adults aged 50 or older living with HIV. The prevalence is comparable with 11% and 42% of general community-dwelling older adults aged 65 or older, reported in a previous systematic review. Our study suggests HIV is associated with an earlier onset of frailty. Earlier screening and intervention for frailty might be needed for HIV infected patients.

A375

Benzodiazepine receptor agonist deprescribing and nocturia in older adults with chronic insomnia

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Background: Current evidence supports deprescribing benzodiazepine receptor agonists (BZAs) and replacing BZAs with cognitive behavioral therapy for insomnia (CBTI) as first-line treatment for chronic insomnia. The potential for exacerbating nocturia symptoms during BZA deprescribing may be of concern to patients with nocturia, which often coexists with chronic insomnia disorder. We examined nocturia frequency in participants enrolled in an ongoing trial comparing two methods of BZA deprescribing.

Methods: Adults 55 years or older (N=24; mean age 69, SD=6 years) with chronic insomnia disorder and chronic BZA use were recruited from two clinical sites and randomized to a masked BZA taper + CBTI (& novel cognitive exercises) versus a traditional, unmasked BZA taper + CBTI. Self-reported nocturia frequency (0-5+/night over past month) was assessed at baseline and at 1-week and 6-months post-treatment and categorized as presence/absence of clinically-relevant nocturia (≥2 versus < 2 times/night). An exact McNemar's test for paired binomial data was used to examine changes in the proportion of participants with nocturia at -week and 6-months follow-up.

Results: Clinically-relevant nocturia was present in 50% (12/24) at baseline, 21% (5/22) 1- week post-treatment, and 25% (6/24) at 6-months post-treatment. BZA tapering + CBTI was associated with a clinically relevant but not statistically significant reduction in the proportion of participants with nocturia compared to baseline (1-week post-treatment p=.096; 6-months post-treatment p=.070).

Conclusion: BZA deprescribing in older adults who underwent CBTI did not increase the proportion of participants with clinically-relevant nocturia. Future analyses with larger sample sizes are needed to address whether deprescribing BZAs in conjunction with CBTI improves nocturia among older adults with chronic insomnia.

Support: R01AG057929, VA IIR 17-234

A376

Time to benefit of bisphosphonates for the prevention of fractures in postmenopausal women with osteoporosis: A meta-analysis

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Background: In older adults with limited life expectancy, the decision to start a medication needs to balance shorter-term harms and burdens with longer-term benefits that may takes months or years to be seen. This is particularly relevant for bisphosphonates in the treatment of osteoporosis that can be burdensome to take with rare but serious side effects and longer term benefits in reducing fracture risk. We therefore conducted a survival meta-analysis of randomized controlled trials (RCTs) of bisphosphonates to determine the time to benefit (TTB) for prevention of non-vertebral fractures in postmenopausal women with osteoporosis.

Methods: We identified RCTs of bisphosphonates from previously published systematic reviews performed by the Agency for Healthcare Research and Quality (2014), United States Preventive Services Task Force (2018), and Endocrine Society (2019). We included studies involving postmenopausal women with osteoporosis based on either an existing vertebral fracture or a bone mineral density T-score -2.5 or below. Our primary outcome was time to the first non-vertebral fracture. Secondary outcomes included time to the first clinical vertebral fracture and hip fracture. Given that ibandronate is generally not recommended as first-line treatment in societal guidelines, we focused on alendronate, risedronate, and zoledronic acid. To obtain the TTB for individual studies, we fit random effects Weibull survival curves to estimate the annual absolute risk reduction (ARR) for the control and intervention groups. The time to specific ARR thresholds was determined through Markov chain Monte Carlo methods.

Results: For the primary outcome of time to first non-vertebral fracture, we included five papers describing the results from eight RCTs. Results will be presented on the TTB in months to avoid one non-vertebral fracture for 100 persons receiving bisphosphonate therapy (ARR = 0.01). We will also present the TTB for different ARR thresholds and each of the secondary outcomes.

Conclusions: Our findings will help inform risk-benefit discussions for initiating bisphosphonate treatment among postmenopausal women with osteoporosis and limited life expectancy.

A377

Functional Status in Hospitalized Geriatric Patients with Sarcopenia

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Background: Geriatric patients with sarcopenia are at increased risk for functional decline with loss of independence in daily living. This cross-sectional study aimed to investigate the association of sarcopenia with different domains of functional status in hospitalized geriatric patients.

Methods: Sarcopenia was assessed at hospital admission using recommendations of the European Working Group on Sarcopenia in Older People 2 (EWGSOP2). Body impedance analysis (BIA) was performed to determine muscle mass, and a pneumatic hand dynamometer was used to assess muscle strength. The Functional Independence Measure (FIM) score, an 18-item tool exploring an individual's physical, cognitive and social functions and ranging from 18 to 126 points, was used to measure functional status.

Results: In 305 included patients with a median age of 84.0 years (65.6% female), prevalence of sarcopenia was 22.6%. The FIM score domains social cognition ($p = 0.003$), communication ($p = 0.003$) and locomotion ($p < 0.001$) were found to be lower in patients diagnosed with sarcopenia compared to non-sarcopenic patients. In contrast, no significant difference was found for the domains of self-care ($p = 0.106$), sphincter control ($p = 0.059$) and transfer ($p = 0.055$). When categorized into four groups according to total FIM score, patients diagnosed with sarcopenia were significantly more often represented in the lowest quartile than non-sarcopenic patients ($p = 0.049$), whereas significant more non-sarcopenic patients were found in the highest quartile compared to sarcopenic patients ($p = 0.013$).

Conclusions: In hospitalized geriatric patients, sarcopenia was found to be associated with cognitive and mobility domains, but not with self-care domains of the FIM score. Therefore, timely diagnosis of sarcopenia and early start of treatment might help to reduce cognitive decline and poor mobility.

A378

Inflammatory and Immune Gene Expression in Frail Patients with Severe Aortic Stenosis

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Background: Although frailty is a risk factor for adverse outcomes following transcatheter aortic valve replacement (TAVR), the pathophysiology of this risk remains unclear. Defined by increased pro-inflammatory and decreased innate antiviral gene expression, the conserved transcriptional response to adversity (CTRA) is a biomarker of psychosocial risk factors that may also relate to frailty. We explored the relationships between frailty and CTRA in TAVR.

Methods: In a cross-sectional study of 94 patients who underwent TAVR, CTRA gene expression and frailty were assessed at baseline. CTRA was measured in whole blood and calculated as a composite score of 19 pro-inflammatory and 34 innate immune system indicator genes. Columbia Frailty Score (CFS) was a composite score of activities of daily living (ADL), gait speed, grip strength, and serum albumin. Unadjusted analyses included linear regression, Student's t-tests, and ANOVA.

Results: Composite CFS correlated with CTRA (r^2=0.13, p<0.01). Patients with slower gait speed and ADL dependence had higher CTRA scores (p<0.01, p=0.01, respectively). Albumin and grip strength did not show a significant association with CTRA.

Conclusion: Frailty in TAVR patients is associated with increased inflammatory and decreased innate antiviral gene expression (CTRA), providing insight into physiologic dysfunction contributing to increased procedural risk.

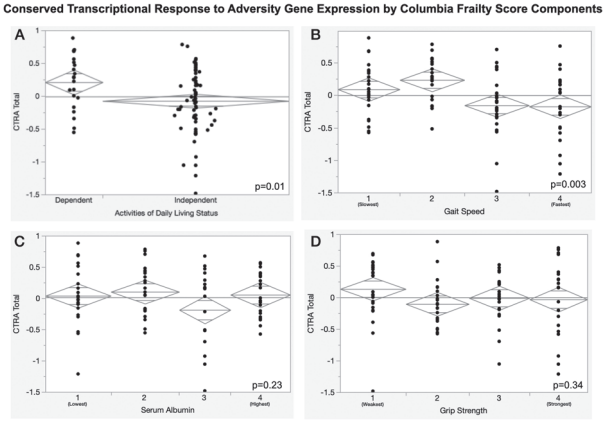

Figure 1. Conserved Transcriptional Response to Adversity Gene (CTRA) expression as seen in individual components of the Columbia Frailty Score: activities of daily living (ADLs), gait speed, serum albumin, and grip strength.
A) CTRA expression by ADL capability. ADLs were dichotomized into functionally dependent in at least one ADL versus independent. Individuals who were functionally independent had significantly lower CTRA expression (p=0.01).
B) CTRA expression by gait speed. Gait speed was stratified by quartile 1 (slowest) to 4 (fastest). Individuals with faster gait speed had significantly lower CTRA expression (p=0.003).
C) CTRA expression by serum albumin. Albumin was stratified by quartile 1 (lowest) to 4 (highest). No significant difference in CTRA expression by albumin level was found.
D) CTRA expression by grip strength. Grip strength was stratified by quartile 1 (weakest) to 4 (strongest). No significant difference in CTRA expression by grip strength was found.

A379

The Impact of Specialized Diets on the Need for Appetite Stimulant Pharmacotherapy in Long-term Care

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Background

Between 15-20% of older adults experience unintentional weight loss increasing rates of morbidity and mortality. In frail elders, even minimal amounts of weight loss can have negative consequences. Older adults in the long-term care (LTC) setting are monitored closely for weight loss, and frequently placed on medications to assist with weight gain. Although there is limited data in older adults, medications targeting the treatment of weight loss, such as megestrol and mirtazapine, enjoy off-label use for this indication within LTC. The use of liquid nutritional supplements is also quite common. However, the use of special diets (e.g., no-concentrated sweets, no added salt) may contribute to decreased palatability of food, and thus decrease food intake. Guidelines (e.g., American Diabetes Association) support liberalizing or removing special diets to ensure older adults maintain a healthy diet. Other disease states and medications can contribute to weight loss in the older adult patient population, including dementia and cholinesterase inhibitors. Even the number and volume of dosage forms can contribute to a feeling of satiety and reduce meal consumption. Therefore, our primary objective was to determine the prevalence of the use of special diets in LTC residents also receiving appetite stimulant medications, and impact on weight. Secondarily, we sought to evaluate the prevalence of liquid nutritional supplements and the number of concomitant scheduled medications individuals receiving appetite stimulant pharmacotherapy are using. Finally, we wished to determine the prevalence of the use of cholinesterase inhibitors and the diagnosis of dementia in those receiving appetite stimulant pharmacotherapy.

Methods

We employed a cross-sectional descriptive study design involving a retrospective chart review. All residents residing in one of 35 LTC facilities in a single ownership group were eligible for inclusion if they were receiving mirtazapine, megestrol, cyproheptadine, marinol and/or prednisone for appetite stimulation or weight loss in August 2020. Descriptive statistics will be utilized to characterize the data. Sub-analyses for secondary objectives will be performed as appropriate.

Results

Six hundred ninety-four patients met inclusion criteria and data are being analyzed. Results will be discussed at the conference

Conclusions

None at this time

A380

The Effect of Yoga on the Frailty Syndrome in Older Adults: A Systematic Review

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Background: Yoga is a multicomponent practice that has been shown to have beneficial effects on cellular aging, cardiovascular and respiratory physiology, and psychological health. Given its impact on multiple systems, yoga may positively impact the frailty syndrome. Currently, there are no randomized controlled studies that evaluate the impact of yoga practice on frailty syndrome. The purpose of this systematic review is to analyze the available evidence regarding the impact of yoga-based interventions on the frailty syndrome in older adults.

Methods:

Eligibility criteria: Included studies must be randomized controlled trials that assess a yoga-based intervention in an older adult population (mean age >60 years) vs. any comparison group (e.g., waitlist, education, or active control). The yoga-based intervention must include some component of physical poses. The outcomes assessed must include any aspect of the frailty syndrome, including: the Rockwood frailty index, Fried phenotypic criteria, gait speed, grip strength, timed up and go test, 6-minute walk test, chair rise, measures of standing balance, serum albumin level, Katz ADL index or other measures of ADL dependence, self-reported exhaustion/fatigue, self-reported quality of life, mini-nutritional assessment, and/or cognitive assessment.

Risk of bias: Assessed with accepted criteria such as the Jadad methodological quality criteria scale.

Results:

4301 studies were identified from the initial search strategy. Title and abstract screening is currently underway.

Conclusion:

The goal of this review is to identify potential effects of yoga on the frailty syndrome in older adults. Meta-analytic pooling is not planned given heterogeneity and methodological limitations in published yoga literature. If yoga practice is found to have a positive impact on reducing frailty syndromes this would be important in planning future studies, as well as provide clinicians with additional evidence-based therapeutic options when managing patients with frailty.

This review is registered under PROSPERO ID# CRD42020130303.

A381

The Long-Term Trajectory of Geriatric Syndromes After Acute and Post-Acute Care Stay

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Background: Geriatric syndromes (GS) are prevalent in hospitalized older adults and may often be exacerbated or newly acquired during hospitalization and post-acute care. The presence of multiple GS is associated with poor functional and health care utilization outcomes. Little is known about the trajectory of GS burden following acute and post-acute care. The objective of this study is to describe the trajectory of GS burden from hospitalization to 90 days after a skilled nursing facility (SNF) stay and evaluate differences in syndrome stability.

Methods: This descriptive prospective analysis was conducted as part of a randomized controlled trial to deprescribe medications, Shed MEDS. Participants were 50 years of age and older with polypharmacy (≥5 pre-hospital medications), who were hospitalized at an academic hospital and discharging to a SNF. Research staff assessed participants at hospitalization, 7 and 90 days after SNF discharge for the following eight GS using standardized tools: delirium (bCAM), cognitive impairment (BIMS), depression (PHQ-9), weight loss (DETERMINE), incontinence (ICIQ), pain (BPI), falls, and pressure ulcers. Descriptive statistics were used to summarize patient characteristics, prevalence of GS, and syndrome burden (total number of syndromes per patient) at each time point.

Results: Of 372 Shed MEDS trial participants, 223 completed all study phases and were included in this analysis. Participants were predominately Caucasian and female with a median age of 76.8 years (range 50 – 99). During baseline participants experienced a median of 3 [2,4] syndromes, which reduced to a median of 2 [1,3] syndromes at both 7 and 90 days after SNF discharge. Although the individual syndromes differed by age, there was no significant difference in trajectory of overall syndrome burden by age. At each timepoint, the most prevalent syndromes were incontinence and depression. Both of which along with weight loss were least likely to resolve and most likely to be newly acquired at 90 day follow up.

Conclusions: While GS burden reduced slightly after hospitalized older adults transitioned from SNF to home, multiple GS remained after the post-hospital period for all age groups, including 'younger' older adults. These results suggest that an evaluation of GS should be part of routine clinical practice following hospitalization particularly for incontinence, depression, and weight loss.

A382 Encore Presentation

Investigation and treatment of delirium: an analysis of the first 48 hours post-diagnosis in geriatrics inpatients

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Background

Delirium investigation and treatment is challenging, involving multiple domains including identifying and treating causes, detecting and managing distress, reducing the risk of complications, and communicating with the patient and family. There is little research assessing real world practice in relation to expert recommendations (e.g. UK NICE Guidelines on Delirium, 2010). This preliminary study aimed to (a) develop a data extraction tool to assess delirium care, and (b) to examine actions related to delirium management in geriatrics inpatients.

Methods

We examined the casenotes of 30 patients with a confirmed diagnosis of delirium who were inpatients in three geriatrics wards in a single hospital in the UK. Clinical care actions in the first 48 hours following diagnosis were extracted using a newly developed Delirium Management Report Form.

Results

Mean age was 87 (range 82-90); 14 were women. One or more conditions were explicitly documented as possible delirium causes in 67%. Delirium-specific environmental and behavioral measures, e.g. one-to-one nursing were documented in 27%. No patients had a documented assessment for distress. New psychotropic medication was prescribed in only 2 patients (7%). The diagnosis of delirium was recorded to have been communicated to family in 57% and to patients in 10%. Other aspects of care showed similar variability.

Conclusions

This study found wide variability in documented practice in delirium management. Some care may not have been documented but the findings likely reflect variability in actual practice. The low rates of psychotropic medication use are aligned with UK guidelines. The variable lack of documented assessments of causes of delirium, presence of distress, communication with families and patients, and other relevant aspects of care suggest that more formal processes to ensure more consistency in documentation and practice could improve delirium management.

A383

Cancer related dysphagia and dementia: the dual diagnosis challenge

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Introduction: Cancers, particularly head and neck (H&N) and gastro-intestinal (GI) tract cancers, and the effects of cancer treatment can result in significant swallowing difficulties which ultimately lead to malnutrition in older adults. Presence of dementia can interfere with decision of placing percutaneous endoscopic gastrostomy (PEG) tubes to maintain nutrition. However, the impact of dementia on PEG placement in cancer patients has not been studied. We sought to investigate the association of dementia and PEG placement among older adults with cancer using nationally representative data.

Methods: We conducted a retrospective, observational study using National Inpatient Sample from Healthcare Cost and Utilization Project (HCUP) from 2016 to 2017. Patients 65 years or older with a primary diagnosis of H&N or GI cancer were included. Cancer and dementia diagnoses were identified using the Clinical Classification Software (CCS) codes from HCUP. Baseline demographic data were retrieved from the database for all patients included in the study. We conducted a multivariable logistic regression to assess the odds ratio (OR) of getting PEG if the patient has dementia, adjusting for patients' demographic and clinical factors.

Results:

Out of 5 167 053 patients, 582 085 had cancer, 13.98 % (81 390) had H&N cancer and 86.26 % (502 090) had GI cancer. Out of all cancer patients, 6.13% had dementia, with a male preponderance (57.2%). Patients with dementia underwent PEG tube placement slightly more frequent (3.2%) than patients without dementia (3.14%), without statistically significant difference (p=0.795). Multivariable logistic regression analysis showed that having a diagnosis of dementia decreases the likelihood of having a PEG tube placement (OR 0.8, Confidence Interval (CI) 0.69 – 0.92). Older adults with frailty also showed high likelihood of getting PEG (OR 1.68, CI 1.5 -1.8) for intermediate frailty score and for high frailty score (OR 2.7, CI 2.46-3.16, $p<0.05$) based on the Hospital Frailty Risk Score by Gilbert et al (Lancet 2018).

Conclusions: Swallowing and cognition are two major contributors to quality of life of older patients. In the absence of standardized guidelines to address the dual diagnosis of cancer related dysphagia and dementia, weighing the benefits and risks of enteral nutrition support is crucial for patients with cancer and dementia.

A384

Incidence of Falls in Nursing Homes before and during COVID19 Pandemic

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Background: Falls are a major cause of morbidity and mortality in older adults. It has been established that decreased physical activity is one of the major risk factors for falls, thus the most effective falls reduction programs incorporate exercise. During COVID-19 pandemic physical activity levels have decreased significantly. **Objectives:** To examine the COVID-19 pandemic impact on incidence of falls and major injuries in nursing home (NH) residents at local, state, and national levels. **Methods:** A retrospective study was conducted on CMS data collected from CASPER reports in 3 NH facilities in Lansing, Michigan. A paired samples t-test was conducted to compare incidence of falls from March to October 2019 to incidence of falls from March to October 2020 (before and during the pandemic). **Results:** Our data showed that there was no statistically significant difference between incidence of falls in 2019 compared to 2020 in NHs, at the state and national levels. However, Incidence of falls with major injury decreased significantly (t (15)= -2.76, p= .01) in the three NHs in 2020 (M= 3.01, SD= 1.65) compared to 2019 (M= 4.18, SD= 1.93), and at the state level (t (7)= -2.98, p= 0.02) in 2020 (M= 3.18, SD= 0.05) compared to 2019 (M= 3.31, SD= 0.11). **Conclusion:** This study showed the in incidence of falls during this pandemic was comparable to the incidence before the pandemic. Interestingly, falls with major injury have decreased significantly during the pandemic compared to the year before the pandemic. The decreased mobility, likely due to fear of contracting the virus, along with the imposed restrictions, may explain the difference in our study. The association between physical activity level and incidence of falls need to be re-examined through further research. Additional data will be presented.

A385

Characterizing Geriatric Incontinence in Women

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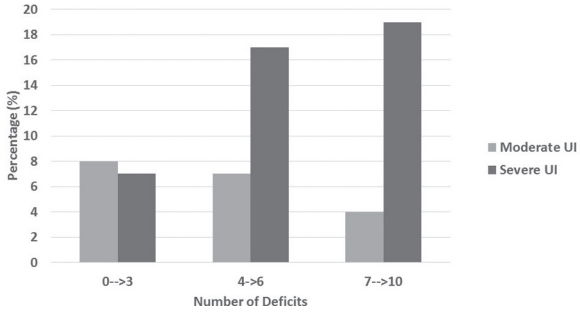
Objective: Urinary incontinence (UI) is heterogeneous in older women, changing from a condition to a geriatric syndrome. We aim to identify clinical features of the geriatric incontinence syndrome (GIS) to inform its definition in clinical practice.

Methods: We examined 61 community-dwelling women aged ≥70 years with moderate-to-severe UI. UI symptom severity was defined using a bladder diary. Physical ability was assessed subjectively. Physical performance was objectively assessed using the Short Physical Performance Battery (SPPB). SPPB scores ≤9 reflected impaired physical performance and scores >9 were normal. UI severity defined the comparative groups; moderate UI< 2 episodes/day and severe UI ≥2 episodes/day. We examined geriatric characteristics of chair-stand pace, gait speed, grip strength, cognition, sarcopenia, disability, and fatigue to explore a cumulative deficit model for the GIS assessing their frequencies based on UI severity.

Results: The average age was 77 years. Severe UI episodes was most common (69%) compared to 31% with moderate UI. Women with severe UI reported more difficulty walking (52% vs 21%, p 0.046); had slower gait speed [0.08±0.2 m/s (severe UI) vs 1.0±0.2 m/s (moderate UI)]; and higher prevalence of SPPB≤9 (59%) compared to women with moderate UI (26%), p=0.02. Women with severe UI also had higher frequency of geriatric deficits compared to women with moderate UI. (Figure 1)

Conclusion: The GIS may be a unique phenotype of UI featuring co-existent severe UI symptoms, physical function impairments, slower gait speed, and disability among older women.

Figure 1. The cumulative number of deficits in physical performance, strength, and cognition present among baseline participants categorized based on UI severity.



A386

Heart is the way to Hip: Prevalence of Cardiovascular Disease, Cardiac Medications or Medications with Cardiac Side Effects in Older Adults with Hip Fractures.

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Background

Hip fractures and Cardiovascular disease (CVD) cause substantial morbidity and mortality in older adults. Low bone mineral density (BMD) has been related to increased cardiovascular morbidity and mortality likely due to the calcification process involved in bone mineralization and atherosclerosis. Whereas certain cardiac medications like angiotensin converting enzyme inhibitor (ACEI) and thiazides have been studied to reduce progression to osteoporosis and especially hip fracture risk. Much of this research was performed outside the United States. We designed a prevalence study to identify potential associations between hip fractures and cardiovascular disease, cardiovascular medications or medications with cardiovascular side effects in geriatric patients in a South Texas tertiary hospital.

Methods

A retrospective cohort analysis using trauma registry data at our level 1 trauma center is underway. Patients 65 years and older with pathologic and traumatic hip fractures admitted between 2015-2020 are included. Cohorts consist of patients with hip fractures with and without CVD. Use of cardiac medications and medications with cardiac side effects will be analyzed in both groups. We also identify those with a fall mechanism of injury.

Results

Data will be presented

Conclusions

Our study will observe prevalence of hip fractures in patients with cardiovascular disease, on cardiovascular medications or medications with cardiovascular side effects. If an association is identified, findings will contribute to literature suggesting that older adults with cardiac disease could be at higher risk for hip fractures, and support screening and treatment for osteoporosis in this population. It will also support further efforts to deprescribe potentially inappropriate cardiac medications in these patients. Limitations of our study include the possibility of missing data in the retrospective chart review and including a population from only one hospital. Further studies will be needed.

A387

Relationship Between Gender and Recovery rate from Post-concussion Syndrome in Older Adults Receiving Physical Therapy Rehabilitation.

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BACKGROUND

Mild traumatic brain injury (mTBI) is a growing epidemic in the geriatric population across the world. A minority of patients with mTBI develop persistent post-concussion syndrome (PCS) defined by a cluster of cognitive, somatic and emotional symptomslasting for >3 months. Multiple systematic reviews highlight the prognostic significance of age, biological sex and other factors such as pread-mission functional ability and comorbidities on development of PCS. However, these variables remain understudied in older adults. Moreover, research is needed to determine how utilization of physical therapy (PT) services may affect recovery. The aim of this study is to examine the relationship between gender and recovery rate from PCS in Older Adults receiving PT rehabilitation.

METHOD

A retrospective chart review of 45 patients (27 females and 18 males) in the age 65 and older referred for to PT rehabilitation at Saint Joseph Hospital, Orange, CA was performed. More data are being compiled from older paper-based medical records and combined analysis will be presented at the conference. All the patients had a history of a traumatic event such as falls or MVA which may have resulted in concussion. At initial evaluation and discharge, recordings were made of outcome measures of self-report [Dizziness Handicap Inventory (DHI)] and gait and balance performance [Dynamic Gait Index (DGI), gait speed, and the Sensory Organization Test (SOT)].

RESULTS

Based on interim analysis both males and females in the 65 and older age group improved with dizziness, balance or both in an average of 9.5 visits. Females had a clinically significant improvement in DHI outcome (27+/-3) whereas for males the average improvement in DHI was not clinically significant (10+/-4) (MCID for DHI =18 units). Additionally, both genders showed clinically significant improvement on SOT (MCID for SOT =8 points) and DGI scores (MCID of DGI = 3).

CONCLUSIONS.

Both females and males improved in the same number of visits. However, females showed clinically significant improvement over males on self reported dizziness as measured by DHI but not on DGI or SOT.

A388

Challenges to a safe transition home from skilled nursing facility for patients with heart failure

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Background

Readmission rates for heart failure (HF) patients remain high at 21.9%. Prior work has demonstrated that many HF patients are discharged to skilled nursing facility (SNF) before discharge home, and this subsequent transition is associated with a high readmission risk. Our objective here was to understand the current challenges to safe discharge from SNF to home for heart failure patients.

Methods

Detailed individual semi-structured interviews with employees across three SNFs in New York City were conducted. Purposive sampling was used to identify staff members who have experience working with HF patients and are involved in the discharge process at the SNF. Audio-recorded interviews were transcribed professionally. Data were analyzed with Dedoose. Transcripts were coded using the constant comparative method to identify themes.

Results

Nineteen employees across these SNFs were interviewed. Participants included 4 social workers, 2 nurse case managers, 2 registered nurses, 1 licensed practical nurse, 4 nurse practitioners, 5 physicians, and 1 administrator. Five major themes emerged on the topic of safe discharge challenges:

(1) community-level factors, for example, lack of social support or inadequate housing;

(2) insurance-level factors, for example, reduced SNF coverage and coverage gaps for home care services;

(3) institution-level factors, for example, high patient volume, rapid patient turn-over, low nurse to patient ratios, resulting in limited time spent on patient teaching;

(4) provider-level factors, for example, lack of coordinated communication between team members resulting in durable medical equipment not ready at expected time of discharge or poorly coordinated, piecemeal education for the patient or their caregivers;

(5) patient-level factors, for example, inability to manage themselves due to severe mental illness, cognitive impairment, frailty; and lack of adherence to recommended treatment.

Conclusions

Challenges to safe discharge from SNF are multifactorial, and these challenges may be more pronounced than what is typically seen at hospital discharge as this population is frailer and often require structured support to ensure a safe transition home. Interventions targeting these challenges are needed to facilitate safe discharge from SNF.

A389

Provider perspectives on discontinuing surveillance colonoscopy in older adults

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Background:

Little is known about provider willingness to discontinue colonoscopy among older adults with a history of colon polyps ("surveillance"). The US Multi-Society Task Force recommends that stopping surveillance be individualized. We aimed to identify factors that influence decision-making by primary care providers (PCPs) and gastroenterologists (GIs) related to stopping surveillance.

Methods:

We recruited providers in two US states via email and conducted semi-structured virtual interviews, which were transcribed and analyzed using Dedoose.

Results:

Twenty-five providers were interviewed 6/2020-10/2020. Among PCPs (N=12), 66% were female with 2-30 years of experience. Among GIs (N=13), 31% were female with 8–35 years of experience. All providers were familiar with guidelines and cited 75 as the recommended age to discontinue surveillance. However, all suggested that other factors, including life expectancy, co-morbidities, and results of last colonoscopy, should be considered more than age. All gave examples of recommending surveillance for patients ≥80. PCPs were more likely to consider patient preferences. All felt comfortable discussing discontinuing surveillance with patients and felt that many patients are accepting of discontinuing based on age, co-morbidities, and not having to go through colonoscopy again. Some

described discussions around discontinuing as 'delicate' if patients were uncomfortable about their own mortality or felt offended that they could not continue surveillance. PCPs relied on GI recommendations most often to consider ongoing surveillance. Both PCPs and GIs shifted more responsibility to PCPs when patients are both older and have more serious co-morbidities. Most GIs and PCPs agreed that PCPs were in a better position to advise patients as they grew older based on visit frequency and familiarity with patient's overall health and goals.

Conclusions:

Most PCPs and GIs respect each others' role in counseling older adults about surveillance. However, as patients age and/or develop comorbidities PCPs need to be prepared to be the main drivers of discussions on individualizing surveillance.

A390

Investigating Barriers to SNF Admission for Older Adults with Opioid Use Disorder

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Background: Opioid addiction in older adults is an important public health concern. There was an 11.8% relative increase in 2018 of the opioid overdose deaths in adults 65+ compared to 2017 (Wilson et al., 2020). Hospitalized patients with opioid use disorder (OUD) who require skilled nursing facility (SNF) services are often denied admission to SNFs. There is speculation regarding the reasons for exclusion/misconceptions about the care needs of older adults with OUD.

Methods: To confirm/expand on potential barriers for admission to SNFs for older adults with OUD, SNF leadership (e.g. Administrators, Directors of Nursing, Admissions Directors) were invited to complete an IRB-approved anonymous online survey. Surveys were sent directly to SNFs where a Boston Medical Center clinician is credentialed to see patients as well as to an informal network of geriatricians and SNF leadership.

Results: There were a total of 43 respondents. Due to the recruitment methods, the precise number of potential respondents cannot be stated. 30 emails were sent to unique individuals. Assuming that each person forwarded it to 5 colleagues, then the survey went to approximately 150 people. The estimated response rate is 29%. While the majority of participants (76%) reported that their facilities admit patients with a history of OUD, patients with an active OUD diagnosis constitute <10% of their current long-term care (LTC) and subacute rehabilitation (SAR) cohorts (see Table). In response to open-ended questions regarding what is needed to care for patients with OUD, common themes were training and education, addiction and mental health services support, and collaboration with and guidance from state regulatory bodies.

Conclusions: This study begins the important step of gathering information and perspectives from SNFs on barriers to providing care for older adults with OUD. The barriers for admission to SNFs are multifactorial and complex, but common themes emerged that provide actionable items to improve access to care for this population.

Wilson, N., et al. 2020. "Drug and Opioid-Involved Overdose Deaths—United States, 2017–2018." *MMWR Morbidity and Mortality Weekly Report* 69(11): 290–7.

Percentage of patients with opioid use disorder

	Percentage of patients				
	<10%	10-25%	26-50%	51-75%	>75%
LTC patients with OUD (n=27, SD=0)	78%	22%	0%	0%	0%
SAR patients with OUD (n=28, SD=0)	75%	25%	0%	0%	0%

***Not every participant answered every question**

A391

In-hospital mortality in frail older adults after hip fracture surgery

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Older adults undergoing surgical intervention for hip fracture are at high risk for mortality, and frailty is known to increase mortality in this population. We aimed to determine the association between frailty and in-hospital mortality among older patients who underwent hip fracture surgery.

We used the National Inpatient Sample data from 2016 and 2017. The final analysis included hospitalizations with patients 65 years and older with a primary diagnosis of hip fractures who underwent surgical interventions during that hospitalization. Frailty was defined using the Hospital Frailty Risk Score. Ranging from 0-99, the Hospital Frailty Risk Score categorizes frailty risk as low (<5), moderate (5-15), and high (>15).

A multivariable logistic regression determined the association between in-hospital mortality and frailty, adjusting for patients' demographic and clinical characteristics (age, sex, race, insurance type, Elixhauser comorbidity index, delirium, elective vs. urgent admission, weekend vs. weekday admission, teaching vs. non-teaching hospital, hospital location, and hospital bed size).

A total of 29,719 hospitalizations were identified. In-hospital mortality was 1.7% (504 deaths). The mean age was 81.5 (±7.3) years, 30.5% were male, and 84.2% were White. The mean frailty risk score was 8.8 (±5.0); 24.5%, 64.0%, and 11.5% had low, moderate, and high frailty risk scores, respectively. Nearly 7% of them experienced delirium. Frailty was significantly associated with in-hospital mortality (odds ratio (OR)=1.10, 95% Confidence Interval (CI): 1.08-1.11). Compared with low frailty, moderate and high frailty were associated with higher odds of death with OR of 2.94 (95%CI: 1.91-4.51) and 5.99 (95%CI: 3.79-9.47), respectively. Other factors associated with mortality included age (OR=1.05, 95%CI: 1.03-1.06), additional Elixhauser comorbidity (OR=1.31, 95%CI: 1.25-1.36), and delirium (OR=2.17, 95%CI: 1.72-2.74). Women had a 35% lower odds of dying (OR=0.65, 95%CI: 0.54-0.79) than men. Compared to hospitals in the Northeast, being in the Midwest and West were associated with 26% (0R=0.74, 95% CI: 0.55-0.98) and 31% (OR=0.69, 95% CI: 0.51-0.95) decreased odds of mortality, respectively.

Frailty is a significant risk of in-hospital mortality in older adults undergoing surgical intervention for hip fracture.

A392 Encore Presentation

Skilled Home Health Care Agency Perspectives on Communication with Physicians: A National Survey

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BACKGROUND: Communication is important in the care of older adults receiving skilled home health care (SHHC). In a prior national survey, physicians viewed communication and care coordination with SHHC agencies as dismal. The views of SHHC personnel (Registered Nurses, Licensed Practical Nurses, Physical Therapists, Occupational Therapists, and Speech-Language Pathologists) on this issue have not been well studied. OBJECTIVE: To determine the effectiveness of communication between SHHC personnel and physicians

who order SHHC services. METHODS: A nationally representative mailed survey of personnel from SHHC agencies identified through the 2016 Home Health Compare dataset from the Centers of Medicare and Medicaid Services. RESULTS: 265 of 2000 surveys returned (13.3% response rate). Responding agencies were mainly proprietary (75.3%) and urban-based (83.7%). Most agencies were in the South (38.8%); 28.3% Midwest, 22.9% West, 12.1% Northeast. Only 62.2% of SHHC personnel completing start of care visits (n=203) reported being able to contact a physician when needed. The most common strategies used to contact physicians are phone (76.0%) and fax (11.2%). The greatest barriers to communication are having to communicate through a third party (64.9%) and a perception by SHHC personnel that "Physicians [are] not interested in communicating with SHHC Personnel" (45.1%). Failed communication resulted in delayed orders (70.8%) and sending a patient to the emergency room (37.1%). IMPLICATIONS: SHHC agency personnel experience significant barriers in communicating with physicians. Modes of communication remain rudimentary, and there are serious consequences of failed communication.

A393

A Scoping Review of Interventions for Older Adults Transitioning from Inpatient Hospitalization to Home

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Background: Older adults are at high risk for poor outcomes as they transition from inpatient hospitalization to home. Transitional care interventions primarily focus on care coordination and medication management, and they may miss key components, such as patient and caregiver engagement. The objective is to examine the current scope of transitional care interventions, including their patient and family-centeredness, and their impact on health and related outcomes.

Methods: The authors conducted a scoping review from December 2019 through March 2020 in CINAHL, PubMed, and Scopus to identify peer-reviewed English original randomized controlled trials focusing on adults aged 60 and older. Articles included in this review were reviewed in full and all data were extracted that related to study objective, setting, population, sample, intervention, primary and secondary outcomes, and main results.

Results: Five hundred nineteen records were identified by title through searching CINAHL, PubMed, and Scopus. Forty-two articles were deemed eligible and included in this review after authors' abstract and full-text review against inclusion/exclusion criteria. Most common transitional care components in study interventions are care continuity and coordination, medication management, care seeking and symptom management, and self-management. Only a few studies reported a focus on caregiver needs or goals in the interventions. Common modes of intervention delivery included by phone, in person while the patient was hospitalized, and in person in the community following hospital discharge. No studies reported using information technologies such as electronic health records, patient portals, or mobile health applications as intervention modes. The most common primary outcomes were readmission and mortality.

Conclusions: This study summarizes recent interventions designed to support older adults transitioning from inpatient hospitalization to home and provides implications and recommendations for future research.

A394

Hospital-Associated Disability Among Older Adults Due to Avoidable Hospitalizations

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Background: Hospital-associated disability (HAD), defined as a functional decline in Activities of Daily Living (ADL) at hospital discharge, occurs in nearly 30% of acute care hospitalizations among older adults. As HAD is associated with long-term physical impairment and increased mortality, methods to reduce HAD are urgently needed. Our study objective was to examine the incidence of HAD among older adults hospitalized for ambulatory care sensitive conditions (ACSCs), which are those that can be treated with outpatient primary care management.

Methods: This was a retrospective cross-sectional study of 48,757 older adults aged ≥ 65 years admitted from January 1, 2015 to December 31, 2019 to general inpatient (non-ICU) units of a large regional Southeastern academic medical center. The primary outcome was HAD, defined as a decrease in Katz ADL score between hospital admission and discharge. The ACSC predictor was defined using standardized primary admission ICD-10 diagnoses. Generalized linear mixed models were used to examine the association between ACSCs and HAD, adjusting for covariates and repeated observations for individuals with multiple admissions.

Results: We found that 8.3% of all admissions were for an ACSC and 24.5% of all older adults developed HAD during their hospitalization, with similar rates between those admitted for ACSCs versus those admitted for other conditions (24.1% versus 24.6%, $P = 0.152$). Age, comorbidity, baseline functional status, and baseline cognitive impairment were significant predictors for development of HAD. After adjusting for covariates, the risk of HAD did not differ between admissions for ACSCs and other conditions (adjusted OR = 0.92; 95% CI 0.84, 1.02).

Conclusions: Rates of HAD among older adults hospitalized for ACSCs did not differ significantly from those hospitalized for other conditions, indicating that management of ACSCs in the outpatient setting could reduce HAD by avoiding hospitalization.

A395

Stakeholder strategies to improve medication management during care transitions of older adults living with dementia

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For older adults with Alzheimer's disease and related dementias (ADRD) experiencing hospital-to-home care transitions, medication management (MM) tasks can be challenging. Role ambiguity—lack of clarity regarding who should complete MM tasks—can lead to adverse events. Our objective was to use a human factors engineering participatory approach to engage stakeholders, prioritize strategies to decrease role ambiguity, and support MM during care transitions of older adults with ADRD.

We assembled an "Intervention Refinement Team" (IRT): family caregivers of older adults with ADRD, home health staff involved in care transitions, and researchers. We conducted three virtual IRT meetings to: 1) develop a shared mental model of role ambiguity; 2) brainstorm strategies to reduce role ambiguity and support MM;

and 3) prioritize strategies according to effectiveness, feasibility and sustainability domains. We assigned each strategy a score based on the sum of their scores in each domain. We asked IRT members to evaluate each meeting regarding usefulness, comfort in participation, degree of provision of input, and suggestions for improvement.

IRT members (n=14) suggested 25 strategies to reduce ambiguities and improve MM during care transitions. Top-rated strategies were: 1) establishing accurate contact information during transitions; 2) storing medications away from person with dementia; 3) notifying primary care provider after hospital discharge to ensure follow-up; 4) using cognitive aids for medication storage and administration; and 5) setting expectation for duration of medication trials to aid in eventual deprescribing efforts. Stakeholders categorized strategies into high or low feasibility and effectiveness. The IRT meetings were well-received. The majority of participants rated the meetings as "extremely useful", "extremely comfortable", and feeling they contributed "a great deal" or "a lot" to the discussion.

Stakeholders used a human factors engineering participatory approach to develop and prioritize strategies to reduce role ambiguity and improve MM during care transitions for older adults with ADRD. Study findings can guide healthcare system improvement efforts, especially for skilled home healthcare agencies.

A396

Frailty or Dementia: Which Drives Health Care Costs?

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Background: Frailty and dementia are associated with poor health outcomes and increased health care utilization and costs. Understanding how frailty and dementia drive health care costs may be useful to prioritize resources and develop policies to improve the care of the most vulnerable populations.

Methods: This retrospective cohort study was conducted using 5% random sample of Medicare fee-for-service beneficiaries in 2014-2016. Frailty and dementia were identified using validated claims-based algorithms. We compared 1-year health care costs per beneficiary and mortality across four groups: frailty and dementia, frailty alone, dementia alone, or none.

Results: Beneficiaries (n=1,132,367; mean age 76.2 years; 57.9% female) with frailty or dementia made up only a third of the population but they accounted for 49.4% of total health care costs: 21.5% with frailty alone (40.3% of total costs), 0.5% with dementia alone (0.4% of total costs), and 4.4% with both (8.7% of total costs). Beneficiaries with both conditions had the highest 1-year mortality rate (21.9%) and highest mean total costs per beneficiary ($26,030). Despite similar mortality between those with frailty vs dementia alone (9.4% vs 9.7%), frail beneficiaries had substantially higher mean total costs per beneficiary ($24,693 vs $12,096). By service type, individuals with frailty alone also had higher costs than those with dementia alone except for hospice (Table).

Conclusions: While both frailty and dementia are associated with increased health care costs, frailty appears to be a stronger driver of health care costs. Efforts to decrease health care costs should focus on older adults with frailty alone or with frailty and dementia.

Service Type	Absence of frailty & dementia (n= 834,328)	Presence of dementia alone (n= 5,197)	Presence of frailty alone (n= 242,937)	Presence of frailty & dementia (n= 49,905)	P-value (Kruskal-Wallis test)
Total health care cost ($)	9,029 (18,969)	12,096 (21,270)	24,693 (35,507)	26,030 (33,647)	<.0001
Inpatient cost ($)	2,700 (11,038)	4,022 (11,630)	8,776 (20,728)	8,768 (18,645)	<.0001
Skilled nursing facility cost ($)	503 (3,914)	2,027 (7,802)	2,679 (9,370)	4,964 (12,140)	<.0001
Home health aide cost ($)	265 (1,292)	854 (2,297)	1,561 (3,590)	2,221 (4,529)	<.0001
Hospice cost ($)	78 (1,235)	911 (4,837)	419 (3,009)	1,772 (6,533)	<.0001
Outpatient cost ($)	1,931 (6,043)	1,351 (3,584)	4,219 (9,333)	2,904 (5,958)	<.0001
Medicare B carrier cost ($)	3,393 (6,026)	2,837 (3,646)	6,292 (8,648)	5,050 (6,480)	<.0001
DME cost ($)	159 (1,235)	94 (929)	748 (4,444)	350 (1,444)	<.0001

Costs are presented as mean (SD) per beneficiary in a 1-year period

A397

Surveying knowledge, attitudes, and experiences with dementia care among Hispanic caregivers of persons with dementia: a qualitative study

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Background

Compared to non-Latino White older adults, Latino older adults are more likely to receive low quality dementia care such as high-risk medications (e.g. antipsychotics) or services (e.g. feeding tubes). Caregivers play a critical role in managing medical care for persons with dementia (PWD). Our study objective was to describe knowledge, attitudes, and experiences of dementia care among Latino caregivers of PWD.

Methods

We used a qualitative research design and conducted 60-minute phone interviews in English and Spanish with Latino caregivers of older adults with memory problems. We also interviewed caregiver advocates who serve Latino older adults and caregivers. We recruited from community organizations, senior centers, and clinics. Our interview guide focused on experiences of caregiving, interactions with medical system, and knowledge and experiences managing behavioral and eating problems. We used Constructivist Grounded Theory methodology to analyze the data.

Results

Preliminary results from interviews with 3 caregivers (caring for parents who had received care from primary care physicians and geriatricians) and 2 caregiver advocates illustrate that caregivers report feeling that they did not receive enough information from primary care doctors regarding dementia and medications for dementia. Two caregivers felt that some primary care clinicians misinterpreted symptoms of dementia as part of normal aging. All caregivers in our sample also reported that they wished they had more information on what to expect with dementia disease progression.

Caregiver advocates noted that primary care doctors often did not provide non-pharmacological approaches to behavioral problems. All three caregivers reported receiving higher quality care with geriatricians, who provided recommendations on how to manage behavioral symptoms.

Conclusions

Early findings from our pilot study suggest that Latino caregivers feel that the care for dementia from primary care docs is inadequate. Future studies might analyze caregiver-patient-clinician office visit interactions to better understand potential communication challenges around dementia care.

Abstract Impact: This qualitative study describes potential barriers to high-quality care for Latino older adults with dementia.

A398

Transfers Among Long-Term Nursing Home Residents During the COVID-19 Pandemic

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Background: For long-term nursing home residents, the nursing home is not only a source of 24/7 care but also regarded as the residents' community/home. Previous research showed that 11% of all nursing home residents are transferred from one facility to another within a year. Transferring long-term nursing home residents between facilities can compromise the quality of life and be associated with functional decline, increased loneliness, isolation, falls, hospitalizations, and even death. Little is known about how the COVID-19 pandemic healthcare response may have impacted transfers between facilities. The objective of this study was to examine changes in transfer rates and negative outcomes with transfers (transfer trauma) among nursing home long-term residents between before and during the first wave of the COVID-19 pandemic.

Methods: Using the Michigan state Minimum Data Set (MDS) data from 2018 through the first two quarters of 2020, we identified long-term nursing home residents who transferred to another facility. We first examined transfer rates over time by quarter. We assessed changes in functional status, behavioral problems, Changes in Health, End-stage disease and Symptoms and Signs score, hospitalizations, and death as transfer trauma by quarter. We first used simple t-test or chi-squared test for comparisons as appropriate. We plan to use interrupted time-series analysis, adjusting for individual- and facility-level characteristics, to estimate the COVID-19 impact on transfer rates and transfer trauma.

Results: Compared to transfer rates in 2018 (4.8% of 36,283) and 2019 (4.8% of 36,245), the transfer rate in the first two quarters of 2020 was 2.9% (N=31,040), with a higher transfer rate for COVID-19 (N=3,239, 7.6%) than non-COVID-19 (N=27,801, 2.4%) residents. Among those who transferred, 24.5% moved more than once in the first two quarters of 2020 compared to 14.4% in 2018 and 13.8% in 2019. Two out of five (40.9%) COVID-19 residents transferred more than once. In the Detroit area, 11.9% of COVID-19 residents (N=522) were transferred, and from those 51.6% moved more than once. More results will be available to report.

Conclusions: Although lower transfer rates were observed in the first two quarters of 2020, more long-term residents moved more than once. COVID-19 residents experienced more transfers and transferred more than once, which could result in greater risk of transfer trauma.

A399

Filling a Public Health Gap: Geriatricians' Role in the COVID-19 response

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Background: COVID-19 has disproportionately impacted older adults, particularly those in long-term care. In San Francisco, 3 academic geriatricians worked within the local public health department's COVID response, assigned to the team responsible for outreach and prevention in assisted living facilities, known as "SeniorHub." We assessed the views of non-geriatrician SeniorHub team members on the roles and contributions of the geriatricians.

Methods: We conducted a focus group of Senior Hub team members about their experiences in outreach to assisted living facilities and their views on having geriatricians as part of the team. Team members who could not join the focus group were individually interviewed. We analyzed anonymized transcripts using thematic content analysis.

Results: 9 of the 10 SeniorHub team members participated in the focus group or interviews. Preliminary themes on how geriatricians contributed to the COVID response included 1)Aging expertise, 2)Collaboration, 3)Advocacy, and 4)Need for a lifespan approach in public health. Aging expertise encompassed geriatrics clinical knowledge including dementia, aging resources, familiarity with eldercare sites and regulations, and strategies to address isolation and overall wellbeing in addition to infection control. Collaboration recognized the geriatricians' "no ego" approach to interprofessional teamwork, while also being able to shape policy through authoritative interactions with MD public health leaders. The SeniorHub team noted surprise at the gaps in aging expertise in public health departments and the need for increased attention to older adults. Table 1 shows illustrative quotes for each theme.

Conclusions: The COVID-19 pandemic helped identify critical roles geriatricians can play in public health, including as aging and long-term care subject matter experts, collaborators on interprofessional teams, and advocates for older adults and eldercare policy. The aging of the U.S. population requires a lifespan approach to public health that includes those with geriatrics expertise.

Table 1. Themes and Example Quotes

Aging Expertise	"They've all worked with the clients that we have had…they work with, these residents, who live in these places and so they're all very familiar with, you know, the many issues that accompany these residents."
Collaboration	"There was absolutely no sense of hierarchy or entitlement or, you know, feeling above. It was just so collaborative. They're such collaborative clinicians and docs. And that was really great -- And maybe that's specific to geriatricians, I don't know."
Advocacy	"Their expertise in geriatrics, COVID-19 research and policy implications on older adults has been invaluable... For example, they have identified communications and policies that have ageist implications and have escalated these issues within the public health department."
Need for a Lifespan Approach in Public Health	"There is a whole section in public health that is standard- maternal and child health…But there's no sort of adults and older adults and you know, there's no focus on the rest of the age spectrum... And I think that that can't continue because the population is changing."

A400

99483: Cracking the Code to Better Dementia Care

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Background

Procedural Terminology (CPT) code 99483 reimburses providers for assessment and development of a care plan for people with dementia (PWD) every 180 days and requires documentation of 9 elements: H&P, function, stage, high risk meds, behaviors, safety, caregiver needs, advance care planning (ACP), complexity, and care plan. We found no published studies on use of 99483. We describe preliminary outcomes and feasibility of 99483 visits between February and November 2020.

Methods

People with suspected dementia were referred to Benedum Geriatric Center in Pittsburgh, PA. Care-partners completed assessment tools prior to the 99483 visit. The provider reviewed these data and the medical record in non-face-to-face (CPT 99358, 99359) encounters before the face-to-face (FTF) 99483 visit when education and the dementia care plan were presented to the PWD and care-partner.

Results

17 community-residing PWD completed 9 office and 8 telemedicine visits. 3 were black; 14 were non-Hispanic white; 10 were women. Mean age was 79 (range 63-98). 8 had Alzheimer's disease. Mean MoCA© score was 17 (range 0-23). Median Global Deterioration Scale stage was 5; 7 PWD were stage 6 or 7. Every PWD had 3+ dementia behaviors, most commonly agitation (13), nighttime issues (12), hallucinations (11), and delusions (11). Most care-partners were daughters (7) or spouses (5), reporting very high (2) or extremely high

(8) stress levels. 10 PWD started medications for behavior symptoms. By November, 2 moved to long term care; 4 died. Care plans addressed reducing behaviors, ACP, and safety. Only 1 PWD returned for a 180-day visit; they showed 50% reduction in behavior severity and stress. On average, non-FTF encounters lasted 109 minutes (range 65-150); FTF visits took 99 minutes (range 60-141), with combined compensation of $490.10 (7.54 wRVU) per consult.

Conclusions

These PWD were in the later stages of dementia with multiple behaviors associated with high levels of care-partner stress. Implementing 99843 is complex and may exceed the expertise of most PCPs. Though time-intensive, it reimburses accordingly. Efficiency and workflow may improve if others assist with data collection and documentation.

A401

What delirium detection tools are used in routine clinical practice in the UK? A Freedom of Information investigation of UK hospitals

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Background

Formal detection of delirium in routine clinical practice at the earliest possible time point has been advocated in multiple guidelines. In the UK, guidelines recommend the Confusion Assessment Method (CAM) and 4A's Test (4AT). However, it is not known what proportion of hospitals use delirium detection tools, what tools are used, and also if they use delirium management pathways. The aim of this study was to collect information on delirium assessment processes and pathways in non-intensive care settings in the UK.

Methods

We sent a Freedom of Information Act request (which mandates a response) to 169 UK NHS hospitals, trusts and health boards (units) in July 2020 to obtain data on usage of delirium assessment tools in clinical practice, and use of delirium pathways or guidelines.

Results

We received responses from 154 units (91% response rate). 146 (95%) units reported use of formal delirium assessment processes and 131 (85%) units had guidelines or pathways in place. The 4AT was the most widely used tool, with 117 (80%) units reporting use. The Confusion Assessment Method was used in 65 (45%) units, and the Single Question in Delirium (SQiD) in 52 (36%) units. There was some overlap in tool use, but the SQiD was used as the sole tool in only 3 units.

Conclusions

These findings show that more than 95% of UK hospitals use delirium tools, and that most use either or both of the 4AT or the CAM. Around one-third of hospitals have adopted the SQiD, a single-item screening tool, likely in conjunction with a more definitive assessment tool such as the 4AT. Most units also use delirium pathways or guidelines. This study adds to our knowledge of real-world implementation of delirium detection methods in clinical practice. Further work should examine completion and positive score rates of tools alongside use of pathways and guidelines.

A402

Community Health Workers help a Federally Qualified Health Center adapt to older adults' needs, even during a pandemic.

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Background:

Over the past several years, HealthNet (HN), a federally qualified health center in Indianapolis, has planned to develop geriatric programs in response to a dramatic increase in the number of older adult patients served at HN clinic locations. Building on their experience using community health workers (CHW) to serve other patient populations, HN partnered with the Indiana Geriatrics Education and Training Center (IGETC) to develop a geriatric CHW role to engage with older adult patients and provide education and referrals.

Methods:

Two CHW were hired by HN and dually trained by HN staff and the IGETC team. CHW were trained through online modules, case-based discussions, and shadow opportunities with health system and community-based organizations. The role of CHW was to engage with older adult patients and their caregivers to provide education, make referrals to health services and community organizations, and to conduct screening for risk of falls, depression and cognitive impairment—reporting any positive screens to clinical staff. Patient and caregiver education was guided by the 4Ms of age-friendly care (Mentation, Mobility, Medications, and What Matters Most)[1]. Beginning in the summer of 2020, CHW additionally invited patients to participate in an optional survey to identify health care barriers specifically related to the COVID-19 pandemic—further enhancing both the understanding of COVID and patients' educational needs.

Results:

CHW conducted more than 700 interactions with 270 unique patients in 2020. They conducted 379 risk screens, 39 COVID-19 surveys, and made 66 referrals to the local area agency on aging for help with transportation, housing, and food resources. Patients describe CHW as advocates, dedicated and compassionate. HN leadership say they exemplify the mission and values of the organization.

Conclusions:

CHW have increased the ability of the health system to engage with older adult patients for enhanced screening, education, and connection to community resources.

References:

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A403

Engagement of Family in Function Focused Goal Setting: Impact Upon 30-day Hospital Readmissions

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Background: Hospitalized older persons with Alzheimer's disease and related dementias are at greater risk for functional decline with increased care dependency at discharge. Engaging families in decision-making may improve the hospital experience and outcomes of hospitalized person with dementia. Family-centered Function-focused Care (FAM-FFC) works with family caregivers as care partners in the assessment, function-focused goal setting, implementation, and evaluation of goal attainment during hospitalization and the 60 day post-acute period.

Purpose: The purpose of this study was to 1) evaluate the impact of Family-centered Function-focused Care (Fam-FFC) upon 30 day hospital readmissions, and 2) examine the contribution of discharge goal attainment to reducing 30 day hospitalization.

Methods: This secondary analysis of the Fam-FFC cluster randomized controlled trial included 321 dyads of persons with dementia and family caregivers admitted to six units of three hospitals. ANCOVA technique examined the impact of FAM-FFC upon 30-day hospital readmissions. The Goal Attainment Scale (GAS) describes the family caregiver's perception of whether goals established for the patient were met, measured on a five-point scale. Binary logistic regression tested the association of goal attainment with 30-day hospital readmissions in the intervention arm.

Results: The majority of the participants were Black (50%), female (62%), had a mean age of 81.6 (SD=8.43) and a mean Barthel Index of 60.29 (SD=27.67), and mean MoCA of 10.67 (SD=7.00) indicative of significant cognitive impairment. Patients in the intervention group had significantly less 30-day hospitalizations *(F*= 4.60*, p*=.033) and goal attainment was significantly associated with less recidivism (*B*=.179, *Wald*= 2.77 (1), *p*= .045).

Conclusion: Family-centered Function Focused Care shows promise in reducing 30-day hospital readmissions and results support the contribution of family engagement.

A404

The Preliminary Data of Vaccine Hesitancy in High-Risk Geriatric Population

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Background: Vaccines to prevent SARS-CoV-2 infection are deemed one of the most promising measures to control the devastating pandemic that has disrupted the United States and many countries worldwide. New York city started distributing vaccines to the geriatric population aged 75 or older on January 11th, 2021. ALIGN (Acute Life Interventions, Goals, and Needs) program at the Mount Sinai Hospital is a specially designed outpatient service to offer intensive ambulatory care to the most vulnerable older patients with complex medical and psychosocial needs. Though two vaccines are already approved by the FDA and available to American population, previous surveys from Pew Research Center have shown that around 40% of population probably or definitely would not get the vaccine. Given that persons most at risk for complications of COVID-19 include the older population, and those with heart, lung, and diabetic diseases, it is critical to overcome the vaccine hesitancy especially in the high-risk geriatric population. As the vaccine has only just become available to the older population, the data specific for this population is lacking.

Methods: All 68 patients followed by our outpatient program were eligible for the vaccine as part of Phase 1b and 1c. Eligible patients were contacted by phone and vaccine risks, benefits, and patient-specific recommendations were discussed with the patient or patient's healthcare proxy. The patients were also asked if they were willing to be vaccinated. If they answered "yes", they proceeded with making appointments. If the answer was no, then the clinical team further probed for reasons and barriers for declining the vaccine. Qualitative data was categorized into themes and subgroups. Demographic data was collected by chart review.

Results: Results including the proportion of older patients willing to be vaccinated, the reasons for vaccine hesitancy, and clinical team member debrief will be forthcoming.

Conclusions: We conducted a brief qualitative report characterizing vaccine perceptions and hesitancy in a high-risk older population. This preliminary data informs healthcare providers of potential health literacy, cultural and language, and other potential barriers in order to help further understand how to optimize SARS-CoV-2 vaccine acceptance and delivery.

A405

What if Independence at Home (IAH) Practices were measured like High Needs Population Direct Contracting Entities? Greater Savings.

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Background The IAH demonstration, recently expanded and extended to 10 years, has shown that mobile interdisciplinary teams can efficiently care for frail, home-limited Medicare beneficiaries, improving quality while reducing cost. During the past decade, other CMS demonstrations have been developed to provide primary care to complex Medicare beneficiaries, with High Needs Population Direct Contracting (HNDC) being the closest to IAH in design, with improved cash flow. While IAH is a one-sided shared savings model, HNDC is a partial capitation model with 2-sided risk. Due to administrative issues, 2018 was a demo gap year demo, between demo years 5 and 6. We wanted to know how IAH practices would have performed under HNDC rules (7% advance primary care payment, concurrent V24 model), compared to Year 5 and projected Year 6 of the IAH demonstration.

Methods: We used 100% Medicare claims to identify all IAH-qualified patients managed by the Year 5 IAH demo practices (N=14). IAH claims qualification used 2017 data, including the JEN frailty index for 2+ ADL dependency. We computed end of year V24 HCC scores to proxy a concurrent HCC model, and evaluated cost benchmarks using the HNDC ratebook adjusted to 2018. Advanced payment was adjusted for FFS practice payments. HNDC:IAH qualified patient comparison was based on a subset of practices.

Results: IAHq beneficiaries were less prevalent than HNDC (51% to 60%), 43% of beneficiaries qualified for both. HCC and JFI scores were similar (4.08 IAH vs 4.10 HNDC; JFI 8.3 IAH vs 8.13 HNDC). Truncated qualification identified 59% of Y5 demo beneficiaries (5659/9654). Total savings were $19.7M, with an additional $1.1M in advance payments, a total of $397 PBPM in savings. IAH in Y5 had $297 PBPM in savings, with Y6 projected at $246 PBPM.

Conclusions: IAH practices, judged against HNDC benchmarking, produced greater total savings than in either Y5 or Y6 using IAH benchmarking. Identified patients were similar, although HNDC identified a slighted larger share of the practices. Advanced primary care payments net of FFS practice revenue was modest ($22 PBPM).

Policy Implications: HNDC and IAH should be harmonized with a common, concurrent V24 based benchmarking approach, and enhanced advance primary care payments (9% vs 7% of expected).

A406

Informal Caregiver Burden and Acute Healthcare Utilization for Veterans with Dementia in Home Based Primary Care (HBPC)

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Background: Home-Based Primary Care (HBPC) serves multimorbid veterans (including over 20,000 with dementia yearly) and provides interdisciplinary home-based longitudinal care. A key program goal is to minimize preventable acute care (ER and hospitalization). Research outside the VA has shown that patients with dementia are more likely than their age- and comorbidity-matched peers to receive

preventable acute care. Informal caregivers (family and/or friends) play a key role in decisions to seek such acute care for

patients with dementia, and caregiver burden may impact their choice.

Objective: To ascertain likelihood of preventable acute care based on caregiver burden among Veterans

with dementia participating in HBPC.

Methods: An observational cross-sectional cohort of 527 Veterans greater than 50 years old with ICD

codes consistent with a diagnosis of dementia, HBPC participation within a ten-year time frame, and

receipt of care from a location with documented burden scores (Puget Sound, WA and Bronx, NY).

Multivariable logistic regression was conducted using burden as an exposure (Categorical variable: High

>=8 on 4-Item Zarit Burden Interview, Low <8) and VA ER or hospital use as an outcome (Categorical

variable, one year after Zarit screening). Confounders include Veteran age and comorbidity (Gagne

Score).

Results: The odds of hospitalization or ER use in those whose caregivers reported high burden, after

adjusting for age, comorbidity and offsetting for right censoring, was 1.16 times as high as those whose

caregivers report low burden (CI:0.78-1.71).

Conclusions: Although the association found between caregiver burden and acute health utilization was

not significant, this effect may be secondary to the inability of a one-time administration of a screening

version of the Zarit Burden Interview to adequately measure burden for caregivers of this multi-morbid

population of patients with dementia. Targeted caregiver support programs are needed for this population as identification of burden alone is insufficient to change acute health utilization behavior.

A407

The WOOP Group: Piloting a Support Group Activity for Care Partners of Individuals Living with Dementia

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Background: Behavioral interventions have the potential to alleviate stress and encourage emotional well-being for care partners of individuals living with dementia. Integrating behavioral interventions that have been validated with individuals into a support group setting can provide a number of additional benefits including the discussion of shared experiences. No research to our knowledge has examined this type of translation in the context of dementia care. This pilot study examined the emotional effects of a brief self-regulation intervention, known as the Wish Outcome Obstacle Plan (WOOP) strategy, by introducing it to care partners and asking them to discuss their practice in a virtual support group.

Methods: This pre-post intervention study recruited 6 adults who identified as care partners of individuals diagnosed with dementia. Each care partner received individualized WOOP training over the phone and were asked to practice the mental strategy daily for three weeks. They were then brought together in a virtual support group session to engage in the activity and discuss their experiences after practicing WOOP for three weeks. Care partners completed surveys at home (at baseline and after the group session) that measured perceived stress and negative and positive emotions. Care partners also engaged in post-intervention qualitative interviews to assess the added value of the group experience.

Results: The Results will be discussed. Post-intervention data is currently being collected.

Conclusions: We hypothesize that WOOP will be acceptable, feasible, and may have added benefit in the group setting. Implications of the study would be that support group leaders can use WOOP as a brief intervention to improve dementia care partners' perceived stress and emotional well-being. This project is a small pilot that will lead to a larger study to determine efficacy.

A408 Encore Presentation

Comparative efficacy of insomnia treatments: a network meta-analysis

H. McElroy,[2] B. O'leary,[2] M. Adena,[2] R. Campbell,[1] G. Meier,[1] A. Abbas Tahami Monfared.[1] *1. Eisai Inc, Brooklyn, NY; 2. Datalytics, Kingston, ACT, Australia.*

Background: Insomnia, involving sleep disturbances such as difficulty falling asleep or premature wakening, is common in elderly people. Lemborexant (LEM) is a new dual orexin receptor agonist approved for insomnia treatment. The objective of this study was to compare the efficacy and safety of lemborexant with other insomnia treatments.

Methods: Medline and EMBase were searched in Oct 2017 and Feb 2019. English-language, randomized controlled trials (excluding crossover trials) in adult or elderly patients with primary insomnia with ≥2 interventions of interest or placebo following ≥1 week of treatment were included. Interventions of interest were LEM, suvorexant (SUV), benzodiazepines (BZDs), non-BZDs (zolpidem, eszopiclone, zaleplon, zopiclone), trazodone and ramelteon. Efficacy outcomes included wake after sleep onset (WASO), sleep efficiency (SE), latency to persistent sleep (LPS)/sleep onset latency (SOL), total sleep time (TST) and Insomnia Severity Index (ISI). Bayesian network meta-analyses were performed at ~4 weeks, 3 months and 6 months. Safety outcomes included serious adverse events (SAEs) and withdrawals due to adverse events (AEs).

Results: The analysis included 45 studies covering 16 treatments. LEM had the highest probability of being the best treatment for three of the four outcomes measured objectively by polysomnography: TST, LPS and SE, and was ranked second to SUV on WASO at 4 weeks. Eszopiclone was highly ranked for subjective measures at 4 weeks, 3 months and 6 months. LEM was rated higher than SUV in subjective measures of WASO, TST or SOL at 4 weeks, although differences were not statistically significant. No statistically significant interactions were found between treatment effect and the elderly, indicating that treatment effect was similar in elderly and non-elderly people. LEM was broadly similar to other treatments for SAEs and withdrawals due to AEs.

Conclusions: Lemborexant was ranked highest of the treatments studied on three out of four objectively measured insomnia efficacy outcomes, with a safety profile similar to other insomnia treatments.

A409

Demographic Analysis of Variations in 4AT Positivity Rates

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Background: Delirium prevalence increases with age for hospitalized adults and is frequently reported to be greater in males. Our hospital system uses a modified 4AT test to screen all patients age ≥ 70 in acute care units for delirium. We noted variation in rates of positive screens among hospitals and wanted to understand if patient characteristics were responsible. Thus, we evaluated delirium, documented by positive 4AT, by age, sex, and admission type per hospital.

Methods: Retrospective cohort study of de-identified data from 4AT dataset of all admissions age ≥ 70 discharged from 7 acute care hospitals (1 Tertiary Care and 6 community) in 2018 to compare positive screening rates by age, hospital and sex. Demographic administrative data (emergency vs elective admission) were compared across hospitals.

Results: In 2018, 39,423 patients age 70 or greater were discharged from the 7 hospitals. 4AT positive rates increased significantly with every decade (p< 0.001) (Age 70-79 20%, 80-89 35%, >=90 52%). Patients age ≥ 80 accounted for more than 60% of patients with positive 4AT screens. Females had significantly higher rates of positive screens across all age groups. Even among narrow demographic group like women age 80-89, 4AT positivity ranged widely from 28% to more than 40%. The 4AT positive rates were similar for most community hospitals (elective admission rates 7-14%) with three at 32% and two at 29%. Hospitals with high elective admission rates had lower delirium prevalence. The tertiary care hospital (HMH) had significantly different delirium rates from all others (25%) and highest elective admission rates (22%).

Conclusions: Positive delirium screen rate increased with age across all hospitals. While others have shown males have increased risk of delirium, women had more positive screens in our system. Variation in hospital 4AT positive rates correlated with elective admission rates, age and other, unknown factors.

A410

Disturbed sleep as a predictor of impulsivity in adults with bipolar disorder.

M. Patapoff, E. Lee, M. Ramsey, L. Eyler. *Psychiatry, University of California San Diego, San Diego, CA.*

Background: Sleep disturbance and impulsivity are known features of bipolar disorder (BD), and impulsivity has been linked with poor sleep as well as poor health outcomes and suicidality in individuals with BD. However, the directionality of the sleep-impulsivity relationship or which aspects of sleep are most influential on impulsivity are not known. Using a combination of subjective and objective sleep measures as well as ecological momentary assessment (EMA) of impulsivity, this study examines the predictive nature of the relationship between sleep and impulsive mood.

Methods: This study includes 56 adults with BD from the greater San Diego area who wore actigraphy devices for a 14-day period. During this period, participants completed three short EMA surveys about their mood and sleep each day via mobile devices. Subjective sleep was measured using the Pittsburgh Sleep Quality Index (PSQI) and a daily EMA sleep quality question. Linear mixed models were used to examine the relationship between mean sleep and mood variables over the 14-day period, as well as to conduct time-lag analyses to examine how mood affected that night's sleep and vice versa. Variability in sleep and impulsivity were included as well.

Results: The study sample was 63% female (mean age 47 ± 9 years). The ethnic diversity of the sample was as follows: 58% Caucasian, 11% African American, 20% Hispanic, 4% Asian, 2% Pacific Islander, 5% biracial or other. Over the 14-day period, worse subjective sleep quality was linked to greater impulsivity. Longer total sleep time was associated with lower mean impulsivity and lower variability in impulsive mood. Time-lag analyses showed that lower sleep efficiency and greater wake after sleep onset (duration of overnight awakenings) predicted greater atypicality of impulsive mood the next day. Impulsive mood during the day predicted later sleep onset time that night.

Conclusion: These findings support a predictive relationship between disturbed sleep and impulsivity. The prediction of mood changes through sleep assessment may allow for novel preventative measures in bipolar disorder, through monitoring and improving sleep, as well as using irregularities in sleep patterns to trigger just-in-time interventions for adults with BD. Improving impulsivity may ultimately affect outcomes such as suicidality and other risky behaviors that are common in BD.

A411

Association between COVID-19 Severity and Delirium in Hospitalized Adults with Confirmed SARS-CoV-2 Infection

S. C. LaHue, D. P. Escueta, E. Guterman, K. Patel, k. L. Harrison, V. Douglas, J. Newman. *University of California San Francisco, San Francisco, CA.*

Background: Despite growing recognition of neurological complications associated with SARS-CoV-2 infection, whether coronavirus disease 19 (COVID-19) severity is associated with delirium in hospitalized patients is poorly understood.

Methods: This retrospective cohort study included all individuals at least 18 years old diagnosed with COVID-19 using reverse transcriptase polymerase chain reaction for SARS-CoV-2, hospitalized for at least 48 hours from February 1-July 15, 2020. Diagnosis of COVID-19 was identified using ICD-10 code U07.1. COVID-19 infection severity quartiles were adapted using WHO criteria for each patient within 24-hours of admission. Trained nursing staff screened all patients for delirium each shift as part of a multidisciplinary delirium care pathway using either NuDESC (non-ICU) or CAM-ICU. Multivariable logistic regression models assessed the association between initial COVID-19 severity and delirium, as well as the association between delirium and clinical outcomes.

Results: We identified 99 patients with COVID-19, of whom 44 required ICU care and 17 met criteria for severe disease within 24-hours of admission. 43% were delirious during hospitalization; 63% of patients at least 65 years old were delirious, compared with 35% of patients under 65 (p=0.01). 70% of delirious patients received ICU-level care, compared with 25% of those without delirium (p<0.001). After adjustment, patients with the highest severity of COVID-19 within 24-hours of admission were 31.1 times more likely to have delirium compared to those with the lowest level of COVID-19 severity (aOR 31.1; 95% CI 4.6, 209.1; P<0.001). Age slightly increased odds of delirium (aOR 1.04; 95% CI 1.01; P=0.007). Delirious patients also experienced increased odds of restraint use (aOR 83.3; 95% CI 3.7, 1866.27; P=0.005) and decreased odds of discharge home (aOR 0.2; 95% CI 0.04, 0.7; P=0.02) compared with non-delirious patients.

Conclusion: Delirium is common in hospitalized patients with COVID-19, especially in those with severe disease and in older adults. Older adults with COVID-19 are an important population to target for delirium screening and management as delirium is associated with key differences in both clinical care and disposition.

A412

Depressive symptoms in nursing home residents with COVID-19

W. Mak,[1] H. M. Weerahandi,[2] O. Burack,[1] B. Canter,[3] J. Reinhardt,[1,4] K. Boockvar.[4,1] *1. Research Institute on Aging, Jewish Home Lifecare, New York, NY; 2. Medicine, NYU Langone Health, New York, NY; 3. Skidmore College, Larchmont, NY; 4. Icahn School of Medicine at Mount Sinai, New York, NY.*

Background: The psychological state of nursing home residents' with COVID-19 is not well documented. The goal of this study was to assess changes in incidence of depressive symptoms over the COVID-19 disease course and identify areas of vulnerability. **Methods:** Residents at a NYC skilled nursing facility with a positive COVID-19 PCR test between 3/1/2020 – 6/1/2020 were included. The Minimum Data Set (3.0) was used to examine residents' Patient Health Questionnaire-9 (PHQ-9) scores prior to COVID-19 diagnosis, 1-30 days after diagnosis, and 31 or more days after diagnosis. Individual PHQ-9 items were examined as well. Descriptives, chi-square, and repeated measures GLM were used. **Results:** 359 nursing home residents (mean age = 79 years, 56% female) with COVID-19 were included. The average PHQ-9 score at baseline was 1.41, indicating low endorsement of depression symptoms. From baseline to 30 days (n=128), 14.1% of residents showed increased

PHQ-9 scores, indicating increased depressive symptoms, 17.2% showed decreases, and 68.8% showed no change. From 30 days to post-30 days (n=123), 14.6% showed increased PHQ-9 scores, 8.9% showed decreases, and 76.4% showed no change. Residents with three data points (n=95) showed no change in PHQ-9 scores over time (p = .67). At baseline, PHQ-9 items endorsed by at least 10% of the residents included feeling depressed (13.9%), trouble with sleep (10.6%), and little energy (18.4%). During the 30-day window, endorsement increased for little energy (24%), and poor appetite/overeating was endorsed by 14%. Residents reported higher frequency of these problems during the 30 days of their illness compared to baseline and post 30 days (p = .02). After 30 days, the only item that was endorsed beyond 10% was little energy (15.9%). **Conclusion:** The COVID-19 pandemic caused unprecedented challenges in nursing homes that may have affected the psychological state of its residents with COVID-19. While PHQ-9 summary scores did not change over time, individual symptoms did wax and wane. Nursing home residents with COVID-19 experienced more days with appetite loss/overeating and little energy during the 30 days after COVID-19 diagnosis compared to baseline and post 30 days. Low energy persisted beyond 30 days after COVID-19 diagnosis.

PRESIDENTIAL POSTER SESSION B

Thursday, May 13
5:00 pm – 6:00 pm

B1

Religious Fasting with Artificial Nutrition: An Ethical Dilemma

N. Yarze, C. Nolan, T. Holahan. *Geriatrics, University of Rochester Medical Center, Rochester, NY.*

Purpose: In the medical literature, there is a scarcity of discussions on the refusal of artificial nutrition due to religious fast. We present a case of an older adult patient who is chronic ventilator dependent and resides in the nursing home (NH). He requires tube feeds due to irreversible dysphagia secondary to Amyotrophic Lateral Sclerosis (ALS). He is religious with a history of fasting as part of his faith practice. He continues to request to fast for 2-4 week periods of time which creates a unique dilemma for the NH staff to address.

Case: 80 yo male with ALS, tracheostomy with ventilator dependence, dysphagia s/p PEG tube and suprapubic catheter who resides in a NH. He identifies as being a devout Christian. Several months after NH admission, he began to decline tube feeds, expressing that he was "full." He denied pain and was in his usual state of health. Per family this behavior was similar to his prior fasts, which he expressed would only end when he received a "spiritual or physical [hunger] sign from God." Per medical staff, resident appreciated the risks of feeding refusal and was deemed to have capacity to decline tube feeds. While fasting, he developed hyponatremia, hypokalemia, hypomagnesemia and leukocytosis. He accepted free water, normal saline and electrolytes through his tube. After 14-28 days, he usually accepted feeds again, which were slowly reintroduced to reduce the risk of refeeding syndrome.

Discussion: This case discusses a resident refusing tube feeds as they would refuse food by mouth for religious reasons. Per medical literature, it is unethical to force human beings to eat, including those on hunger strikes. However, discussions regarding religious fasts do not address artificial nutrition, a medical treatment. This situation highlights the need for palliative care skills, pastoral care and clinical ethics that are often scarce resources in the NH. We offer a stepwise framework to help NH teams address these issues. 1. Determine the patient's capacity. 2. Review and understand physiologic results of fasting and risks for refeeding syndrome so care can be optimized for a patient who fasts and then re-initiates nutrition. 3. Review and discuss the regulatory difficulties of this scenario and how to address them.

References:

1. Bendtsen On the Fore Feeding of Prisoners on Hunger Strike. HEC Fourm 2019; 31(3):29-48.

2. Reber, et al Management of Refeeding Syndrome in Medical Inpatients. J. Clin Med 2019; 8(12):2202.

B2 Resident Presentation

No Difference in Mortality with Palliative Opioids Compared to Intubation in Long-Term Care Facility Residents with Severe COVID-19 Symptoms

S. Assadzandi,[1] J. Williamson,[1] E. Crocetti,[2,1] C. Pilkerton,[1] A. Ashcraft,[1] C. Shrader.[1] *1. West Virginia University, Morgantown, WV; 2. Family Practice Clinic, Naval Education and Training Command, Pensacola, FL.*

In March 2020, a resident at a 98-bed long-term care facility (LTCF) in Morgantown, West Virginia was the first confirmed COVID-19 positive case in the state. Within 48 hours, 40 facility residents had tested positive, with 11 eventually developing severe respiratory symptoms requiring escalation of treatment. This study examined associations between the treatment received, location, and mortality in the residents who experienced severe respiratory symptoms secondary to COVID-19. Residents with severe symptoms had a mean age of 84 years and 81.2% were female. All were chronically ill at baseline with an average of 8 chronic medical conditions each. With respect to treatment, 3 of the 11 residents opted for transfer to a hospital where they continued to decline and required intubation. The 8 residents who developed respiratory failure and elected to stay at the LTCF at the facility received palliative measures including opioids for dyspnea. No statistically significant differences in age, gender, chronic medical conditions, or medications were found among those who remained at the LTCF receiving opioid therapy versus those hospitalized and intubated. Overall mortality among the residents who developed severe respiratory symptoms was 45.5%. Across four time points mortality was not statistically different between those hospitalized versus those who received palliative opioids at the LTCF. These findings, although limited due to small sample size, suggest that LTCF staff can provide the necessary care to residents with COVID-19 while maintaining mortality rates comparable to hospitalization. This may have significant cost implications for both the resident and health care system given that the cost difference between one day in a LTCF versus a day in the intensive care unit can easily be $10,000. Our findings also suggest that palliative opioids may be an important tool in bridging the gap in both rural and low-resource areas until higher levels of care can be accessed.

B3 Student Presentation, Encore Presentation

Telemedicine and Dementia Care: A Systematic Review of Barriers and Facilitators

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Background: An increasing reliance on telemedicine for older adults with cognitive impairment requires a better understanding of the barriers and facilitators for this unique patient population. Telemedicine that is responsive to the technological abilities and preferences as well as the sensory needs of persons living with dementia is critical to advancing access to care.

Methods: The study team queried PubMed, Embase, the Cochrane Library, PsycINFO, CINAHL, and Scopus, and ClinicalTrials.gov on May 1, 2020 for studies in English published from January 2010 to May 2020. We included articles that investigate the use of telemedicine among older adults with Alzheimer's disease and related dementia (ADRD) or mild cognitive impairment (MCI) that focused on the patient and care partner perspectives. Telemedicine

encounter purpose, technological requirements, and findings regarding sensory needs were extracted. The Cochrane Collaboration's Risk of Bias Tool was applied for quality assessment.

Results: The initial search yielded 3551 nonduplicate abstracts, from which 90 articles were reviewed and 17 were included. The purpose of telemedicine encounters included routine care, cognitive assessment, and telerehabilitation. Three studies investigated telemedicine delivery in the home. 16 studies relied upon support staff and care partners to navigate technologies. No studies reported technological adaptations to account for hearing loss. Among the domains assessed using the Cochrane Risk of Bias Tool, the 'incomplete outcome data' domain had the greatest number of studies rated as "high risk" of bias.

Conclusions: Successful delivery of telemedicine requires support staff and care partners to navigate technologies and optimize the environment for older adults with cognitive impairment. Technological adaptations to account for sensory needs are lacking and warrant further research to serve this population.

B4

Atypical Presentation of Frontotemporal Dementia, Diagnosed with Advanced Imaging

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Introduction

Frontotemporal Dementia (FTD) is an underrecognized cause of dementia, with variable presentations that can be diagnostically challenging. Advanced imaging techniques can allow for accurate and timely diagnosis.

Case Description

A 73-year-old male without neuropsychiatric history was status post spinal laminectomy for lumbar stenosis. Postoperative course was complicated by wound infection, delirium, and hallucinations. His infection resolved and his cognition improved. He presented to our institution eight months postoperatively with auditory, visual, and tactile hallucinations for months. The patient described aquatic creatures that crawled in bed and bit his legs, associated with pain. Family confirmed that the patient was highly functional and cognitively intact prior to surgery and that onset of hallucinations seemed abrupt. Exam elicited subtle visuospatial deficits and mild bradykinesia of the left upper extremity. Attention, orientation, memory, and language were all intact. MRI brain showed no structural abnormalities and video-EEG had no epileptiform findings. Cerebrospinal fluid showed no evidence for infectious or inflammatory processes. Dementia with Lewy Bodies (DLB) was suspected due to hallucinations, subtle bradykinesia, and visuospatial impairment. Dopamine Transporter SPECT scan demonstrated normal bilateral striatal uptake. NM-PET of brain showed significant hypometabolism of bilateral frontal and temporal lobes, suggestive of FTD.

Discussion

Psychotic symptoms were previously reported to be rare in FTD, but recent studies have unveiled a higher proportion of patients with FTD and concurrent psychosis. In a study of 97 patients with autopsy-confirmed FTD, 17.5% demonstrated hallucinations. FTD with parkinsonism has previously been recognized as well, with findings of severe parkinsonism in 7% of 126 pathologically confirmed cases of FTD in one observational study. The discrepancy between this patient's clinical syndrome, consistent with DLB, and his imaging findings, consistent with FTD, highlights the clinically heterogenous features of both disorders and suggests that a broad differential for neurodegenerative diseases, including FTD, should be considered for new-onset psychosis in the geriatric population. As these disorders are managed differently, advanced imaging techniques can be useful in diagnostically challenging cases.

B5

Does hip BMD predict the 10-year probability of osteoporotic fractures in patients with prior fragility fractures?

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Introduction:

The Fracture Risk Assessment Tool (FRAX) utilizes clinical risk factors for osteoporosis with or without neck of femur (NOF) T-score to predict the 10-year probability of fragility fracture. It is not clear whether there is correlation between total hip T-score and future fragility fracture using FRAX UK without NOF T-score.

Aims:

1. To determine if the total hip T-score correlates with FRAX UK without NOF T-score

2. To assess the impact of gender on this correlation

Methods:

A retrospective, cross-sectional analysis was carried out on patients with prior fragility fractures attending a fracture prevention clinic. SPSS 27 software package was used for statistical analysis. Descriptive statistics, Pearson's correlation co-efficient and linear regression were used for statistical analysis.

Results:

205 patients were analyzed. There were 28 males and 177 females. Average age was 69.7 years +/- 10.45. There was negative correlation between total hip T-score and the 10-year probability of major osteoporotic fracture (r= .353; p<.001) and the 10-year probability of hip fracture (r=-.327; p<.001). This effect persisted in females for the 10-year probability of major osteoporotic fracture (r=-.370; p<.001) and the 10-year probability of hip fracture (r=-.330; p<.001). In males there was no significant correlation between total hip T-score and the 10 year probability of major osteoporotic fracture (r=-.095;p=.65) or hip fracture (r=-.364;p=.07).

Conclusion:

Total hip BMD is negatively correlated with the 10-year probability of major osteoporotic and hip fractures in female patients but there is no significant correlation in males

Reference:

Gadam R, Schlauch K, Izuora K.E. FRAX Prediction without BMD For Assessment of Osteoporosic Fracture Risk. Endocrine Practice 2013;19(5):780-784.doi:10.4158/EP12416.OR

B6

Oh What a Tangled Web We Weave: A Case of Drug-Induced Livedo Reticularis

C. Lau, M. C. Dale. *University of North Carolina at Chapel Hill, Chapel Hill, NC.*

Case: A 70-year-old woman with multiple sclerosis (MS) was admitted for sepsis from proctocolitis. The course was complicated by acute kidney injury (creatinine 2.1 mg/dL), Raynaud phenomenon, and livedo reticularis. Her home medications included amantadine, which was continued during hospitalization. One month later, she was seen in clinic for unintentional 20-pound weight loss, fatigue, leg edema, severe generalized pruritus, excessive hair loss, and persistent livedo reticularis. She underwent broad rheumatologic workup that was unrevealing. Symptoms remained for another month until her neurologist stopped amantadine for its lack of benefit in relieving fatigue. Within a month of stopping the medication, all symptoms resolved.

Discussion: Amantadine is frequently used as an evidence-based therapy for fatigue in MS. The incidence of adverse effects for an indication of MS fatigue ranges from 10% to 57%. Each of the symptoms seen in this case have been identified as adverse effects of amantadine, in order of decreasing incidence: peripheral edema, livedo reticularis, loss of appetite, generalized pruritus, and alopecia (very rare). The most common side effects include orthostatic hypotension, syncope, and psychosis.

The incidence of adverse drug reactions is known to increase with age. This holds true for drug-related rashes and skin eruptions. Though a relatively rare side effect for any medication, livedo reticularis has been associated with several, including amantadine, bromocriptine, beta interferon, and several stimulants.

Amantadine is renally eliminated. Its mechanism of action involves a weak NMDA-antagonist effect. The half-life ranges from 20 to 40 hours in older adults. When creatinine clearance is less than 40 mL/min, elimination half-life can increase by 3-fold. With the patient's acute kidney injury, the drug could have been present at a supratherapeutic level for nearly a month, potentially precipitating her adverse effects. It is vital to note that creatinine and common calculators of glomerular filtration rate and creatinine clearance frequently overestimate renal clearance in older adults due to physiologic changes of aging. This can lead to increased incidence of toxicities and greater likelihood of adverse effects.

Conclusion: Careful medication review and dose adjustment for renal function are important to remember at the time of admission and at hospital follow-up visits, particularly when new unexplained symptoms are present.

B7 Resident Presentation

The Glute That Keeps on Growing: Rare and Unusual Mass in the Geriatric Population

G. v. Ruiz, R. Al-Dossari. *Family Medicine, Memorial Family Medicine Residency Program, Houston, TX.*

Introduction: Sarcomas are a rare group of malignant tumors of skeletal and extraskeletal connective tissues that comprise of less than 1% of all adult malignancies, with 80% originating from soft tissue. As patient populations age, sarcomas may become more common but are infrequently reported. They should be on the differential with rapid soft tissue growth in the geriatric population for early diagnosis and treatment. The diagnosis of sarcoma presents as a challenge in the elderly as it is not a common etiology for pain, causing a delay in work-up.

Case Description: A 71-year-old male with OSA, HTN, diabetes, renal cell carcinoma with nephrectomy and osteoarthritis of right hip, presented to clinic with 3-month history of progressive growth of right buttock.

On presentation vital signs were stable, and patient was in no distress. His right gluteal region was triple the size of the left buttock. There was no erythema, warmth, or bruising. On palpation, there was a large painless firm mass. Ultrasound of R hip showed a well-marginated heterogeneous solid-appearing lesion, possibly a hematoma or neoplasm. A CT scan of pelvis showed right gluteus maximus muscle rim enhancing heterogeneous lesion, possibly representing intramuscular abscess, soft tissue sarcoma or metastatic disease. Patient was referred to surgery and thought to have a hematoma. A right gluteal hematoma was evacuated with right gluteal biopsy. Biopsy showed high-grade sarcoma suggestive of smooth muscle origin. Patient was referred to oncology and orthopedic for further management which consists of chemotherapy with future surgical resection.

Discussion: This case highlights the importance of considering rare sarcomas on your differential in the elderly population given its malignant nature. This rare tumor may be difficult to diagnose and treat due to co-morbidities and wide differential in the elderly patients. These patients require adequate support and access to healthcare for multiple evaluations. Distal sarcomas may require amputation, while proximal sarcomas present difficulty with removing the cancer and preserving muscle tissue to improve quality of life especially in the geriatric population.

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B8 Student Presentation

Delirium Assessment in the Context of Language Barriers and Comorbidities

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This case closely examines the interplay of the invisibility of systemic racism and ageism in healthcare and how it was augmented in the presence of increasing frailty.

We present an 86-year-old immigrant male who is primarily Mandarin speaking with past medical history of mild Alzheimer disease, severe hearing loss, and heart failure. He was admitted to the hospital for surgical evaluation of valve insufficiency. His case was prolonged and resulted in dysphagia for all consistencies secondary to vocal cord paresis. He was transferred to the general medical floor without reliable means of nutrition. Staff reported that he was screaming for water despite explanation that he was kept nothing by mouth due to dysphagia. It was reported that he declined Mandarin interpreter and was oriented only to person. Geriatrics team was consulted to evaluate for hyperactive delirium and assess for need of Haloperidol. Primary team was concerned about placing a feeding tube for a patient with dementia and wanted to clarify goals of care with the family.

When interviewed in person by a Mandarin-speaking member of the geriatrics team, patient was oriented to person, place, and time. He was not aware of why his request for water for was ignored. After explanation of risk for aspiration and confirmation with surgical team that he was allowed to have ice chips, patient asked for ice chips frequently but ceased the screaming and could assist himself with suctioning. When obtaining consent for temporary feeding tube placement, patient engaged in the discussion with thoughtful questions and good insight of illness.

Some of the ageism exemplified in this case included his ability to consent to feeding tube even in the presence of dementia. This was a reasonable intervention due to iatrogenic nature of vocal cord dysfunction and need for healing from surgery, not to be withheld due to history of "dementia." The systematic bias towards non-English speaking immigrants included lack of recognition that his screaming was a call for help after being continuously dismissed without clear explanation. It was documented that he declined an interpreter, when he was not able to hear the interpreter line, manifesting the intersection of ageism and bias towards immigrants. His language barrier and history of cognitive impairment led the medical team to conclude he did not have capacity, and considered giving him Haldol to sedate him due to lacked access to proper communication method.

B9

Can I have a popsicle? A complex case of end of life care for a patient with a legal professional guardian

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Background: End of life care for adults who lack decision-making capacity with court-appointed guardians is challenging. This is due to lack of both advanced directives and personal knowledge of patient goals and values, as well as legal burdens related to transitioning to comfort-focused care.

Case: A 62 year-old resident of a long-term care psychiatric facility was admitted for 52 days in fall of 2020 after an aspiration event, requiring intubation. She had a history of schizoaffective disorder, moderate dementia, advanced chronic obstructive pulmonary disease, lung cancer without formal staging, and chronic aspiration with two failed gastric tube placements due to forcible patient removal. The patient lacked capacity to make medical decisions and had a court-appointed guardian. Extubation was complicated by delirium and the patient subsequently had continued aspiration events. She continued to request to eat and was able to say "food gets caught", but unable to demonstrate understanding of associated risks. She received temporary nutrition via nasogastric tube, but removed it several times and required restraints, causing significant emotional distress for the patient and providers. After discussion with the patient's legal guardian, a motion to expand guardianship powers to transition to comfort measures was denied by the court. The patient continued to have recurrent aspiration events and progressive respiratory decline. Several in-house ethics committee meetings were held and supported the medical team's decision to transition to comfort-focused care.

Discussion: This case illustrates the ethical challenges and moral distress faced by patients, providers and caregivers for patients with professional guardians. There is no standard approach to medical decision making. Evidence evaluating quality and outcomes is lacking, though our experience underscores the value of a multidisciplinary approach to care for these patients including ethics and palliative care teams. Medical decision making is complicated in the acute care setting, when timely changes in treatment are delayed by court processes. This case highlights the importance of further investigation and legislation to enact a more standardized delivery of care for these vulnerable patients.

B10

Dermatitis caused by nutritional deficiency in the elderly: Not a myth

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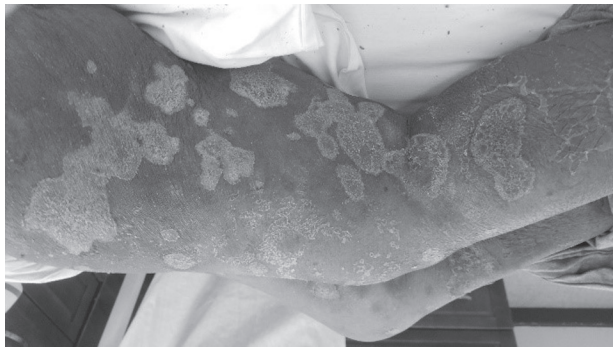
Background: Nutritional risk increases with advanced age due to may factors including socioeconomic limits, medications, physical impairments, and overall diminished body reserves. Although it is important to assess protein deficiency when treating geriatric patients, one should also consider trace elements and vitamins, as deficiency can lead to disease, including dermatitis.

Presentation: A 74-year-old woman presented to the hospital following a fall and was diagnosed with septic shock due to infected open skin lesions on her left knee causing MSSA bacteremia. On examination, she had a scaly diffuse rash involving her face, trunk and extremities with no mucosal involvement. She was treated with antibiotics and dermatology initially thought she had psoriasis vulgaris.

Punch biopsy and histopathology revealed focal intracorneal bulla with subjacent spongiotic dermatitis and intraepidermal dyskeratotic keratinocytes suggesting nutritional deficiencies after ruling out autoimmune causes. Laboratory workup revealed decreased levels of Vitamins A, B6, B12, C, D, zinc and iron. She was given nutritional supplements and vitamins and discharged to a skilled nursing facility with continued treatment and the addition of vitamin B12 and D. Within 2 months, all levels were normal, with the exception of vitamin C. Her skin lesions improved significantly.

Conclusion: This case demonstrates the importance of considering nutritional deficiencies when assessing elderly patients, especially in regards to skin lesions. Nutritional assessments and interventions are easily accessible and are an efficient way to help diagnose dermatological conditions in geriatric patients. The tragedy of this COVID-19 pandemic is that this already vulnerable population is facing enormous challenges and that this is manifesting in uncommon ways such as skin lesions caused by nutritional deficiencies.



B11 Student Presentation

Understanding the Area Agency on Aging's Response to the COVID-19 Pandemic

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Background: The Area Agencies on Aging (AAAs) provide older adults with community resources and in-home services that are aimed at promoting independence and well-being to those aged 60 and older [1]. AAAs provide a variety of services including social work, nursing, care management, meal delivery, and transportation. The COVID-19 pandemic has been particularly devastating for older adults as stay-at-home orders prevented access to many social activities such as congregate meal sites and day centers, leading to increased risk of loneliness and isolation [2]. The AAAs were tasked with facing issues such as connecting clients to vital resources, preventing social isolation, and providing effective case management. In this paper we will look at how the AAAs addressed the issues associated with serving an older population during the pandemic.

Methods: This data was gathered through semi-structured interviews with a Social Worker, Registered Nurse, program supervisor, and client at the Area Agency on Aging – Kalamazoo. Data from the interview was coded to create categories and sub-categories. These categories were used to identify major themes in the data.

Results: Table 1 displays the themes that were found during data analysis. Interview statements supporting the themes will be discussed.

Conclusions: The AAAs successfully adapted to a remote work and care environment by implementing programs such as the Friendly Reassurance program, which placed phones calls to older adults in need of social support and partnering with local food shelters to provide meal delivery services. As of January 2021, the AAAs are continuing such programs and frequently adding online courses to better serve their clients. It will be necessary to continue interviewing agency members and clients to better understand their perspectives.

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Table 1: Themes.

Identified Theme	Associated Sub-Category
1. Risk of social isolation	A. Closure of Adult Day centers which led to emotional, physical, and cognitive declines in older adults as recognized through observations made by AAA staff B.Difficulty adapting to socializing in a virtual environment C.Older adults who do not have family/friends in the area and relied on AAA staff for social support D. Creation of the Friendly Reassurance program which allowed older adults to call in to AAA centers for social support
2. Risk of food insecurity	A.Fear of having others come into the home to assist with food delivery B.Fear of entering grocery stores C.Difficulties using digital apps to order food and groceries D.AAA partnership with United States Department of Agriculture to create food delivery boxes for older adults
3. Difficulties in providing effective case management to older adults in a remote environment	A. Inability of social workers and nurses to directly observe clients in their homes B. Fear of allowing staff into home due to COVID-19 risk which led to older adults declining AAA services that they had previously been receiving

B12

HFpEF: A Geriatric Syndrome

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Introduction: Heart failure with preserved ejection fraction (HFpEF) is becoming increasingly common among older adults. Currently, HFpEF is a geriatric syndrome involving multiple organ systems, predisposing to frailty, and cognitive impairment. (Beltrami, 2019) HFpEF is more commonly diagnosed than heart failure with reduced ejection fraction and a significant contributor to hospital readmissions, with the vast majority of readmissions due to non-cardiac causes. The prevalence of HFpEF is increasing in our aging population due to an increase in risk factors, including hypertension, obesity, and diabetes. HFpEF patients have co-existent undiagnosed depression, frailty, and lower quality of life. (Warraich, 2018) This case report discusses a patient with multiple co-morbid conditions and her arduous course involving multiple hospital readmissions, prolonged subacute rehabilitation (SAR), then needing long term care (LTC) before being referred to hospice.

Case: The patient is a 72-year-old female with a past medical history of obesity, HFpEF, nonalcoholic steatohepatitis cirrhosis, stage 3 kidney disease, osteomyelitis, and toe amputation. During her last year of life, she had greater than ten hospital admissions for decompensated heart failure with kidney injury, altered mental status due to hepatic encephalopathy, and osteomyelitis needing toe amputation. She needed subacute rehabilitation after the sixth hospitalization. She demonstrated cognitive and functional decline despite maximal therapies; thus, she was transitioned to LTC. She remained bed-bound in LTC with challenges to adhere to lactulose and a narrow therapeutic window for diuretic dosing. Her last hospitalization was due to altered mental status, and a palliative referral was initiated. The patient was enrolled in hospice and died comfortably after ten days. This case highlights that HFpEF is a geriatric syndrome with the potential to rapidly decline due to associated co-morbidities, needing multiple hospitalizations, care transitions from home to SAR and LTC, and finally enrolled in hospice.

Conclusion: HFpEF is a complex disease with multifactorial pathophysiology and clinical heterogeneity. Understanding the varied presentation will help clinicians manage this geriatric syndrome effectively, thus reducing hospital admissions and providing timely guidance to patients and families with goals of care conversations while enabling high-quality end-of-life care.

B13

Complex Pain, Grief and Cultural Beliefs - A Case Study

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Background: Chronic pain in the setting of depression and complicated grief has been found to have strong cultural roots in society. Overlapping of these symptoms can often hinder proper medical management.

Methods: An 80-year-old Asian female with past medical history of osteoporosis, chronic low back pain, parkinsonism presented to the geriatric clinic for complaints of unrelenting neuropathic pain of her feet. Pain regimen including several analgesics and levodopa were implemented without considerable relief. Further investigation revealed disruptive sleeping patterns, polypharmacy and multiple falls. She had several emergency room visits for refractory pain and failed all treatment modalities. On further inquiry of the patient's social history, it was found that she had immigrated as a young woman from North Korea to marry an American against the will of her family. She went on to have a son who regrettably committed suicide in his early adulthood, more than twenty years ago. She later divorced and lived alone with minimal social interactions.

Results: Review of systems revealed deleterious falls at home, sullen mood and insomnia. Physical exam revealed depressed affect, stooped posture, shuffling gait but without cogwheel rigidity or dysarthria. A complete blood cell count, basic metabolic panel, TSH, vitamin B12 and anemia profile were within normal limits. An EMG was unimpressive for neuropathy or radiculopathy. A geropsychiatric evaluation confirmed mild cognitive impairment (MOCA score 18) and depressive psychosis with visual and auditory hallucinations of her deceased son. An alarming finding was the patient's conceptualization that she must suffer the same fatality as her son. Disowned by her family due to her elopement and without social support, she immersed herself into her grief as is culturally expected of her. Furthermore, she also fostered delusions that her physicians and those surrounding her had intentions to hurt her.

Conclusion: It was crucial to acknowledge cultural beliefs in this patient, as she was caught in a vicious circle of depression and complicated grief, that manifested as somatic pain. Her lack of insight and acceptance of the treatment plan were limiting factors to proper pain control. In summary, when presented with complex symptomatology, approaching one's patient using a biopsychosocial model is ideal for optimizing medical care.

B14

ADEs due to AEDs: Hypocalcemia and Vitamin D Deficiency in the Treatment of Seizures

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Background

Hypocalcemia is most often caused by disordered regulation and metabolism of PTH and the vitamin D axis; primary hyperparathyroidism and vitamin D deficiency account for the majority of cases. Anti-epileptic drugs (AEDs) are occasionally implicated in vitamin D deficiency and hypocalcemia.

Case

A 67-year-old man with a history of congenital cranial AVM with rupture and ICH s/p craniotomy presented 42 years later with a new complex partial seizure disorder. Levetiracetam was initiated and uptitrated to 1000 mg BID. Symptoms remained uncontrolled and lamotrigine 100 mg BID added. Due to suboptimal seizure control lamotrigine was increased to 150 mg BID. Complaints of headache 4 months later resulted in the addition of topiramate 25 mg BID. Symptoms improved and remained stable for 8 months when seizures recurred. Lamotrigine and topiramate were increased to 200 mg BID and 50 mg BID, respectively. Due to tremor and falls from balance impairment he was then referred to a movement disorder clinic and diagnosed with Parkinson's disease (PD). Carbidopa-levodopa 25 mg/100 mg TID was initiated. Topiramate was discontinued in favor of zonisamide to treat symptoms of both PD and seizures. Calcium level was normal and vitamin D unknown at that time. Five months later, he presented with generalized weakness, fatigue and increased frequency and duration of seizures. Calcium was critically low at 5.3 and vitamin D level was 8. The patient was admitted to

the hospital for IV calcium and vitamin D. He was discharged 3 days later with improved symptoms on calcium carbonate 2500 mg BID and vitamin D3 5000 IU weekly, as well as a 7 day course of calcitriol 0.25 mcg daily.

Conclusion

A factor related to vitamin D deficiency and hypocalcemia is disordered vitamin D metabolism associated with altered cytochrome P-450 activity. AEDs including phenytoin, phenobarbital, and carbamazepine are known to induce the cytochrome P-450 system. AEDs also interfere with calcium homeostasis and bone metabolism through other mechanisms. Although less is known regarding newer AEDs including lamotrigine, levetiracetam, and zonisamide, this case highlights the importance of adequate calcium and vitamin D supplementation and routine monitoring for all patients taking AEDs.

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B15 Resident Presentation

Cerebral Amyloid Angiopathy: A Rare Cause of Subacute Decline in Cognition

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Introduction

Cerebral amyloid angiopathy (CAA) is caused by deposition of amyloid beta peptides within small to mid-sized vessels of the brain and leptomeninges. A common presentation of CAA is spontaneous lobar hemorrhage in the elderly. CAA is also a known contributor to cognitive decline in patients with Alzheimer's dementia (AD). However, isolated CAA is rarely reported as a cause of progressive neurodegeneration in patients not previously diagnosed with dementia.

Case Presentation

An 82-year old male with a history of hypertension, coronary artery disease, atrial fibrillation, and type 2 diabetes mellitus presented for planned surgical resection of a left parietal brain mass seen on outpatient MRI. Prior to admission, he had a 5 month history of ataxia, blurry vision, and confusion. He had no evidence of underlying dementia. Post-operatively, he developed hyperactive delirium and seizures. Surgical pathology showed CAA without evidence of malignancy or tau immunoreactivity. The patient's mentation improved throughout admission, but he did not recover baseline cognition before discharge.

Discussion

The prevalence of CAA is age dependent. It is identified pathologically in up to 8% of brains from adults age 75 to 84. There is a strong association between CAA and AD, but other proposed mechanisms of cognitive decline in patients with CAA are seldom reported. CAA-related inflammation (CAARI) is a distinct subset of CAA. The clinical syndrome of CAARI is distinguished by subacute neurobehavioral symptoms, headaches, seizures, and stroke-like signs. Imaging of CAARI may show findings that are difficult to distinguish from cerebral neoplasm. Thus, CAA should be kept on the differential for subacute cognitive decline in previously functional patients with new lesions on brain imaging.

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B16

Nutritional status is associated with new-onset delirium in elderly, acute care, orthopedic trauma patients: A single-center observational study

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BACKGROUND/SIGNIFICANCE: Almost half of emergency room visits by elderly persons are due to injury or unintentional fall. When injury results in major orthopedic trauma, up to 60% of individuals develop delirium during hospitalization. Delirium is a potentially preventable complication that is associated with longer hospitalization, increased health service utilization, and higher one-year mortality. A national and global aging demographic and burgeoning healthcare costs has highlighted the need for identification of modifiable risk factors for delirium.

PURPOSE: We investigated whether nutritional status at hospital admission is associated with new-onset delirium (NOD) in elderly orthopedic trauma patients.

METHODS: We conducted a retrospective cross-sectional study of hospitalized patients at the Massachusetts General Hospital. **Setting:** Patients were ≥65 years of age and hospitalized between 01/01/2017 and 08/31/2018 for acute management of major fractures after trauma (n=644). **Intervention:** Patients were evaluated by the Geriatric Inpatient Fracture Trauma Service within 24 hours of admission and daily throughout acute care hospitalization.

Measurements: Nutritional status was assessed at admission using the Mini Nutritional Assessment-Short Form (MNA-SF). The Confusion Assessment Method (CAM) was used to assess for delirium at admission and was repeated daily.

RESULTS: The analytical cohort was comprised of 471 patients. The incidence of delirium was 20%. Each unit decrement in MNA-SF was associated with a 16% higher risk of NOD (OR 1.16; 95% CI 1.05-1.28). Malnourished patients (MNA-SF 0-7) were twice as likely to develop NOD (OR 2.07; 95%CI 1.01-4.35) compared to patients who were not malnourished (MNA-SF 8-14).

CONCLUSIONS: In hospitalized, elderly, orthopedic trauma patients, poor nutritional status may be a modifiable risk factor for NOD. Future studies are needed to determine if nutritional interventions can reduce the incidence of NOD and improve outcomes in this cohort of patients.

B17

An unusual patient for a drug rehabilitation center: Buprenorphine in an older adult with dementia

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Background:

As the number of older adults in the US rises, more patients with substance use disorder are aging in the community. Adults > 50 y/o are more likely to be prescribed opioids and are at higher risk for prescription misuse, particularly in those with cognitive impairment.

Case presentation:

An 87-year old male with dementia and chronic pain managed with long term opioids presented for increasing pain and agitation. He would become irritable prior to his oxycodone administration and was requiring it more frequently than prescribed. Given his age, cognitive impairment (MOCA 18/30), and concern for physical dependence, an attempt was made to taper. His family struggled as he would forget the timing of his medication administration and would request more, causing agitation and distress. The decision was made to admit him to the hospital for a slow taper which was unsuccessful due to delirium.

His family found an inpatient addiction treatment facility that was willing to accept him despite his age, medical comorbidities, and unclear ability to participate in counseling. With every attempt to wean in the rehabilitation center, he struggled with delirium which prohibited the ongoing taper. During one attempt, he fell, suffering a small SDH which required hospitalization. Ultimately, he was trialed on buprenorphine 1mg daily with improvement in his functional status, pain management, and behaviors. He was discharged back to his primary care doctor for ongoing buprenorphine prescription.

Discussion:

This case demonstrates some challenges in managing older adults with opioid use disorder: the risk of prescription misuse, the complexities of opioid withdrawal in a patient with dementia, and the difficulty in accessing adequate treatment. This patient had a supportive family who was able to advocate for admission to an addiction center where he was started on buprenorphine with success. This also demonstrates the potential for low dose buprenorphine as treatment for opioid withdrawal in older adult patients. More research is needed to understand the specific needs and treatment options for opioid use disorder in older adults.

B18

To Benzo or Not to Benzo? A Case of Hyperactive Delirium with Abrupt Benzodiazepine Cessation

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CASE: Our inpatient geriatric medicine consult service evaluated an 81 year old male with Alzheimer's dementia who, three days prior, fell from his bed with subsequent left periprosthetic hip fracture. He was transferred from a regional hospital for possible surgical intervention but ultimately pursued a non-operative course. Discussion with family revealed, since starting diazepam three weeks prior to his fall for dementia-associated behavioral disturbances, his behaviors dramatically worsened with more agitation, compulsions, delusions, and new visual hallucinations. Diazepam was not reconciled on his medication list on admission and thus inadvertently and abruptly discontinued since his fall. On evaluation, he presented with hyperactive delirium symptoms. Given subacute symptom onset with a new longer half-life benzodiazepine prescription, a paradoxical benzodiazepine reaction was initially considered, but benzodiazepine withdrawal could not be excluded given a history of sudden cessation. Benzodiazepines were cautiously held, but withdrawal assessments were also performed with gabapentin and haloperidol used in lieu of short-acting benzodiazepine lorazepam for symptom management. Serial withdrawal assessments showed worsening symptoms and, thus, benzodiazepine withdrawal became the leading diagnosis. Diazepam was started at reduced dosage with lorazepam given based on withdrawal assessment scores. He was ultimately restarted on diazepam at a reduced dose with improvement to near baseline orientation and mentation without as-needed lorazepam.

DISCUSSION: Successful treatment of delirium requires determination of cause(s) from a list of differential diagnoses narrowed through careful history-taking and accurate medication reconciliation. But, delirium itself, particularly hyperactive subtype, has overlapping symptoms with benzodiazepine withdrawal. This case illustrates the challenges of hyperactive delirium assessment in the setting of sudden benzodiazepine cessation for two possible differential diagnoses with opposing treatment plans (i.e.: holding benzodiazepines for a paradoxical reaction versus reintroduction of benzodiazepines for withdrawal). Given persistent prescription patterns of benzodiazepines in older adults despite their associated significant risks, including life-threatening withdrawal, benzodiazepine withdrawal must be considered when investigating delirium.

B19

Geriatrics outpatient co-management model can play a key role in preoperative comprehensive assessment and goals of care discussion

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Case Presentation: A 77-year-old woman with a past medical history of end-stage renal disease due to type 2 diabetes mellitus and hypertension and ischemic stroke presented to our geriatrics clinic to undergo a preoperative geriatric assessment for potential renal transplant. The patient has been on hemodialysis for more than 10 years and placed on the waiting list for renal transplant since 2011. Comprehensive geriatric assessment revealed her to have undiagnosed dementia (MOCA 12/30) and mild frailty based on the clinical frailty score. Given her baseline cognitive and functional status, she is at high risk for delirium and other surgical complications and would likely be discharged to a rehabilitation facility postoperatively. Further goals of care discussions also revealed that the patient values being independent and has enjoyed time with friends at a dialysis center. She believed the benefit from the transplant is to help her "make more urine." Based on the geriatric assessment, the renal transplant committee decided to remove her from the transplant list as the risks did not seem to outweigh the benefit, particularly in light of her goals and values.

Discussion: It is well known that frailty predicts postoperative mortality and morbidity more than age alone, thus preoperative frailty screening is essential. Moreover, American Geriatrics Society recommends that the health care team should ensure discussion of personal goals and treatment preferences prior to surgery, including specific outcomes important to older adults, such as postoperative functional decline and loss of independence. However, previous literature suggests that surgeons do not routinely discuss these issues preoperatively. Incorporating geriatricians to perform preoperative comprehensive geriatric assessments, including advanced care planning, can help to ensure aligning of patients' goals and values and likely postoperative outcomes based on level of frailty.

Conclusions: We experienced a case in which preoperative comprehensive geriatric assessment and goals of care discussion led by a geriatrician changed the treatment strategy of the patient with end-stage renal disease. Further work on developing and evaluating a geriatric surgical co-management framework is needed.

B20

COVID-19 reinfection in an immunocompromised older adult with multiple myeloma

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Background: Coronavirus disease (COVD-19) occurs in nearly 1 in 3 older adults with less than 10% survival (1,2). Older adults have worse outcomes because of comorbidities, suppressed immunity, and frailty (2). Older adults hospitalized for COVID-19 have greater risks of multi-organ failure, increased length of stay, morbidity, and mortality. The impact of chemotherapy-induced immunosuppression and reinfection rates of COVID-19 in older adults is unknown. This case reports COVID-19 reinfection in an older adult with multiple myeloma (MM) on chemotherapy.

Case: 78-year-old frail Hispanic women with type 2 diabetes mellitus, hypertension, atrial fibrillation, with recently diagnosed MM who had recurrent hospital admissions for coronavirus-related sequelae including multi-organ failure with heart failure, renal failure

requiring hemodialysis, respiratory failure requiring intubation, and anemia requiring transfusions. After COVID-19 recovery, she initiated Cyclophosphamide, Bortezomib, and Dexamethasone (CyBoRD) chemotherapy. Following CyBoRD cycle three, she developed fever, acute hypoxemic respiratory failure, and hypotension with suspected sepsis. Repeat RT-qPCR assay on nasopharyngeal swab was positive. Development of leukopenia, severe COVID-19 pneumonia with characteristic bilateral ground-glass opacities on the chest CT required high-flow nasal cannula. The family proceeded with comfort care measures; she quickly deteriorated and expired.

Conclusions: Data for acquired immunity after COVID-19 and reinfection risks in older adults is limited. This case illustrates the risks for coronavirus disease reinfection in a recovered COVID-19 older adult on chemotherapy. In medically complex older adults with cancer, assessing the risks of morbidity and mortality from COVID-19 is crucial when considering cancer treatment.

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B21

Weight loss during the pandemic: Suboptimal follow up and rapid morbidity progression in the world of telemedicine

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Background

Telemedicine has been widely used during the COVID-19 pandemic but hasn't been embraced by all patients. Valuable objective information is lost and diagnoses delayed due to inaccurate patient self-report or delays in face to face visits. The lack of obtaining vital information such as weight loss may lead to delays in diagnoses and disease progression. Sometimes this delay is irreparable.

Materials & Methods

We discuss 3 cases of weight loss occurring during this COVID pandemic reflecting our concern:

1) 87 yo female w/PMH HTN, CAD, dementia presented to the ER 8/2020 with wt. loss, decreased oral intake, and mandibular pain for 5 months. PE and testing revealed extensive disease involving her mandible and neck. She was diagnosed with mandibular SCC, palliative Rx was initiated, and hospice care arranged after discharge.

2) 86 yo male w/PMH dementia, HF, CKD presented with fatigue and wt. loss over 5 months. A malignancy work-up was started but a month later he went to the ER with melena. His family declined further interventions and hospice care was initiated.

3) 84 yo male w/PMH HTN, Paget's disease, BPH had 3 virtual visits over 6 months. On the last visit his son reported concern for wt. loss. An in-person visit documented a weight loss of 27 lb in 9 months. A w/u demonstrated a spiculated nodule. Biopsies showed non-necrotizing granuloma and BAL grew MAC. He was started on Rx and gained 10 lbs.

Results

These cases expose consequences of delays in face to face care and inaccurate patient self-reporting during this pandemic. The first case highlights the rapid progression of frailty in a patient with dementia and newly diagnosed SCC due to delay in care. In the 2nd case, a delay in care and w/u of fatigue and weight loss resulted in cachexia and irreversible disease. The 3rd case highlights our reliance on accurate patient self-report when conducting telemedicine visits.

Conclusions

Telemedicine visits are likely to remain during COVID-19 surges. It's important to be mindful that we rely on patient self-report which if inaccurate or delayed, may lead to rapidly developing geriatric syndromes. These cases are reminders of the devastating effect of the current pandemic in delays of in-person visits

B22

5Ms in Inpatient Consultation: A Framework for Comprehensive Care

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Background: 5Ms provide a framework for the care of older adults[1]. We present a case in which 5Ms were used in inpatient geriatric consultation on a senior psychiatric unit.

Case: A 71-year-old male was hospitalized for worsening paranoia with increased frequency of falls and weight loss due to eating refusal. He has a PMH of schizoaffective disorder, traumatic brain injury, and HTN. We identified the following using 5Ms as the structure for consultation: 1) *Mind*: MOCA of 16/30 compared to 23/30 1 year prior, PHQ-9 of 23 from 11 points 6 months prior, and severe decrease in his interests after the start of SARS COV-2 pandemic. 2) *Mobility*: Get Up and Go Test <20 seconds, 3 falls in preceding 24 hours. 3) *Medications*: Recent increase in clonazepam from 0.25 to 0.5 mg twice daily, sertraline 100 mg daily, aripiprazole 30 mg daily, trazodone 50 mg nightly, losartan discontinued for hypotension. 4) *Multi-Complexity*: He has a long history of schizoaffective disorder requiring multiple lengthy hospitalizations in the past. At age 63, he sustained a subdural hematoma during a bicycle accident that resulted in gradual decline in cognition and memory. His brother is the only remaining kin and has durable power of attorney for finances, but not for healthcare. 5) *Matters Most*: He is independent with ADLs and dependent for all iADLs. He wishes to return home after discharge, which his brother is amenable to only if his paranoia can be controlled.

Discussion: In this case scenario, we present a patient with repeated hospitalizations who required a multi-model assessment of his medical, psychiatric, and psychosocial background to effectively arrive to a care plan. Through the framework of 5Ms, such complex cases can be effectively and comprehensively cared for with the assistance of an interdisciplinary team. We shared our findings with the interdisciplinary team that resulted in iADL re-training, acceptance and commitment therapy, evaluation for assistive devices, and management of polypharmacy by discontinuing trazodone, de-escalating clonazepam and sertraline, and initiating clozapine and mirtazapine to provide goal-aligned care.

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B23

A Case of Bullous Pemphigoid and Anchoring Bias

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BACKGROUND: Bullous pemphigoid (BP) is most common an autoimmune sub-epidermal blistering disorder, affecting older adults between the ages of 60 to 80. It can start with pruritus and can cause urticarial, papular lesions which evolve to bullae affecting axillae, flexor surface of forearms, medial thighs, and trunk. Constitutional symptoms are uncommon and the Nikolsky sign is negative. Microscopy is diagnostic. The mainstay of treatment in older adults is potent topical steroids.

CASE PRESENTATION: Frail and dependent 83-year-old man with history of eczema had been treating his new bilateral forearm rash with over-the-counter remedies. His rash extended to his back without apparent cause. An allergic reaction was suspected, and he

was advised to stop his current treatment and to begin an emollient and cetirizine. A few days later, he developed redness on palms, which progressed to a blistering, red, raised, and itchy rash on chest, upper extremities, and feet. An allergic reaction to cetirizine was suspected and it was discontinued. Two days later it increased to 2x2 cm fluid filled blisters. Besides the itching, he remained asymptomatic. Two punch biopsies were sent for microscopy and he was advised to use a steroid cream on the bullae. Both biopsies confirmed BP. At follow-up, the rash was clearing in most areas and itching improved. At the subsequent visit, the rash had resolved.

DISCUSSION: Anchoring bias (AB) is one of the cognitive biases where there is the tendency to rely too heavily on one piece of information or idea, usually the former when making decisions. In our case, the initial thought of patient having an allergic reaction to OTC medications and later to cetirizine delayed the diagnosis of BP.

CONCLUSION: AB is one of the most common diagnostic biases that may lead to closed-minded thinking and could result in unnecessary tests, inappropriate patient management and even misdiagnosis. We should be cognizant of the cognitive biases when taking care of patients.

B24 Encore Presentation

Principles of Embedment: Experience of a Palliative Care Fellow in an Oncology Fellow's Clinic

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Introduction: Embedding palliative care in an oncology clinic can improve symptom control and quality of life for patients in addition to having a positive impact on doctor patient relationship and provider satisfaction. Oncology fellows' outpatient clinic at our institution has a patient population that is diverse and disadvantaged. A survey of oncology fellows' perceived palliative care needs was obtained prior to integrating a palliative care fellow. Pain management with high opioid dosage and evaluation of emotional distress, are areas that oncology fellows reported needing the most assistance with. Survey result showed that all oncology fellows found an embedded palliative care team in their clinic important.

Case Presentation: A 69-year-old Middle Eastern male with metastatic gastric adenocarcinoma was referred to palliative care for symptom management. The palliative care team met with the patient and his family regularly during his oncology appointments, provided recommendations for symptom management, and established a strong relationship with the patient. After two months, imaging showed progression of disease despite multiple lines of chemotherapy and a recommendation for home hospice was made. Patient's family was initially reluctant to accept hospice due to cultural beliefs. Palliative care team spoke with family to educate about hospice care and they agreed that hospice was in line with patient's wishes to stay at home and die comfortably. During a follow up call, patient's daughter expressed gratitude, as she felt supported by hospice and reported that the patient was comfortable and happy at home.

Discussion: Team approach, trust building, provider availability, consistency of care, compassion, and competency are some key factors for a successful embedment practice. Working with oncology fellows in an embedded practice can lead to earlier palliative care involvement, improved communication and a stronger therapeutic relationship. Education on palliative care to oncology fellows can lead to cultural changes in oncology.

B25

Are clinicians blind to cortical blindness? A case report

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Background: Cortical blindness defined as total loss of vision with intact pupillary reflexes and absence of ophthalmological disease resulting from bilateral pathology affecting striate cortex in the occipital lobes. Gabriel Anton, in 1899, described patients with bilateral occipital lobe lesions who were completely blind and did not report any disturbance in their vision, leading sometimes to confabulation. We report a case to illustrate clinical management challenges and best practices in a patient with cortical blindness and dementia.

Methods/Case Description: The patient was a 74-year-old male with a history of hypertension, atrial fibrillation, chronic kidney disease who was admitted after an episode of acute agitation and aggression towards his family members. He had history multiple strokes, one 7 years prior resulted in peripheral visual field loss, and second episode 3 months prior to presentation that resulted in a total loss of vision. The patient started developing behavioral changes and visual hallucinations 1 year prior to presentation for which he was treated with antipsychotics. The patient had severe memory loss. He experienced retrograde and anterograde amnesia, and was unable to recognize his close family members. He became totally dependent on others for feeding, toileting, personal care, medications, transportation and finances after the 2nd stroke. Due to severe cognitive impairment the patient was unable to perceive his visual impairment which led to confabulation. Brain imaging demonstrated that his strokes were predominantly in the bilateral PCA territory and the left hippocampus

Results: Due to the complex nature of presentation, the care team was unable to recognize his severe visual deficit for a few days until a geriatric consultation and a thorough neurological examination revealed the extent of his blindness. A subsequent ophthalmology evaluation revealed no major intra-ocular pathology.

Conclusions: Severe cognitive impairment can confound the extent of visual impairment and delayed the diagnosis. With evidence of occipital lobe involvement and atypical visual impairment, we should consider cortical blindness as part of our differential diagnosis in our patients with dementia and behavioral disturbances. This condition may warrant a more of a caregiver education and non-pharmacological behavioral intervention as opposed to pharmacotherapy. As a result of above intervention we saw a decreased use of antipsychotics in our patient.

B26

Cefepime Induced Delirium Can Mimic Acute Stroke

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CASE REPORT:

A 79-year-old woman with a history of hypertension, anxiety, chronic pain, fibromyalgia, peripheral neuropathy, prior right AKA, and CVA was admitted with acute osteomyelitis and cellulitis of 3rd toe. Initially she was tachycardic at 140, and EKG showed sinus tachycardia. Diastolic BP was around 100. The HR slowed after rehydration, and BP normalized with analgesia. CBC showed mild leukocytosis with neutrophilia of 74%. ESR and CRP were elevated at 56 and 146, respectively. She tested negative for COVID-19, RSV and influenza. CXR showed low lung volumes. Blood cultures were drawn before initiation of antibiotics (Vancomycin and Cefepime). Orthopedics evaluated the patient.

On day 1, the patient was found noted to be confused. CT of head showed extensive periventricular and subcortical white matter hypodensities. MRI of brain showed no acute abnormalities. MRA showed no abrupt vessel occlusion of the circle of Willis. Aspirin and statin were recommended by Neurology.

On day 6, the Geriatrics team was consulted. The patient was minimally verbal, not following commands. She did have perseveration and answered with "What" or "Wait" to most questions.

Blood cultures returned showing no growth, and the mild leukocytosis had resolved.

Her acute delirium was thought to be multifactorial, due to infection, pain and also possibly some contributing medication (probably Cefepime).

Patient's home dose of Gabapentin and Cymbalta were halved and scheduled Tylenol was recommended. Cefepime was discontinued and Rocephin was started.

On day 7, the patient underwent left 3rd toe amputation. Her mental status improved and she became more attentive and was able to answer orientation questions correctly by day 8.

On day 9, she was back to her baseline mental status. She experienced no worsening of her delirium post-op.

CONCLUSION:

This case focuses on the importance of recognizing the effects of antibiotics on cognition and mental status in geriatric patients. Cefepime induced encephalopathy can occur even with normal renal function and can lead to marked changes in mental status. For patients presenting with expressive aphasia and changes in mentation, prompt removal of the delirium-contributing drug may allow for rapid resolution of the delirium.

B27

An Underdiagnosed Complication of Chronic Topical Corticosteroid Use in Older Adults in Long-Term Care: A Case of Adrenal Insufficiency

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Background: Topical steroids are commonly prescribed in long-term care (LTC) facilities for dermatologic conditions. Hypothalamic–pituitary–adrenal (HPA) axis suppression is a serious, potentially life-threatening adverse effect of prolonged topical corticosteroid use, contributing to nonspecific presentations in this population [1].

Case: A 88-year-old female with dementia residing in LTC was evaluated for chronic weakness and one year history of postural dizziness, recurrent falls and syncope. Medical history was significant for chronic scalp dermatitis for which she was on scheduled clobetasol 0.05% topical cream for over a year. Symptom onset followed a change from scheduled dosing to as needed application of the topical steroid. Prior extensive workup of syncope was unrevealing. On exam, orthostatic blood pressure was positive and atrophic skin changes were noted at steroid application site. Morning serum free cortisol and ACTH levels were 0.01 ug/dL (0.2 - 1.8) and 6.5 pg/mL (7.2 - 63.3) respectively. Cortisol binding globulin level was 1.9 mg/dl (1.7 - 3.1). Studies of adrenal insufficiency in older populations suggest that adrenocorticotropic hormone (ACTH) stimulation test is not specifically validated in older patients[2]. Thus, ACTH stimulation test was not pursued. With the presumed diagnosis of secondary adrenal insufficiency (AI), topical clobetasol cream was discontinued and a slow taper of topical hydrocortisone was initiated. During the topical steroid taper, stress dose hydrocortisone was administered during acute illness to prevent adrenal crisis. AI symptoms resolved over six weeks. HPA axis recovery was confirmed by normal morning serum cortisol.

Conclusion: This report underlines the importance of time-limited courses of topical steroids to avoid potential AI. Delay in diagnosis may occur among older adults residing in LTC due to non-specific symptoms shared between AI and common comorbidities in this age group.

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2. Rushworth, R. L., Torpy, D. J., & Falhammar, H. (2020). Adrenal crises in older patients. The Lancet Diabetes & Endocrinology, 8(7), 628-639.

B28 Resident Presentation, Encore Presentation

A PRESing delirium case.

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Introduction

Posterior reversible encephalopathy syndrome (PRES) results from often reversible subcortical vasogenic edema in bilateral parieto - occipital regions. It is characterized by a hyperintense signal on T2/FLAIR sequences in the MRI. Classical symptoms include headaches, encephalopathy, and seizures. The diagnosis of PRES is based on clinical and radiographic findings. Common causes are a sudden rise in arterial pressure, eclampsia, vasculitis, or drugs. Treatment depends on the underlying cause. Here we report a case of an elderly female who presented with delirium secondary to PRES and acute ischemic stroke.

Case

A 73-year-old female with hypertension and medication noncompliance was found unresponsive, incontinent of urine, in a non-convulsive state. Upon arrival, she was hypertensive at 197/80 mmHg, lethargic, with no neurological deficits. Laboratory showed acute kidney injury and elevated creatine kinase of 381 U/L. The toxicological screen and brain CT were unremarkable. After hydration, she gradually cleared her delirium but began to have headaches. EEG showed bilateral temporal sharp waves suspicious for potential epileptogenic focus and subsequently, she seized and was started on levetiracetam. Follow up brain MRI revealed T2/FLAIR hyperintensities in both cerebellar hemispheres and brainstem suggesting PRES, associated with restricted diffusion in the right frontoparietal lobe suggesting acute ischemic stroke. She was treated with amlodipine, aspirin, clopidogrel, and atorvastatin. Her encephalopathy improved and she was discharged. One month later, she was readmitted to the hospital with delirium and hypertension at 210/98 mmHg. Repeated brain MRI showed signs suggestive of PRES. EEG revealed a lower seizure threshold on the frontal/cortical area and the levetiracetam dose was increased. Lisinopril was added and she was discharged with steady improvement.

Discussion

This patient presented with an atypical variance of PRES involving the cerebellum and brainstem. PRES complications include cerebral ischemia/hemorrhage, and herniation due to cerebral edema. Although with a good prognosis, 20% of the patients may have long-term neurology sequelae such as seizures. The disease may recur in 10% of the cases with uncontrolled hypertension. The presence of restricted diffusion lesions in the MRI is associated with irreversible structural injury and incomplete clinical recovery. Early recognition of PRES is important for adequate treatment and prevention of disease complications.

B29

Virtual end-of-life care during COVID19 outbreak in a nursing home

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Telemedicine in nursing homes has demonstrated promise for the delivery of timely medical care and reduction of avoidable hospitalizations, and now in pandemic conditions, is being examined more closely. This case highlights the competency needs and challenges of providers delivering end-of-life care during outbreak restrictions – coordinating technology set up, the virtual assessment and family meeting.

Case: 82yo female with moderate stage Alzheimer's dementia, HTN, HLD, hypothyroidism was admitted to the hospital as the first COVID19 positive case in a memory care unit, due to inability to quarantine. She was treated for sepsis, COVID19, and CAP vs aspiration, as well as suspected delirium. Discussion with her spouse determined that code status would remain DNR/DNI and that ICU transfer would not be within her goals of care. She was able to wean off oxygen but was minimally responsive and refusing PO.

She was discharged back to the nursing home's new COVID unit, and a follow up virtual visit was scheduled by the PCP due to the ongoing outbreak in the facility. However, the morning of the scheduled visit, she developed hypoxia and respiratory distress; her vitals and clinical condition relayed to the PCP by facility nurses. PCP needed to remotely conduct urgent goals of care discussion and provide end-of-life care. PCP discussed the change in her condition with spouse and daughter, and a shared decision was made against hospital transfer and to initiate comfort care.

Key family members living outside the state and internationally were immediately invited to join the virtual room and ask questions. PCP then worked with the nursing staff to set up the technology in the patient's room. The family had time to express their love to her, and once out of the room, engaged in life review and appreciation of her impact on each of them. The patient's husband was allowed to enter the facility briefly to physically be with her at end-of-life. She was kept comfortable until she died the next morning.

Discussion: Practice models for telemedicine use to facilitate delivery of inpatient palliative care under pandemic conditions have been recently published, but little is known about its implementation in the nursing home and community. Similar study in implementation and patient/family outcomes is needed to effectively adapt these models and inform guidelines and training protocols for virtual palliative care in the nursing home for the duration of the COVID19 crisis and beyond.

B30

Palliative management of chronic lymphocytic leukemia with intravenous vitamin C

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Treatment of chronic lymphocytic leukemia (CLL) in the elderly can be extremely challenging due to comorbidities and poor functional reserve. Often, palliative medicine represents the only option for patients who do not respond to or tolerate conventional therapy. When treatment related toxicity is intolerable, many patients seek integrative medicine options. Pharmacological doses of Intravenous Ascorbic acid (IVAA) have significant in vitro and in vivo activity against CLL B-cells by inducing apoptosis. Furthermore, trials have shown that IVAA is both safe and improves patient's quality of life in other cancers including pancreatic and ovarian.

Case

An 82-year-old woman with a 15-year history of CLL presented to the academic integrative medicine clinic complaining of severe fatigue. She had discontinued chemotherapy due to intolerable sides effects. Targeted therapy was also attempted but discontinued due to vasculitis. She was felt to have only weeks to months to live by her oncologist, given the disease progression and her poor treatment tolerance. The patient was anemic with thrombocytopenia and a leukocyte count of 500,000 cells/mm^3. Weekly intravenous AA (50 gr) infusion was initiated. Within 3 months, her endurance improved and there was a 50% reduction in her leukocyte count. No significant side effects or hospitalizations were documented during this time. After two years of clinical stability, the disease progressed despite AA dose escalation. One year later, hospice care was initiated. The patient passed away peacefully at the age of 85. With integrative medicine, she had lived significantly longer than had been expected with an improved quality of life.

Conclusion

IVAA is a safe and effective palliative strategy for elderly patients with CLL. Oncologists, geriatricians, and palliative medicine physicians should familiarize themselves with available evidence-based integrative medicine strategies to optimize their patients care.

B31

Hemophagocytic Lymphohistiocytosis (HLH): *A Rare & Often Fatal Diagnosis in Older Adults*

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INTRO:

Hemophagocytic lymphohistiocytosis (HLH) is an uncommon type of hemophagocytic syndrome characterized by systemic inflammation and overactivation of the immune system leading to multisystem failure.[1] Most common in pediatrics[1], it's a rare, challenging diagnosis often missed in older adults.

CASE:

A 67 year-old male with a PMH of COPD, CKD3a, and lung nodules presented to his PCP for dyspnea and cough. COVID19 test was negative, CXR showed irregular opacities but no consolidation, so he was treated for COPD exacerbation. One month prior, he saw Pulmonology and completed a 10 day course of Augmentin. After 3 days, family noted the patient was jaundiced with dark urine. Labs showed normocytic anemia, acute on chronic kidney injury, and elevated LFTs. His PCP had him admitted for further workup and treated for community-acquired pneumonia; dyspnea improved.

But, the patient's acute kidney injury worsened, so he was transferred from an outside facility to U of M Hospital. Nephrology was consulted and urine studies were consistent with ATN. Liver function worsened and drug-induced liver injury with cholestasis was suspected, given recent Augmentin. Acute hepatitis panel, infectious and autoimmune workups were negative. The patient's hgb declined, requiring multiple transfusions despite no source for an active bleed. Abdominal ultrasound showed an enlarged liver with diffusely coarse echogenicity. Liver biopsy showed diffuse granulomatous hepatitis with necrosis and cholestasis.

Finally, soluble IL-2R was ordered and was quite elevated at 35,150 U/mL (normal 137-838 U/mL). Lab findings and clinical presentation led to a diagnosis of HLH. At the end, the patient decompensated requiring transfer to ICU for multi-organ failure. Following goals of care discussions with family, he was transitioned to comfort care and passed away soon afterward.

DISCUSSION:

This case shows the importance of considering HLH as a diagnosis in older adults with characteristic findings. Early diagnosis is often hard due to low suspicion, limitations of diagnostic criteria in adults, and inaccessibility to specialized lab tests (like soluble IL-2 assay). Adult HLH is usually fatal with median survival of about 2 months.

[1]Grzybowski B, et al. *J Pediatr Neurosci*. 2017;12(1):55-60.

B32

A Case of Colchicine Induced Dysgeusia

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Introduction: Dysgeusia is defined as altered taste perception. We present a case of a COVID-19 negative patient with myopericarditis who developed severe dysgeusia due to colchicine, requiring artificial nutrition.

Case: Mr. X was an 84-year-old male previously diagnosed with acute myopericarditis and discharged home on aspirin and colchicine. He was readmitted with congestive heart failure and poor appetite due to dysgeusia. He had lost 15 pounds over 3 weeks. Echocardiogram

revealed reduced ejection fraction and pericardial effusion. Cardiac catheterization revealed nonischemic cardiomyopathy. He underwent investigation for cardiac amyloidosis. His dysgeusia was so severe that he could not tolerate oral intake and a nasogastric (NG) tube was placed for artificial nutrition. An extensive workup of dysgeusia included multiple negative COVID tests, tick panel, and heavy metal panel, and normal TSH, liver and renal functions, electrolytes, vitamin B12, and zinc. MRI brain showed punctate subacute right cerebellar CVA, which did not explain his symptoms. He did not tolerate the NG tube and required multiple reinsertions. Our inpatient geriatrics service was consulted for failure to thrive. Mr. X denied being depressed, but was frustrated with his conditions. Physical examination revealed temporal muscle wasting, oversized clothing, no white patches in his mouth, and he had no neurological deficits. He was unable to pinpoint the timing of onset of his dysgeusia but said that he was very functional and independent prior to his recent hospitalization. Medication reconciliation revealed colchicine as the only new medication. We recommended stopping colchicine as he already completed treatment for myopericarditis. Taste, appetite and food tolerance improved within 2 days after colchicine discontinuation. He was discharged, and taste remained normal at follow-up.

Discussion: Gastrointestinal side effects are most common with colchicine, and severe dysgeusia is a rare side effect. Our case demonstrates the importance of a comprehensive geriatrics assessment with a focus on medication reconciliation when evaluating failure to thrive in older adults. It is also important to examine the oral cavity and to evaluate for malignancy, infection, endocrine, metabolic and psychiatric disorders when evaluating patients with dysgeusia.

B33

Into the 'Frey': Auriculotemporal Syndrome in an Older Adult

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Introduction: Frey's Syndrome or Auriculotemporal Syndrome, is a rare neurological disorder, characterized by gustatory sweating and facial flushing along the auriculotemporal nerve distribution, caused by injury to this nerve. We herein present a case of Frey's Syndrome in an older female.

Case Overview: 68 y/o female seen in clinic for c/o intermittent sweating and flushing over the right preauricular region at mealtimes for 1 month, causing her significant embarrassment. On further review, it was noted that the patient had a right superficial parotidectomy for a pleomorphic adenoma of her parotid gland 1.5 years ago. Frey's syndrome was tentatively diagnosed. To visualize the affected area, a starch-iodine test was performed - the patient was given a lemon wedge to chew on to stimulate gustatory sweating, and the blue discoloration of the starch-iodine complex confirmed the diagnosis. The patient was treated with botulinum toxin injections and symptoms resolved, with no recurrence of symptoms at her 6-month follow up.

Discussion: Pleomorphic adenomas are the most common parotid gland tumors. In elderly, these occur mostly in females. Parotid surgery, trauma or infection can cause misdirected autonomic nerve regeneration of the parasympathetic fibers of the auriculotemporal nerve, which join the sympathetic fibers that innervate sweat glands and subcutaneous vessels, causing gustatory sweating and flushing. This condition is known as Frey's Syndrome. Diagnosis can be confirmed by Minor's starch-iodine test. Treatments include botulinum toxin injection, aluminum chloride solution and surgical transection of the nerve fibers. Anticholinergic treatments should be avoided in elderly patients.

Conclusion: This case report illustrates the clinical features, diagnosis and management of Frey's syndrome. This rare disorder is of clinical significance as it can occur years after parotid surgery (often going undiagnosed or being misdiagnosed), and can cause considerable social debilitation.

B34 Resident Presentation

Babesia: a silent hazard for the elderly.

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Introduction

Human babesiosis is an infection of red blood cells predominantly caused by the protozoan *Babesia microti* in the United States. It is spread by the nymphs of Ixodes scapularis, a vector that is also capable of harboring *Borrelia* and *Anaplasma* species. The infection is highly endemic in the Northeastern and Midwestern areas and occurs from May through October. Most patients have mild or asymptomatic infection, but the elderly have an increased risk for disease complications such as sepsis, hemolytic anemia, thrombocytopenia, multiple organ dysfunction. We report two elderly patients who were diagnosed with babesiosis.

Case 1

An 80-year-old female from Massachusetts presented to the emergency department with 10 days of persistent fever and malaise. She had a previous positive Lyme assay and was on doxycycline treatment. Upon arrival, she was febrile and the physical examination was normal. Laboratory studies were notable for mild hemolytic anemia, thrombocytopenia, and elevated liver enzymes. A peripheral smear revealed rare intraerythrocytic parasites and a PCR for babesia was positive. The patient received azithromycin and atovaquone and was discharged on the third hospital day with steady improvement.

Case 2

A healthy 65-year-old man from Massachusetts was admitted to the hospital with fever and sore throat for 2 weeks. Upon admission he was febrile and the physical exam was unremarkable. A Lyme screen was positive, subsequently confirmed by Western blot, and a peripheral smear showed numerous trophozoites of Babesia (7% parasitemia). He was started on atovaquone, azithromycin, and doxycycline. Over the next days, the patient's parasite load diminished to 0.3%, but he developed severe anemia, thrombocytopenia, striking leukocytosis, and hepatic failure. A CT scan of the abdomen revealed ascites, splenomegaly, and splenic infarcts. The hepatitis panel and the PCR for Anaplasma were negative. Treatment was changed to azithromycin, clindamycin, and quinine with gradual improvement in his liver function tests and wellbeing.

Discussion

Because of age-associated decline in adaptive immunity, the elderly are more symptomatic and have a higher risk of developing severe babesiosis. Co-infection with other tick-borne pathogens are present in 60% of the cases. Despite babesiosis adequate treatment, a low-grade infection may persist up to 2 years with the risk of relapsing disease.

B35

Design and Implementation of an Automated Fall-Risk Identification and Referral System in the ED

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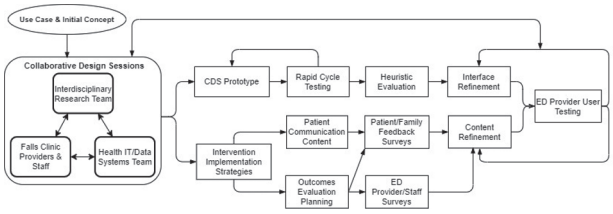
Background: Of the 3 million older adults seeking fall-related emergency care each year, one-third visited the ED in the prior 6 months. ED providers have a great opportunity to refer high-risk patients for fall prevention services, but lack effective tools. Our aim was to develop and implement an automated clinical decision support system (CDS) for identifying and referring older adults at risk of future falls. **Methods:** After validating a fall-risk stratification algorithm using EHR data, we employed a rapid-cycle development and

evaluation process utilizing a novel combination of human-centered design, implementation science, and patient experience strategies. Stakeholders were engaged through online surveys and user testing. **Results:** Requirements, barriers, and facilitators (e.g., data access, workflow constraints) were collaboratively generated in design sessions with ED providers, researchers, health IT, and geriatric clinic staff, and used in prototype development. The team systematically evaluated and resolved problems with interface design (e.g., visibility, language) prior to user testing. Cognitive walkthroughs revealed user problems with discharge navigation screens and order placement. Provider and patient feedback helped refine text on after-visit summaries and protocols for explaining the referral to ED patients at discharge. Surveys indicated high acceptability, appropriateness, feasibility, and intent to adopt across all provider categories. Iterative refinement occurred post-implementation based on interview and utilization data; increasing CDS use. **Conclusion:** Successful development of the fall-risk CDS required integration of technologies and processes into existing workflows for order placement, using iterative design to define and address barriers. Our participatory approach facilitated adoption and ED referrals for fall prevention services.



B36

The Impact of an Opioid Case Management Program on Opioid Overutilization

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Background: Pain is a common problem among older adults and many are prescribed opioid medications. Opioids are effective at treating specific types of pain, but carry serious risks such as the development of opioid use disorder, overdose, and death. These risks are increased with opioid overuse which can result from a highly fragmented healthcare system that gives way to multiple opioid prescribers. To reduce opioid overuse in SCAN Health Plan members, we developed the Reduce Overuse and Misuse (ROAM) opioid case management program.

Methods: The ROAM opioid case management program is managed by an interdisciplinary team comprised of a physician, pharmacist, pharmacy technician, registered nurse, social worker, marriage & family therapist, and fraud investigators. Each team member has a unique role that contributes to the goal of enhancing care coordination so that one prescriber or pain management group is managing the member's pain. Members with the following patterns were enrolled in case management (CM): multiple or high dose opioids, multiple opioid prescribers and opioid dispensing pharmacies, and/or multiple emergency room (ER) visits related to pain. To determine the impact, the following was reviewed pre and post CM: opioid count, average daily morphine milligram equivalent dose (MME), opioid prescriber count, opioid dispensing pharmacy count, number of ER visits.

Results: From 2013 to 2019, 83 members were enrolled in the program. 51% had an average daily MME dose ≥ 50. Prior to CM, 22% were on opioids for < 1 year, 53% were on opioids for 1 - 3 years, and 25% were on opioids for > 3 years. When comparing metrics 3 months pre and post CM, the following statistically significant results were observed: 39% decrease in the count of unique opioid claims per member per month ($p < 0.001$); 48% of members with an MME ≥ 50 prior to CM had an MME < 50 post CM ($p = 0.023$); 55% decrease in the average number of opioid prescribers per member ($p < 0.001$); 35% decrease in the average number of opioid dispensing pharmacies used per member ($p < 0.001$); 39% decrease in the proportion of members with ER visits related to pain ($p = 0.02$).

Conclusions: The ROAM opioid case management program effectively reduced opioid overuse in our members. It serves as a means for enhancing care coordination between the plan, prescribers, and members which reduces adverse risks and helps keep our members safe.

B37 Student Presentation

Student Outreach Call to Older Adults: Combating isolation

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Background: Social isolation and loneliness are risk factors for decline in functional status, frailty, and early mortality in older adults. The SARS-CoV-2 pandemic has necessitated physical distancing to prevent virus transmission, resulting in many older adults lacking interpersonal connection, particularly if they live alone.

Methods: Clinicians at University of North Carolina Geriatrics Specialty Clinic identified older adult patients at risk of loneliness, and invited them to participate in phone calls with students. We then recruited health professions student volunteers via email listservs and word of mouth. We assigned each student volunteer 1-3 patients and advised them to call their patients once every 1-2 weeks for 20-50 minutes of non-clinical conversation on topics of the student-patient dyad's choosing. We assessed students' comfort level in speaking with older adults with cognitive or physical impairments, depression, anxiety, or loneliness before and after participation via online surveys. We assessed patients' experience of loneliness and reception to student calls via mailed surveys.

Results: Eighteen students and 35 patients participated in student outreach calls between April and December 2020. Of the students who completed the post-volunteer survey (n = 17), 82% reported that their comfort level in speaking with older adults with cognitive impairment increased, and 88% reported that that their comfort level in speaking with older adults with physical impairments, anxiety, depression, or loneliness increased. Among patients returning surveys (n = 15), 73% felt they lacked companionship, 60% felt left out, and 67% felt isolated from others often or some of the time. In addition, 94% agreed that talking to the student volunteer was enjoyable, 88% agreed that the volunteer was a source of support, and 82% agreed that the length of the call was appropriate.

Conclusions: Outreach calls by health professions students not only positively affected isolated older adults, but also increased students' level of comfort in speaking with older adults with cognitive and physical impairments, mood disorders, and loneliness.

B38

Improving fall prevention paradigms in homebound older adults: the FAVOR-H initiative

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Background: Homebound older adults are at high risk for traumatic falls due to prevalent multimorbidity and frailty syndrome. Variability in disease burden, life expectancy, and functional status has limited standardization of fall risk reduction interventions in this population. The current intervention seeks to address a critical gap in fall risk assessment and management among vulnerable, homebound older adults – both by implementing a new documentation template and screening process, as well as streamlining delivery of individualized, community-based fall risk reducing interventions.

Methods: FAVOR-H (**F**alls **A**mong **V**ulnerable **O**lder Adults of **R**ochester at **H**ome) is an interdisciplinary, team-based quality improvement (QI) initiative at Mayo Clinic, aimed at preventing falls among patients in our institution's home-based primary care programs. Included persons were inherently at high risk for falls, with evidence of frailty, comorbid illness, and homebound status. With established QI methodologies, a multidisciplinary team was assembled to complete a systematic assessment of current home-based fall management protocols. Actionable areas in fall risk assessment documentation, referral rates, and community resource engagement were identified as foci of improvement.

Results: In 2020, 35.5% (142/400) of patients in homebound programs reported a fall. In the first PDSA cycle, 20% of 124 chart-reviewed visits (7/1/2020 – 8/31/2020) included specific documentation of fall risk assessment and/or prevention. After implementing a standardized documentation template, this improved to 70% (108/155 home visits) within two months. The ongoing second PDSA cycle focuses on augmenting fall risk assessment strategies among providers and on increasing patient engagement with community-based fall resources through multimodal education for homebound primary care teams, integration of pre-visit fall risk screening into scheduling work flow, and EMR-based order sets with ready-access to evidence-based interventions.

Conclusions: Through interdisciplinary collaboration, the FAVOR-H initiative has improved fall risk assessment documentation rates in a relatively short timeframe. Standardized screening and novel pathways that support appropriate testing, referral, and connection with support services may prove impactful in reducing falls in this complex, homebound population.

B39 Student Presentation

Feasibility of Using a Commercially Available Audiometric Mobile Application in Remote Memory Care

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Background: Hearing loss is highly prevalent in older adults, especially in those with cognitive impairment; however, it is often left unaddressed. The COVID-19 pandemic led to a rapid switch to telehealth services, and addressing hearing loss has become critical to optimizing provider-patient communication. To meet this need, our study sought to evaluate the feasibility of using a commercially available mobile hearing test application via telehealth to screen for hearing loss in older adults with cognitive impairment.

Methods: Patients were recruited from the Johns Hopkins Memory and Alzheimer's Treatment Center, an outpatient memory clinic. Older adult patients (mean age 74; n=10) underwent a hearing screening using Mimi Hearing Test, a commercially available iOS-based audiometric testing application. Montreal Cognitive Assessment-Blind (MoCA-B) or Telephone Mini-Mental State Exam (T-MMSE) were performed remotely to assess participants' cognitive function.

Results: Ten participants underwent hearing screening via Zoom. Five out of 8 participants (63%) received reliable results. The average screening length was 34 minutes (16-75 minutes). Patients with reliable results had higher MMSE scores compared to those without reliable results, but this difference was not statistically significant (mean MMSE 23 ± 5.1 vs. 21 ± 2.7, p=0.5). Patients with lower MMSE scores were able to successfully complete the screening test if they had a prepared and involved caregiver. Barriers to screening included unfamiliarity with using a touchscreen, difficulty following the app's instructions, and being a non-iOS user.

Conclusion:

Our study demonstrated that using a mobile app to screen for hearing loss remotely is feasible among older patients with cognitive impairment. However, challenges included less reliable test results with worse cognitive function. Caregivers play an important role in remote telehealth assessments, as some of the more cognitively impaired patients were able to successfully complete the assessment if they had an involved caregiver. Future research is needed to ensure commercially available audiometric screening applications reflect the unique needs of older adults with cognitive impairment.

B40 Student Presentation

Medication management during hospital-to-home transitions of older adults living with dementia

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Background: The hospital-to-home transition is a high-risk period for medication errors and adverse events for older adults with Alzheimer's Disease and Related Dementias (ADRD). Role ambiguity—lack of clarity regarding who is responsible for health-care-related tasks—can be present due to the number of people involved in care transitions. Our objectives were to: 1) identify critical medication management (MM) tasks, 2) understand factors shaping MM role assignment, and 3) elicit strategies to facilitate MM.

Methods: Qualitative study using semi-structured interviews and participant solicited diaries with caregivers of older adults with ADRD receiving skilled home health services after hospital discharge. We used the human factors engineering-informed Systems Ambiguity Framework to guide data analysis. At least two researchers independently coded each transcript using a content analysis approach. We combined data from interviews and diaries to develop process-flow diagrams of MM tasks. We categorized factors shaping MM role assignment, along with strategies to facilitate MM. We used ATLAS.ti to facilitate data analysis.

Results: We interviewed 23 caregivers and identified nine key MM tasks: procurement, process, reconciliation, storage/organization, administration, monitoring, adjustment, and discontinuation. Key factors shaping role assignment were caregivers' experience, education, and language ability. Strategies to decrease role ambiguity and facilitate MM included use of cognitive aids (e.g., pillboxes, calendars) and timing medication administration to other daily routines. Caregivers described values affecting completion of MM-related tasks, such as reservations about the number of medications prescribed contrasted with hope that medications could prevent further clinical decline.

Conclusions: We identified critical MM tasks, factors shaping role assignment, and strategies to reduce role ambiguity during care transitions of older adults with ADRD. Study findings can guide the design of strategies for home health care organizations to decrease role ambiguity and support MM during the high-risk hospital-to-home transition.

B41 Student Presentation

Evaluation of a Care Model for Nursing Home Residents with Dementia

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Background Among skilled nursing facility (SNF) residents, there is an increasing prevalence of dementia with difficult behaviors to manage. Previous studies have mostly focused on individual interventions on managing challenging behaviors. The Cognitive Abilities, Life with Meaning (CALM) program is a comprehensive care model that provides trained staff, individualized treatment plans, and recreational and exercise interventions for patients with dementia at the San Francisco Veterans Affairs (SFVA) SNF. We sought to evaluate the effects of this multi-faceted program, as well as the effects of its abrupt cessation during the COVID-19 pandemic.

Methods A retrospective cohort study was conducted. We identified subjects who were enrolled in the CALM program and had been residents at the SFVA SNF for at least one year prior to program implementation. We examined outcomes measures during three time periods: before CALM implementation (541 patient-months (pt-mos)), during CALM implementation (711 pt-mos), and during the COVID-19 pandemic (221 pt-mos). We compared incidence rates using a chi-squared goodness of fit test.

Results A total of 46 residents ≧60 years of age with dementia were enrolled in the CALM program. No one was diagnosed with COVID-19 at any point during the study. After implementation of the CALM program, there was a decrease in incidence of falls **(**incidence rate ratio (IRR)=0.58, p<0.0001) and nursing notes recording disruptive behavior (IRR=0.46, p<0.0001). During the COVID-19 pandemic, CALM programming ceased and isolation measures were implemented. There was an increased number of nursing behavior notes (IRR=2.26, p<0.0001), initiation and dose increases of psychoactive medications **(**IRR=4.5, p<0.0001), and deaths (IRR=2.9, p=0.037).

Conclusion These results suggest that the CALM program led to positive outcomes in SNF patients with dementia, including decreased falls and disruptive behaviors, and could serve as a model for SNFs throughout the country. Additionally, the observed increase in disruptive behaviors, death rate, and prescription of psychoactive medications during that the COVID-19 pandemic suggest that the cessation of dementia-specific programming and isolation measures may have resounding effects on dementia patients, beyond the effects of the COVID-19 disease itself.

B42

Promoting Hearing Assistance for Social Engagement (PHASE) in Los Angeles Communities

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Background: Hearing loss compounds social isolation. We tested acceptability and benefit of simple hearing assistance devices—Personal Amplifiers (PAs)—provided to older people with hearing loss and risk for social isolation, loneliness and depression.

Methods: We conducted a pre-post pilot trial with 1- and 2-month follow-up of **r**esidents of six low-income senior apartment buildings in Los Angeles (n = 74) who had hearing difficulties, based on either (A) ≥ 10 (range 0-40) on the Hearing Handicap Inventory – Survey; or (B) hearing loss based on a clinically validated audiological iPad assessment (SHOEBOX^{TM}) with surveys at 0, 1 and 2 months using 4 instruments: (1) Social Isolation Score (SIS); (2) Patient Health Questionnaire (PHQ-9); (3) Sense of Social Support scale; and (4) DG Loneliness Scale. We assessed PA use and perceived benefit using the International Outcome Inventory for Alternative Interventions (IOI-AI).

Results: Baseline characteristics and degree of hearing problems did not vary significantly among 74 initial enrollees. Forty-two residents completed 1- and 2- month surveys. Mean age was 78.2 years; 64% were women; 83% scored ≥10 on HHI-S and 83% met SHOEBOX criteria for hearing loss. At baseline, 31% met SIS criteria for social isolation (≥2; mean=1.0; SD:0.98); 41% met DG criteria for loneliness; and 19% had low social support. Mean PHQ-9 was 7.0, (SD:5.3); 26% had moderate to severe mood symptoms. At 2-month follow up, 87% reported PA use of ≥ one hour/day, and 76% indicated that the device changed life enjoyment "quite a lot." Psychosocial measures improved over time.

Conclusions: In a vulnerable older population with hearing difficulties, simple PAs were enthusiastically received and may have improved social functioning and mood. Further work with stronger study designs is needed to shed more light on the effectiveness of this approach.

B43

Nerve Blocks for Geriatric Hip Fracture: Are We Improving Outcomes?

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BACKGROUND: Regional nerve blocks are recommended in clinical practice guidelines for elderly patients undergoing hip fracture surgery, as evidence shows they can decrease pain and reduce opioid consumption. Limited data also suggest that nerve blocks may reduce the incidence of delirium—the most common perioperative complication for older adults. Performing a nerve block early in the hospital course may improve some outcomes (opioid usage, length of stay), but timing has not been shown to impact delirium. We conducted a joint QI study between the Acute Pain Service and Hospital Medicine, examining the impact of preoperative nerve block on postoperative delirium and opioid utilization.

METHODS: We reviewed a data sample from our Geriatric Fracture Center (GFC) of all patients age >60 years who had operative hip fracture repair in 2019. Pre- and postoperative delirium were identified on chart review by NSQIP Surgical Clinical Reviewers, as defined by NSQIP. Frailty was scored using the five-item FRAIL questionnaire. Electronic Medical Record macrodata reported opioid utilization during hospital stay. Logistic regression and linear regression analyses were used to evaluate association between clinical/procedural variables, postoperative delirium and opioid utilization.

RESULTS: There were 190 patients in the sample. 75 (39%) had nerve blocks and 56 (29%) had postoperative delirium. Preoperative delirium (OR:8.40, CI:[3.75-18.77]; *P*<.0001) and age (OR:1.06, CI:[1.01-1.10]; *P*=0.012) were associated with postoperative delirium in a model adjusting for gender, nerve block and frailty. However, nerve block was not associated with postoperative delirium in this model (*P*=0.464). A model adjusting for nerve block timing found no association between timing and delirium (*P*=0.922). Finally, there was no association between nerve block and opioid utilization in this sample (*P*=0.55).

CONCLUSION: Our QI project did not identify an association between preoperative nerve blocks and postoperative delirium or opioid usage in this sample of GFC patients. Consistent with prior evidence, increasing age and preoperative delirium were strongly associated with postoperative delirium. Limitations of our study include a

small sample size and potential inter-reviewer variability in delirium assessment. We plan to continue exploring the impact of nerve blocks within a larger data sample, given prior data supporting their merit.

B44

Targeted Virtual Opioid Overdose Education and Naloxone Distribution In Overdose Hotspots For Older Adults

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Background: Mirroring the rise in heroin use among older adults, the rate of rise of opioid-related overdose deaths from 2016 to 2017 in Chicago was highest among ages 55-64 (+26.7%) and 65-74 (+95.0%). In Chicago, recent work examining spatial distribution of overdose deaths in adults over 50 showed opioid overdose deaths are geographically clustered. This hyper-local impact creates an opportunity for locationally targeted interventions. Opioid overdose education and community naloxone distribution (OEND) is cost effective, results in reduced opioid-related emergency department visits, and may have a mortality benefit. The COVID-19 pandemic has exacerbated the opioid crisis and 2020 was the deadliest year for opioid overdoses in the history of Chicago but many in-person community outreach and training initiatives have paused or been transitioned to virtual platforms due to the pandemic. A video-conferencing based virtual OEND intervention targeting community organizations identified to be within communities with high overdose rates for older adults has the potential to reach this particularly vulnerable population during the limits imposed by the COVID-19 pandemic.

Methods: An existing in-person training for opioid overdose identification and naloxone administration was adapted to a virtual format and revised to include precautions in the context of the COVID-19 pandemic (e.g. changes needed to respiratory resuscitation). A protocol was developed for participants to acquire naloxone. Next steps include soliciting curriculum feedback from diverse stakeholders. We then plan to deliver the curriculum to senior housing residents, community-dwelling older adults, and aging services professionals. Program recruitment will be focused in areas with more highly clustered fatal overdoses. A 5-item Likert assessment on participant confidence in responding to overdose will be used for evaluation.

Results: The results will be discussed and will include data on number of trainings, attendee types, and post-training survey results.

Conclusions: A geographically targeted virtual OEND training represents an innovative means to continue essential outreach aimed at reducing the frequency of fatal opioid overdoses among Chicago's older adults in high-risk communities.

B45 Student Presentation

The Impact of Heart Failure and Dementia on High-Risk Older Adults

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Background: Heart Failure (HF) is the leading cause of hospitalization in the older adult population. The management of HF is a cognitively demanding process, requiring patients to track symptoms, medication, diet, etc. With the presence of dementia, HF patients may be at a greater risk for poorer self-care management and health outcomes than those without dementia. Thus, the aim of this study is to determine the association between HF and dementia in high-risk older adults through the analysis of three outcomes: recommended discharge location, 30-day emergency department (ED) visit rates, and 30-day readmission rates. *Methods*: This is a secondary analysis of an existing database created during the implementation of a care transitions program for high-risk adults age ≥75. Data were analyzed for non-ICU patients age ≥75 admitted to a community teaching hospital from July 2015 to June 2017. Patients diagnosed with HF were grouped based on a dementia diagnosis, determined by ICD-10 codes and/or prescribed dementia medications, and then further divided based on recommended discharge locations. Chi square tests of independence were performed in order to compare groups. *Results:* Of the eligible 5,457 HF patients, 1,258 (23%) had a dementia diagnosis and 4,199 (77%) did not. There was a significant association between the presence of dementia and a recommended discharge to the institutional settings (hospice ($p<.01$) and rehabilitation/skilled nursing facility ($p<.01$)). No significant differences were found for overall hospital returns and readmissions between HF patients with vs. without dementia, but HF patients with dementia had significantly higher ED visit rates than those without dementia ($p<.05$). *Conclusions:* In this study, HF patients with dementia, compared to those without dementia, were more likely to be discharged to an institutional setting and return to the ED. The screening for cognitive impairment in HF patients can help improve patient outcomes, care transitions programs, and can reduce hospital return costs.

B46 Student Presentation

Reducing Inappropriate Dosing in Hospitalized Older Adults: A Quality Improvement Intervention

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Background: Hospitalized older adults 65 years and older often receive inappropriately high dosages of potentially high-risk medications. Inappropriate dosing can lead to adverse drug events, such as falls and fractures. This study evaluated the effectiveness of a quality improvement intervention to reduce the proportion of medication orders with inappropriate dosing for six frequently prescribed, potentially high-risk medications.

Methods: A one-year needs assessment at an urban, academic hospital identified haloperidol, ibuprofen, meclizine, metoclopramide, morphine, and naproxen as medications frequently prescribed at dosages higher than recommended in inpatients 65 and older. An interprofessional team utilized published literature, drug monographs, and clinical experience to develop recommended dosing upper limits. Computerized provider order entry (CPOE) defaults in the electronic health record (EHR) for the six medications were then altered to align with the developed recommendations. The proportion of orders with inappropriate dosing over the recommended upper limits for hospitalized adults 65 and older was the primary outcome measure.

Results: In the three months post-intervention, the rate of inappropriate prescribing for the six medications combined significantly decreased compared to one-year pre-intervention, from 54% (944/1,742 orders) pre-intervention, to 47% (220/469 orders) post-intervention ($p=0.005$). Rates of inappropriate prescribing of haloperidol showed a statistically significant decrease (59% pre, 41% post, $p=0.004$). Rates of inappropriate prescribing for ibuprofen, meclizine, metoclopramide, and morphine showed a trend towards declining, however the rates were not statistically significant.

Conclusions: CPOE defaults represent an effective, easily reproducible quality improvement intervention to reduce inappropriate dosing and improve prescribing practices in hospitalized older adults. Future work will include continued prescribing data collection for the targeted medications over a longer period of time and analysis of the intervention's effect on adverse drug effects and cost savings.

B47

Temperature-based Screening for SARS-CoV-2 in Nursing Home Residents with Dementia

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Background: Alzheimer Disease and related dementias (ADRD) may influence expression of temperature variation during viral illnesses due to degeneration of hypothalamic neurons influencing temperature homeostasis. Investigations of body temperature in nursing home (NH) residents have shown that testing for SARS-CoV-2 based on two or more temperature elevations of 0.5°C above baseline temperature (2TE) can improve detection. We compared the sensitivity and specificity of this strategy in NH residents with and without ADRD.

Methods: We retrospectively identified a cohort of individuals who resided in Veterans Administration operated NHs between March 1st, 2020 and August 5, 2020. We used ICD-10 codes from the prior 12 months to identify the patients diagnosed with ADRD. NH staff recorded vital signs including body temperature, and tested residents for SARS-CoV-2 for clinical and infection control purposes.

Results: Our cohort contained 9408 residents, 895 of whom had PCR-confirmed SARS-CoV-2 infection (see table). 2TE occurred in 2515 (44%) of the 5698 residents with ADRD, and in 1616 (44%) of the 3710 residents without ADRD. In residents with ADRD, 2TE had a sensitivity of 0.82 (95% CI 0.79 - 0.85) and a specificity of 0.61 (0.59 - 0.62). In residents without ADRD, 2TE had a sensitivity of 0.80 (0.75-0.85) and a specificity of 0.59 (0.58 - 0.61).

Conclusions: 2TE performed similarly in NH residents with and without ADRD. These results indicate body temperature elevations in residents with SARS-CoV-2 infection are similar with and without ADRD. We will further evaluate the utility of temperature-based selection for who should undergo SARS-CoV-2 testing in NH residents with ADRD using additional statistical techniques taking into account time to diagnosis and time to maximum temperature.

	N	ADRD<2*	ADRD≥2*	nonADRD<2*	nonADRD≥2*	ADRD	nonADRD
total	9408	3183	2512	2094	1616	5698	3710
SARS-CoV-2 +	895	110	512	55	218	622	273
SARS-CoV-2 -	8513	3073	2003	2039	1398	5076	3437

***number of temperature elevations 0.5 C above baseline**

B48

Examining the effects of modified recreational activities on the mental health of nursing home residents during COVID-19

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Background: Social isolation from COVID-19 has been shown to affect the mental health of all socioeconomic, ethnic and age groups. One of the most affected populations is long-term care (LTC) residents. This increased separation from their families and society has created an additive effect to their baseline physical and mental ailments. We investigated the change in depression and anxiety over time in residents of one LTC facility during this crisis.

Aim: The aim of the intervention was to reduce the impact of social isolation by modifying recreational activities to include face-to-face visits, music therapy, and similar activities.

Methods: Staff collected PHQ-9 and NPIQ (Neuropsychiatric inventory questionnaire) scores of all residents in the facility before implementing modified activities. Between 8/10 and 10/3/2020 we had a modified event calendar. Following the 8-week intervention, PHQ-9 and NPIQ scores were re-recorded. All LTC residents were eligible. Short-term residents, hospice patients, and those who did not participate in the intervention were excluded from analysis. Our primary outcome was change in depression and anxiety. Our secondary outcomes were change in weight, ulcers, and falls (MDS quality metrics). We hypothesized there would be a positive change in PHQ9 and NPIQ scores over time. We analyzed our data using paired sample t-tests. Analyses were conducted using SPSS v. 26.

Results: 97 residents participated this intervention with an age range of 63-103 (mean = 86; SD 8). Participants' mean PHQ-9 scores improved significantly after participation in activities (9.1 vs 6.3) with a mean difference of 2.804 (CI 1.924-3.684, p<.001). Similarly, mean NPIQ scored showed a similar trend (18.74 vs 14.94) with a mean difference of 3.804 (CI 3.098-4.510, p <.001). There were no significant differences in falls, weight, or ulcers.

Conclusions: This study highlights how COVID-19 has impacted LTC residents' mental health and suggests implementing modified recreational activities can improve the mental health of LTC residents. This is especially important as the pandemic, and associated restrictions, have lasted longer than anticipated. Therefore, LTC facilities should slowly and safely increase social interaction for residents whenever possible.

B49

Implementation of A Comprehensive Geriatric Assessment in the Pre-operative Evaluation of Older Adults in Primary Care

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Background: Since 2018, as part of a new initiative in collaboration with the Department of Surgery, Orthopedics, and Anesthesia, geriatrics has been an integral part of caring for higher risk, frail, older adults before and after elective surgeries at Johns Hopkins Bayview Medical Center (JHBMC). JHBMC is currently one of the sites on a National Geriatric Surgery Pilot in collaboration with the ACS-NSQIP to be a certified site for geriatric surgical excellence. The goal for the current initiative is to increase the utilization of screening for frailty, cognitive impairment, and physical impairment during a pre-operative assessment for an older adult by implementing a standardized comprehensive geriatric assessment

Methods: A baseline needs assessment of the current surgical pre-operative assessment for older adults admitted into Bayview Hospital for elective surgery was done at the start of the pilot program. Key metrics to measure improvement and quality of care of the geriatric surgery pilot program were identified and are continually tracked. A review process that includes a weekly preoperative multidisciplinary call with anesthesia, surgery, geriatrics, nursing, case management, rehabilitation medicine, and pastoral care – with review of a select number of cases deemed as high risk patients was instituted.

Results/Discussion: A frail risk screen of the Edmonton Frail Scale was implemented as a key component to identifying high-risk surgical patients. It was implemented in February 2018 in the surgical services of vascular, general, urology, and gynecology with approximately 492 patients were successfully screened (42%). Patients considered high risk were 175 patients (36%). Outcomes from the first 3 months of multi-disciplinary calls identified 34 patients considered high risk, with a mean Edmonton scale of 7.4 due to variables of polypharmacy, multiple admissions and functional impairment and of those patients, 35% had no advance directives, living will or health care agent designated. With identification early on prior to surgery of high risk older adults, early advance care planning can be done and further in-depth conversations regarding risks and benefits can be done with the patient, family, along with medical team members.

B50

Association of a Comprehensive Geriatric Emergency Department Program with Resource Utilization and Hospitalizations for Older Veterans

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Background: Strategies are needed to improve the care of the 20.3 million older adults seeking care in emergency departments (ED) in the United States annually. We aim to describe the outcomes of Geriatric Emergency Room Innovations for Veterans (GERI-VET), a novel initiative utilizing former military medics to perform geriatric screens and post-ED care coordination.

Methods: We prospectively studied Veterans ≥ 65 years treated at an urban Veterans Affairs Medical Center (VAMC) ED who were eligible for GERI-VET from 1/1/2017-2/29/2020. Veterans with an Identification of Seniors At Risk (ISAR) score >2 or physician concern for frailty were considered eligible for GERI-VET. Outcomes of 745 Veterans who received care through the GERI-VET program were compared with a control group of 745 propensity-score matched GERI-VET eligible Veterans who did not receive GERI-VET program care due to staffing. Study outcomes were ED resource utilization, outpatient referrals, ED admission, and 30-day admission.

Results: The GERI-VET and control groups were similar in terms of age (79 +/- 8 vs. 80 +/- 8 years, p=0.17), sex (males; 730 [98.0%] vs. 732 [98.3%], p=0.85), and ISAR scores (ISAR ≥ 3; 511 [68.6%] vs. 511 [68.6%], p=1.00). In the ED, the GERI-VET group received more consults to pharmacy (331 [44.4%] vs 200 [26.8%], p<0.001) and social work (401 [43.8%] vs 138 [18.5%], p<0.001). The GERI-VET group had higher rates of referrals to Geriatrics clinic (59 [15.4%] vs 19 [6.1%], p<0.001), Home Based Primary Care (126 [32.9%] vs 25 [8.0%], p<0.001) and Prosthetics (84 [21.9%] vs 41 [13.1%], p=0.003). The GERI-VET group had lower rates of ED admission (362 [48.6%] vs 432 [n=58.0%], p<0.001) and 30-day admission (413 [55.4%] vs. 481 [64.6%], p<0.001) without increasing ED length of stay (5.3 vs 5.4 hours, p=0.60) or 72-hour ED revisits (28 [3.8%] vs 16 [2.1%], p=0.09).

Conclusions: A program designed to screen for geriatric syndromes and coordinate care among at-risk older Veterans was associated with increased multidisciplinary resource utilization, reduced hospital admissions, and reduced 30-day admissions without increasing ED length of stay or re-visitation.

B51 Student Presentation

Development of a Predictive Algorithm for Long-Term Care Placement and Mortality for U.S. Veterans

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Background: Many older Veterans, like most adults, prefer to remain in their homes and communities as long as possible. While targeted delivery of home and community-based services for Veterans might delay long-term care placement, often access to these services is disorganized or delayed. To aid in early recognition of Veterans at high risk for long-term care placement or death, we developed and validated a predictive model, known as the "Choose Home" algorithm.

Methods: A total of 148 predictor variables—including demographics, comorbidities, and healthcare utilization—were selected using logistic regression to predict placement in a long-term care facility for >90 days or death within two years. Using two cohorts of Veterans Health Administration (VHA) users, Derivation (4.6 million) and Confirmation (4.7 million) cohorts were assembled and followed for two years.

Results: Veterans were predominantly male (92.8%; 92.5%, standard mean difference 0.012) and older (61.7±15.5; 61.5±15.6 years), with a high prevalence of comorbid conditions. Predictors of the outcome included demographics (e.g. age, marital status); socioeconomic variables (e.g. homeless, rural); mental health (e.g. dementia, substance use); medical comorbidities (e.g. spinal cord injury, cancer, diabetes) and costs (e.g. hospitalizations, VA cost). The predictors were weighted and assigned to the predictive algorithm according to the strength of association from the regression models. Between the Derivation and Confirmation cohorts, the area under the receiver operating curve was found to be 0.80 (95%CI 0.799, 0.802) and 0.80 (95%CI 0.800, 0.802) respectively, indicating good discrimination for determining at-risk Veterans.

Conclusions: Overall, the Choose Home algorithm performs well at discerning those at risk for long-term placement or death. The algorithm provides a minimal workload, cost-effective, and high impact tool for providers to identify at-risk Veterans and better coordinate individualized, high-quality care. Implementation into a health system presents an opportunity to study the uptake process.

B52

Blood pressure variability is associated with falls in long term care

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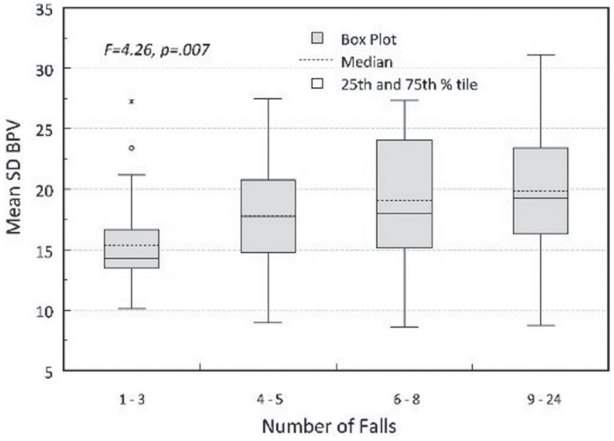
Background: High variations in serially measured blood pressures are associated with adverse events such as poor surgical outcomes and memory loss. Here, BPV was examined for an association with older adult falls in nursing homes.

Methods: A retrospective study was conducted in 2 nursing homes. Medical records of residents 65 years and older were reviewed for blood pressure measurements and reports of falls. BP values taken in the facilities were recorded from two time points/month over 10-months. Falls were determined by reports in nurses' notes, provider progress notes or hospital medical records.

Results: 100 patient charts were analyzed. The population was 100% Caucasian, 60% female, with average age of 85 years old (65–104 years old). The average number of falls over a 10-month period was 6.64. The average systolic BPV significantly increased from 15.4 for those with 1-3 falls to 19.9 for those with >9 falls. Fall number was significantly associated with systolic BPV quartiles.

Conclusions: Multiple falls are associated with High Blood Pressure Variability. This metric may complement other risk assessments for high fall risk. Since this association was found over a 10-month period, additional questions exist whether shorter intervals of BPV measurements can predict frequent fallers. High BPV is linked to arterial stiffness suggesting that clinical interventions lowering BPV might also reduce fall risk.



The average systolic BPV significantly increased from 15.4 for those with 1-3 falls to 19.9 for those with 9+ falls (p=.007)

B53

Validation of the Brief Confusion Assessment Method (BCAM) for Screening Delirium in a General Medicine Unit

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Background: Delirium affects about 11-40% of hospitalized patients, and is associated with significantly increased risk of death, nosocomial complications, prolonged length of stay, and nursing home placement. Only about one-third of physicians and about one-third of nurses recognize delirium. The Brief Confusion Assessment Method (BCAM) developed by Han et al. is an adaption of the Confusion Assessment Method (CAM). While the CAM takes at least five minutes to complete, the BCAM can be performed in less than one minute. The BCAM has previously been validated in an emergency department population. Our study is a validation study comparing BCAM against the gold standard CAM in a general medicine inpatient population.

Methods: The study was designed as prospective observational study. It was carried out in a 50-bed community hospital general medicine unit. Patients were enrolled from March 1, 2020 – November 15, 2020. All patients admitted aged 65 years or older were assessed with BCAM every shift and with any new change in mental status. Patients were excluded if they were non-English speaking, deaf, blind, comatose, non-verbal, or unable to follow simple commands prior to admission. The BCAM was performed by trained bedside registered nurses. The gold standard CAM assessment was performed by internal medicine physicians or geriatricians within three hours of first BCAM assessment.

Results: A total of 105 patients were enrolled. The mean age was 79.3 ± 10.3 years with 58.1% female. Thirteen patients (12.4%) were Black, and the remaining 92 (87.6%) were White. Thirty-three patients (31.4%) had dementia. Per the gold standard CAM, delirium was present in 33 patients (31.4%). Per the BCAM, delirium was present in 26 patients (24.8%, p=0.0196). When compared with the CAM, the BCAM showed 75.8% sensitivity and 98.6% specificity for delirium. Positive and negative LRs were 54.5 and 0.246, respectively.

Conclusions: This is the first study evaluating the BCAM in a general medicine inpatient unit. In our study, the BCAM showed moderate sensitivity and excellent specificity for detecting delirium. We conclude that the BCAM is an effective and practical clinical test to detect delirium in older adults in a general medicine inpatient setting.

B54

Telemedicine, Adherence, and Geriatric Veterans: Improving Medication Compliance Using Mobile Technology (TAG-VET)

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Background: Decreased medication adherence in older Veterans is costly to VA and can be catastrophic for patients. Medication education currently takes place during clinic visits, but adherence between clinic visits can be challenging for older Veterans, especially those who have mild cognitive impairment or who are on multiple medications with complex dosing regiments. These challenges have been exacerbated by the pandemic and the reduction of in-person clinic visits due to prudent social distancing. Moreover, with a few exceptions, VHA does not currently provide interdisciplinary ongoing support for older Veterans between clinic visits to ensure medication adherence.

Methods: This proposal seeks to leverage existing mobile health technology to develop a new telehealth program that improves medication adherence in older Veterans. A multidisciplinary team led by a GRECC physician, includes pharmacists and a nurse will work closely with Veterans to use their mobile devices and the VA Video Connect (VVC) application to improve medication adherence. Eligible VA-prescribed oral medications (along with ample labeling and instructions) were sent to Veteran participants in blister packs that organize pills according to the time of day that they are to be taken. At an initial evaluation, the team assessed the Veterans' ability to adhere to their medication regimens (e.g., cognitive status) and developed an individualized plan to assist them in improving their medication adherence, such as setting reminders on their mobile devices (e.g., watches, mobile phones). The team also facilitated weekly check-ins that assess medication adherence, evaluate Veteran preference and satisfaction, and make modifications as necessary. The team conducted more detailed assessments of medication adherence weekly during the first month and then monthly subsequent to the intervention.

Results: Of the seven patients who have been enrolled, there has been 100% adherence, high Veteran and caregiver satisfaction to date.

Conclusions: Multidisciplinary team consisting of physician, nurse, and pharmacists, using medication bubble pack distribution systems increases Veteran and caregiver satisfaction and medication adherence.

B55

Improving Sensitivity to and Inclusivity of LGBT Older Adults in an Urban Geriatric Practice

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Background: Primary care holds considerable importance to aging adults, aiming to reduce risk, prevent disease, sustain function and cognition, and plan for end of life care. Research shows that LGBT older adults report reluctance to seek medical care due to fear of discrimination and stigma. The lack of adequate medical utilization contributes to delayed care, increased risk of serious illness, and poorer health outcomes. LGBT sensitivity and inclusivity in primary care is paramount to prevent perpetual unmet health needs; however, health initiatives serving this population have mainly focused on younger LGBT individuals. The Center for Healthy Aging at Thomas Jefferson University began an initiative to improve sensitivity to and inclusivity of LGBT older adults. The goal of this study is to assess the concerns, needs, and preferences of LGBT community-dwelling, older adults to guide practice enhancements.

Methods: A voluntary, anonymous survey was distributed through email utilizing a list-serve from the LGBT Elder Initiative (a group of over 1000 older LGBT adults in the Philadelphia area). The survey was administered using Qualtrics, a HIPAA secure platform. Survey questions focused on identifying demographics, health concerns, life concerns, preferred provider expertise, and valued medical services.

Results: Outcomes of the survey will be reported.

Conclusion: Lack of sensitivity and inclusivity in primary care will perpetuate the unmet needs and poorer health outcomes of LGBT older adults. This survey assesses the concerns and needs of older LGBT adults to improve primary care for this vulnerable population. The results will be used to direct provider and staff training and guide further practice enhancements.

B56

COVID-19, masks, and hearing difficulty: Perspectives of healthcare providers

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Background: Hearing difficulties are common, often underrecognized, and contribute to increased healthcare utilization, misunderstandings, and reduced patient satisfaction. Safeguards implemented in the setting of the COVID-19 pandemic, such as personal protective equipment (PPE), physical distancing, and visitor restrictions, may exacerbate communication difficulties. We created a national survey to understand the experiences of healthcare providers and identify potential interventions as a basis for evolving best practices to assure safe, accurate communication.

Methods: To create our survey, we solicited input from multiple professions and made revisions using Plan-Do-Study-Act cycles. Our final 37-question survey focused on communication changes in the setting of increased mask use, changes in hearing loss awareness over time, and tools used by providers to improve communication. The online survey was sent out internally at UCSF and nationally through professional society Listservs, email, and social media.

Results: We received a total of 233 responses from providers in a variety of professions and healthcare settings. The majority of respondents were physicians or nurse practitioners. Most respondents indicated that patients' hearing difficulties moderately or extremely impact the quality of care provided. The pandemic made respondents significantly more aware of communication issues related to hearing difficulties. Mask use resulted in muffled speech, both shorter and longer clinical encounters, and relying more often on caregivers. Strategies to assist communication most often included communication boards, environmental modifications, and sound amplifiers. Many reported not having access to sound amplifiers. Few respondents reported using speech-to-text apps. More than one-third of respondents reported they had some hearing difficulty themselves.

Conclusions: Results suggest that use of PPE during the COVID-19 pandemic has resulted in increased awareness of hearing difficulties, exacerbated communication challenges, and altered care practices. Several strategies are utilized to mitigate these challenges, but no consistent strategy was identified and barriers to implementation in clinical practice remain. Increased awareness of this issue should stimulate the development of creative solutions that can meet communication needs and improve patient care.

B57 Student Presentation

Refinement of an emergency department-based, advance care planning intervention for nurses: a qualitative study

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Background: Most older adults visit the emergency department (ED) near the end of life without advance care planning and thus are at risk of receiving care that does not align with their wishes and values. While our advance care planning intervention has been shown to be acceptable for use on seriously ill older adults in the ED, its potential to be used by nurses remains unclear. Here, we seek to identify refinements to adapt an ED-based, advance care planning intervention (*ED GOAL*) by eliciting the perspectives of nurses.

Methods: We conducted a qualitative study interviewing ED nurses in an urban academic and community ED settings. Areas of inquiry included: prior experience with advance care planning, overall impressions and suggestions to improve *ED GOAL*, potential drawbacks, and methods of implementation. Qualitative interviews were conducted, transcribed, and analyzed systematically using NVivo software.

Results: 25 nurses participated in this study (average 46 years old, 84% female). On average, nurses have been practicing in the ED for 16 years. Most nurses expressed positive feelings towards this intervention and provided feedback to enhance its effectiveness.

Conclusion: ED nurses were overwhelmingly excited to participate in *ED GOAL* and provided insight into how to best adapt our advance care planning initiative to their profession. Implementing these changes and conducting studies to determine efficacy of *ED GOAL* is our next area of research.

B58 Student Presentation

Clinician Tool for Fall Prevention

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Background: Falls remain one of the most prevalent public health issues in the U.S. and especially in adults aged 65 and older. There are many resources in the community that can be used to build strength and balance in order to prevent falls such as Tai Chi, Yoga, Silver Sneakers, and Stepping On programs. However, patients often do not know which resources are appropriate for them, and it is difficult for clinicians to keep track of the various resources, their locations and their availability. We developed a tool that allows clinicians to easily connect their patients with the fall prevention resources with interventions appropriate to their capabilities and needs.

Methods: We found appropriate fall prevention resources by searching for classes available throughout the Cincinnati region and contacting site specific staff to obtain details such as type of class, difficulty level, cost, and weekly schedule. We have partnered with People Working Cooperatively, a local community organization that specializes in helping older adults age in place, to create a website housing these resources with an updated schedule of classes based upon location and intervention.

Results: The website displays local fall prevention classes and resources in several ways – on a map, in a calendar and via list – allowing clinicians and patients to filter by location, available dates, class type, and price. The link to the website will be embedded in the electronic health record (EHR) to be accessible to clinicians addressing a recent fall or fall prevention with their patients.

Conclusions: The goal for this tool is for a provider to be able to hand their patient the resource's phone number, address, email, and calendar availability of classes before they leave the office. Long term goals of this project include incorporation of the tool into the EHR and collection of data on utilization of the tool by providers and subsequent use of resources by providers. This data could then be used to leverage a more robust investigation of the cost benefit of fall prevention resources. With this referral tool in place, our hope is to close the loop between community resources and clinicians and ultimately reduce fall rates and fall associated health complications and medical costs.

B59 Encore Presentation

Asking What Matters is What Matters to Hospitalized Older Adults

E. Emery-Tiburcio,[1] V. Rompala,[2] C. Guerrier,[1] R. Golden,[1] M. Newman.[1] *1. Rush University Medical Center, Chicago, IL; 2. Chicago Commons, Chicago, IL.*

The 4Ms of an Age-Friendly Health System place What Matters at the center of optimal care for older adults. Nurses at Rush have asked every medical inpatient What Matters early in their hospital stay since May, 2018. Responses were recorded in tablet software and on patient room white boards. What Matters responses recorded electronically were stratified by age and ethnicity. Qualitative data analysis of responses (n=660) was conducted using In-Vivo software by three raters. Themes in responses include: going home; comfort, including pain control and breathing more easily; effective staff/patient communication; compassionate care; and mobility. Patient satisfaction data for the first year showed an average 2.6% increase in satisfaction in nurses listening to the patient, and average 3.6% increase in satisfaction in nurses explaining things in an understandable way. Both increases were statistically significant. Implications of this practice for health systems improving age-friendly care will be discussed.

B60

A Tiered, Scalable, Interdisciplinary Approach to Age-Friendly Care for Trauma Patients

C. Jones,[2] J. Willard,[1] N. M. Pajewski,[1] R. Brown,[2] A. Moses,[1] J. Hoth,[3] J. Gross,[3] C. Seguin,[3] K. M. Lenoir,[1] J. Williamson,[2] K. E. Callahan.[2] *1. Wake Forest, Winston Salem, NC; 2. Gerontology and Geriatric Medicine, Wake Forest School of Medicine, Winston-Salem, NC; 3. Wake Forest Baptist Medical Center, Winston-Salem, NC.*

Background:

Adults aged 65+ represent 1/3 of trauma patients and have the highest fatality rate in the National Trauma Data Bank (NTDB). While the Trauma Quality Improvement Program recommends proactive geriatrics consultation, shortages of geriatricians have impeded implementation. This study explores the impact of an interdisciplinary, tiered geriatrics intervention on trauma surgery care. In Spring 2018, the trauma surgery service at Wake Forest Baptist Health created an interdisciplinary initiative to improve geriatric care, which included age-friendly education among trainees and nursing staff; a care pathway with electronic health record (EHR) templates and order sets; and for highest risk patients, geriatrics consultation.

Methods:

Retrospective analysis of EHR and NTDB data for patients aged 65+ admitted to the trauma surgery service for ≥24 hours in an academic medical center-associated Level I Trauma Center. We compared outcomes (delirium, return to ICU, high risk medication use, discharge destination) among three groups: PRE-INTERVENTION (n = 420): cohort hospitalized prior to the tiered geriatrics interventions; POST-INTERVENTION (n = 491): cohort hospitalized after the intervention; and CONSULT (n=124): subset of post-intervention group who received geriatrics consultation. Differences between PRE and POST groups were analyzed using multivariable logistic models for all outcomes except length of stay, which was analyzed using a negative-binomial model.

Results:

The mean age of the CONSULT cohort (80.48, SD7.89) was older ($p<0.001$) than both the PRE (79.71, SD8.45) and POST (77.84, SD8.42) cohorts. While the POST and CONSULT cohorts had a higher percentage of females (54.0% and 58.9%), the groups did not differ by race, history of dementia, or Injury Severity Score. Those in the POST cohort were more likely than PRE to be diagnosed with delirium (OR 4.36), yet less likely to be prescribed antihistamines (OR 0.26) or benzodiazepines (OR 0.31). The POST group had higher utilization of skilled nursing facilities (41.5 %) and hospice (5.5%). Further data will be presented.

Conclusions:

A tiered, EHR-embedded intervention may be a pragmatic, scalable method for age-friendly trauma surgery care.

B61 Student Presentation

Assessing the Impact of VIONE on Deprescribing in Geriatric Veterans: A Quality Improvement Project

B. Y. Ortiz,[1] M. Martin,[2] A. Vadnerkar,[3,4] H. H. Tabarsi,[3,4] N. Agarwal,[4] S. Battar.[5] *1. The University of Arizona College of Pharmacy, Phoenix, AZ; 2. Pharmacy, Phoenix VA Health Care System, Phoenix, AZ; 3. Phoenix VA Health Care System, Phoenix, AZ; 4. The University of Arizona College of Medicine Phoenix, Phoenix, AZ; 5. Veterans Health Administration, Houston, TX.*

Background: Older adults are at significant risk of polypharmacy and potentially inappropriate medication (PIM) use that increases their risk of experiencing adverse drug events. VIONE (**V**ital, **I**mportant, **O**ptional, **N**ot indicated, **E**very medication has an indication) is a deprescribing tool created at the Central Arkansas VA to help identify and decrease the use of PIMs in older adults. The purpose of this quality improvement project was to assess the impact of VIONE on types of medications deprescribed and associated reasons for deprescribing in geriatric veterans receiving primary or palliative care at the Phoenix VA Ambulatory Care Clinic (ACC).

Methods: Patients were identified during their primary or palliative care appointments and offered the opportunity to undergo deprescribing for inclusion in this study. Inclusion criteria: age 65 years or older, on 15 or more medications, and seen for primary or palliative care at the Phoenix VA ACC. A retrospective chart review was conducted to identify patients with a deprescribed medication or note documented with VIONE between November 1, 2019 and October 31, 2020. Data were then exported to a spreadsheet and categorized by drug class and discontinuation reason. Other collected information included patient age, sex, and race/ethnicity. Mean and standard deviation were calculated for age with percentages calculated for sex, race/ethnicity, drug class, and discontinuation reason.

Results: A total of 179 patients qualified for inclusion and underwent deprescribing with VIONE, resulting in 598 medications deprescribed. Mean age was 80 years (SD 7.9), 178 (99.4%) were male, and 141 (78.8%) were white. Top 3 drug classes deprescribed were vitamins/supplements (15.6%), antihypertensives (9.9%), and antihyperglycemics (5.4%). Most common reasons for deprescribing were patients no longer taking (47.8%) and medication no longer indicated (28.4%).

Conclusions: VIONE tool is effective in reducing polypharmacy and deprescribing PIMs in older adults seen in outpatient primary and palliative care settings. Additional studies are needed to assess the tool's impact in other healthcare settings and non-VA older adult populations.

B62 Resident Presentation

Validation of Resting Energy Expenditure Equations in Older Adults with Obesity

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ABSTRACT

Background: Individuals ≥65 years old with obesity benefit from accurate assessment of caloric needs in targeted weight loss programs. In settings where indirect calorimetry (IC) cannot be performed, prediction equations are often used to calculate resting metabolic rate (RMR) with varying degrees of accuracy.

Methods: We conducted a secondary analysis of two previously conducted weight loss studies with a combined total of 73 older adults (aged ≥65 years) with obesity (body mass index (BMI) ≥30kg/m2). One hundred and forty-four individual participant-level data were collected at a single community aging center. Pre and post IC data were collected for each individual. Diagnostic accuracy was analyzed to ascertain the validity of four RMR prediction equations (WHO, Harris-Benedict, Owens, Miffilin) and a proprietary-based SECA bioimpedance analyzer equation.

Results: Mean age of the cohort was 73.4 years. Mean RMR using the ReeVue IC was 1643 kcal, with RMR-calculated using prediction equations ranging from 1509-1670 kcal. The WHO equation demonstrated the most accurate results with 59.0% accuracy within 10% of IC-RMR. The Harris-Benedict equation was second with 53.5% accuracy followed by the Owens equation with 50.7%. Using the SECA demonstrated the second lowest accuracy of 49.6%. Finally, with accuracy of 43.1%, the Mifflin equation demonstrated the lowest accuracy.

Conclusions: All equations demonstrated <60% prediction accuracy for older patients with obesity. There is great need for improved methods of estimating caloric needs in older adults.

B63

Changes in Functional Status over 6 Months in Older Adults After Hospitalization for Pneumonia

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Background

Pneumonia is associated with significant mortality and morbidity in older adults. We investigated changes in functional status over 6 months after pneumonia hospitalization by frailty status.

Methods

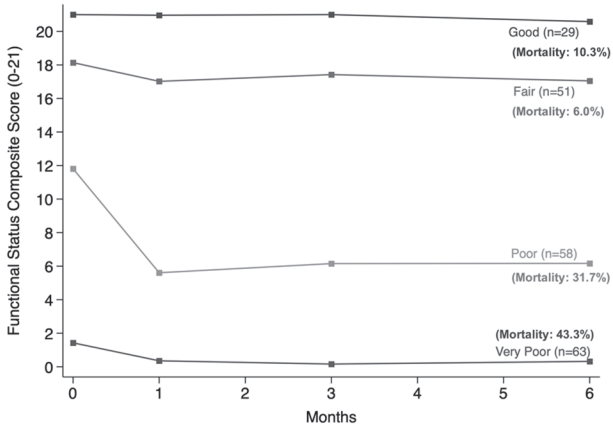
This prospective cohort study was conducted at a university hospital with 201 (mean age 79, 37% female) patients ≥65 years old who were hospitalized with pneumonia. A deficit-accumulation frailty index (FI) (range:0-1; not frail <0.15, pre-frail 0.15-0.24 mild-to-moderately frail 0.25-0.44, and severely frail ≥0.45) was calculated on admission. Functional status, defined as self-reported ability to perform 21 activities and physical tasks independently, was measured via telephone interviews at 1,3, and 6 months after discharge. Group-based trajectory model was used to identify functional trajectories. We examine the probability of each trajectory based on frailty levels.

Results

On admission, 51 (25.4%) were robust, 43 (21.4%) pre-frail, 40 (20.0%) mild-to-moderately frail, and 67 (33.3%) severely frail patients. Four trajectories were identified (figure): excellent (14.4%), good (25.4%), fair (28.9%) and poor (31.3%). The most common trajectory by frailty category was excellent trajectory (59.9%) in robust patients, good trajectory (74.4%) in pre-frail patients, fair trajectory (85.0%) in mild-to-moderately frail patients, and poor trajectory (89.6%) in severely frail patients.

Conclusion

Frailty was a strong determinant of poor functional recovery or persistent impairment over 6 months after pneumonia hospitalization in older adults. A dedicated intervention for frail patients is needed to prevent hospitalization-associated disability.



B64

Mining Big Data from Labs and Vitals to Estimate the Frailty Index in Patients with Congestive Heart Failure

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Objectives

Recognition of frailty in adults with Congestive Heart Failure (CHF) can better target interventions to slow functional decline and improve patient-centered outcomes. Previous studies used expert opinion to create a frailty index (FI) to predict mortality. Our aim is to apply a machine learning algorithm using laboratory values and vital signs to develop a FI.

Methods

Laboratory values and vital signs were collected from a national cohort of patients admitted to VA hospitals for CHF from 2012 to 2014. Lab values and vitals passed through a cascade of variable selection steps: prevalence≥1%, correlation with age, not universal by age≥55Y, P-value<0.05 in univariant analysis, remaining in least absolute shrinkage and selection operator (LASSO), and sequential forward variable selection. A Cox survival model was applied to the variables and their performance reported by area under the curve (AUC). Based on the similarity of the Hazard Ratios, five clusters were identified using Fuzzy clustering.

Results

The cohort consisted of 24,457 patients (age 72±11 Y, male 98%) with 82% mortality in 8 years. Out of 2429 variables (2417 laboratory studies and 12 vital signs), the model selected 54 variables and the COX model AUC was 0.92. The Hazard of mortality clustered into five distinct categories (Figure).

Conclusions

A machine learning algorithm using lab and vital data from electronic health records produced a robust frailty index that can be segmented into 5 distinct clusters predictive of mortality. Future work should evaluate the feasibility of implementing this FI at point of care.

B65

Operation Connect- Using Technology to Combat Older Adult Social Isolation during the COVID-19 Pandemic

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Background: The COVID-19 pandemic exacerbated a growing public health crisis among older adults: Social isolation and loneliness. With older adults instructed to "shelter in place", many lost access to vital resources: food access, worship services, companionship, socialization, and access to medical care We seek to learn if by providing community dwelling, economically disadvantaged, older adults with technology, specifically, tablets and teaching them how to use, will increase their use of technology and decrease loneliness.

Methods: Penn Cares (University of Pennsylvania community funding source) is funding our project to provide WIFI-enabled tablets for older, low-income adults in West /South-West Philadelphia. We are piloting with 10 patients identified by local community organizations and our medical practices. Prior to providing the tablet, we inform them about low-cost options for WIFI. We have developed detailed instructions on how to use the tablet. In addition, an Operation Connect team member personally delivers and teaches each older adult to use the technology. Instructions include how to access: medical visits, family via face-time, ordering groceries, local library, and community event (ex/ on-line church events). In this pilot, we focus on whether our instructions (hands-on, verbal, written) were adequate and whether changes need to be made for further distribution.

We survey each recipient before they receive the tablet and after they have used it for 4 to 8 weeks. Domains included functional status, social supports, loneliness (using UCFC validated 3 question loneliness scale), and adequacy of teaching on how to use the tablet. An IRB exemption was obtained to collect this data.

Results: The results will be discussed and presented upon completion of data collection.

Conclusion: During a time where social distancing leads to increased loneliness and decreased access to resources, technology engagement can be vital to members of our aging population. Technology access and literacy can both be barriers, especially for older, lower-income adults. By beginning to bridge this gap, through increased availability of devices and detailed instructions, we may see improvements in social isolation and decreased loneliness.

B66

Analyzing Risk Factors for Hospital Readmission and Mortality in Geriatric Patients

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Background

Hospital readmissions are considered a massive expense for the American healthcare system. Geriatric patients in particular, are susceptible to the negative consequences of these instances. It is estimated that 1 in 5 hospitalized geriatric patients are readmitted within 30 days of discharge resulting in Medicare costs of $15 billion yearly (MedPAC). Other negative factors which have resulted from hospital readmissions include increased functional decline, infections, and overall mortality. Because of this, identifying high risk patients is essential in clinical practice. The purpose of our study was to evaluate the key factors for hospital readmissions from a local skilled nursing facility and determine the association with overall mortality.

Methods

A total of 35 patients over the age of 60 were analyzed for our study. All patients were admitted to a local skilled nursing facility after their original hospitalization in 2019 and had at least one 30-day readmission. The Health Services Advisory Group SNF Risk Assessment checklist was then implemented to evaluate these patients. This checklist included several high-risk diagnoses and common factors for hospital admissions, and it was hypothesized that patients with more than 5 risk factors were at highest risk for readmission.

Results

Results of the study determined that all 35 patients had ≥5 risk factors on the risk assessment checklist. The overall mortality rate was 17 of 35 patients. The most common admitting diagnosis for these patients was acute respiratory failure secondary to either COPD or pneumonia. Additionally, patients with greater than 7 risk factors were found to have multiple readmissions and higher mortality rates.

Conclusion

We concluded from these findings that the risk assessment checklist was a very accurate tool which should prospectively be implemented for all nursing home residents on admission. Not only does this serve as a great predictive model for hospital readmission, it also helps to identify patients with the highest mortality rates. It is our hope that early identification of these patients will allow us to provide higher level of care and interventional strategies to prevent overall negative outcomes.

References

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B67 Resident Presentation

Admission Order Set Interventions to Improve Age-Friendly Care

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Background: Hospital admission order sets allow admitting teams to conveniently place admission orders. These order sets can include interventions and potentially inappropriate medications (PIMs) that put older patients at higher risk for hospital acquired complications. Our quality improvement project aimed to adjust the general medicine admission order set to improve the inpatient care for older adults, with a specific focus on reducing night-time sleep interruption and removing PIMs.

Methods: The general medicine admission order set includes a series of nursing orders labeled "promoting better sleep," which include interventions such as closing doors/turning down lights, no vital signs overnight if applicable, and offering patients eye masks/ear plugs. The selection options were previously located at the bottom of the order set. Our intervention involved prioritizing the selections near the options for vital signs and nursing activity orders. PIMs zolpidem and tramadol were removed as medication options from the admission order set.

Results: Changes to the general medicine admission order set were implemented on November 4, 2020. Post intervention analysis for "promoting better sleep" orders was performed for order set selections from November 4 through Dec 1, 2020. "No vital signs overnight" was ordered 110 times, "turn lights down and close doors" was ordered 113 times and "offer patient eye mask/ear plugs" was ordered 111 times. Approximately 23% of the time, these orders came from the admission order set. Post intervention, tramadol and zolpidem were ordered 0 times as part of the orderset. Pre intervention data was not available at the time of this abstract. Further assessment will include a comparison of pre and post intervention ordering of "promoting better sleep" options, tramadol and zolpidem.

Conclusions: Older adults represent a high risk population for hospital admission. Order set interventions may increase the use of practical nursing orders to improve sleep and may decrease the use of PIMs. Further work is necessary to study whether these interventions have an impact on inpatient sleep and PIMs prescribing and related complications.

B68 Resident Presentation

The Geriatric Emergency Needs Assessment (GENA): Development and Preliminary Results

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Background

Older adults are disproportionately affected by disasters. Medical literature relating to care of older adults in disasters prior to COVID-19 focused on natural disasters (e.g. hurricanes). We are still in the early stages of understanding how the COVID-19 response has impacted the health of older adults.

In March 2020, a Midwest academic medical center discontinued in-person medical visits. Shortly thereafter, statewide shelter-in-place orders were enacted. Many older adults were left without access to necessary care.

Researchers created a composite screening tool to assess unmet care needs of older adults during the COVID-19 pandemic. This research describes the development of the tool as well as early results of its deployment.

Methods

A 28-item screening tool, called the Geriatrics Emergency Needs Assessment (GENA), was developed based on the previously-validated Camberwell Assessment of Need for the Elderly and Elder Abuse Suspicion Index.

Resident physicians performed telehealth outreach encounters to older adults using GENA from April-July, 2020. Medicare-eligible patients receiving care through the health system's Accountable Care Organization were eligible. Results of the telephone encounters were tabulated by researchers to assess patient needs.

Results

Preliminary data available from 1470 outreach attempts and 1161 completed GENA evaluations (78% completion rate). Available results are detailed in the table below.

Conclusion

GENA can help quickly identify the most urgent unmet needs for older adults in disaster settings. We identified high rates of delayed medical care and were able to intervene. Proactive outreach is especially important for vulnerable populations, such as the homebound and very frail.

Further research is needed to validate GENA externally. Additional data, which is forthcoming, will offer more granular detail on specific needs addressed during these encounters.

Geriatric Care Gap Domain

GENA Assessment Domain	Responses
Perceptions of COVID-19	75% of respondents expressed worry about COVID-19
Social interaction and isolation	1% of respondents referred to Behavioral Health for acute anxiety/depression
Delayed and deferred medical care	6% of encounters include lab orders/provider referrals 3.2% of encounters with Advance Care Planning visit referrals
Risk of abuse and neglect	n=3 referrals to Adult Protective Services for concern for abuse or neglect
Medication and medical supplies	"Numerous" medication issues intervened upon

B69

Comparison of Characteristics and Outcomes in Do-Not-Hospitalize and Hospitalized Nursing Home Patients with COVID-19 Infection

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Background: Advance care planning (ACP) is a critical component of nursing home care especially during the coronavirus disease 2019 (COVID-19) pandemic. In addition to the Do-Not-Resuscitate (DNR) and Do-Not-Intubate (DNI) orders, some nursing home residents with a poor baseline functional status also have a Do-Not-Hospitalize (DNH) order to forego further hospitalizations that are unlikely to alter their disease trajectory and have a high risk of causing additional suffering. Since March 2020, many nursing homes experienced COVID-19 outbreaks with devastating consequences. ACP was strongly recommended to ensure goal concordant care. While some nursing home residents with COVID-19 infection decided to place a DNH order, others elected to be hospitalized. Since the decision to hospitalize could have major implications on the intensity of care a patient receives, we conducted an observational study to compare baseline characteristics, symptoms, and outcomes of nursing home residents with COVID-19 infection who were hospitalized to those with a DNH order. We also identified themes from residents and their families' responses regarding the decision to hospitalize or not to hospitalize.

Methods: All residents at 3 nursing homes in Connecticut with severe acute respiratory syndrome coronavirus (SARS-CoV-2) infection confirmed by polymerase chain reaction testing between March 31, 2020 and January 13, 2021, were included. Observational retrospective chart review was performed. Data was collected for baseline characteristics, home support system, symptoms observed, and treatments received in the DNH group and hospitalized group. Outcomes used for this study are number of deaths and time to death in each group.

Results: A total of 106 patients were included in this study. The results will be discussed.

Conclusions: Our result will allow better understanding of decisions made by nursing home residents with COVID-19 infection which would be helpful in future goals of care discussions. It will also show if hospitalization made a difference in terms of survival in nursing home residents with COVID-19 infection.

B70

Mission Possible: Geriatric Emergency Department Initiative to Address Polypharmacy in Older Adults

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Background: Older adults have high rates of both emergency department (ED) and medication utilization, each of which pose distinct risks. Polypharmacy is attributed to falls, mental status changes, adverse drug reactions, each of which increases risk of ED visits. Addressing polypharmacy in the ED is challenging but crucial to provide high-quality care for older adults. This research describes a Midwest academic medical center's standardized process to identify and address polypharmacy in High-Risk Geriatric Patients (HRGP) presenting to the ED.

Methods: This retrospective chart review included HRGP with an ED visit between 3/10/20 and 12/22/20. HRGP was defined as ≥80yo +1 criteria or 65-79yo +2 criteria. Criteria were polypharmacy (>10 medications), falls, >5 ED visits in past year, dementia. Embedded ED Geriatricians evaluated HRGP, addressed emergent polypharmacy concerns, and then referred HRGP to a board-certified Geriatrics Pharmacist for outpatient polypharmacy management.

Results: A total of 6392 patients were identified as HRGP. Of these, 308 HRGP were evaluated by an ED-embedded Geriatrician and 82 were then referred to a Geriatrics Pharmacist. Of the 82 HRGP referred, 65% were female with mean age 77.5±9.3 years and 14.7±5.9 home medications prior to ED visit. As of 12/22/20, 46 HRGP (56%) had at least 1 visit with Geriatrics Pharmacist (average 1.9 visits per patient). Of these 46 HRGP, a medication reconciliation was performed for 98%, a majority (90%) were taking at least 1 medication incorrectly and provided education, nearly half (48%) had at least one medication deprescribed (mean 1.5*, range 1-9), and 1 in 5 (20%) had medication access issues addressed.

Conclusion: ED-embedded Geriatricians can identify and manage urgent polypharmacy issues associated with acute patient presentations. Polypharmacy is itself a risk factor for ED utilization, so codifying pathways to address medication issues following ED

presentation may help reduce future acute care needs and increase quality of care. This research demonstrates the efficacy of early identification of polypharmacy in HRGP by ED-embedded Geriatricians and follow-up intervention by a pharmacist. Further research is needed to understand the impact of a polypharmacy referral of HRGP on subsequent healthcare utilization.

B71

Lack of Preparation for English- and Spanish-Speaking Surrogate Decision-Makers

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Background: An important part of advance care planning (ACP) is to prepare surrogate decision-makers for their role. However, surrogates report high distress, which may be due to a lack of preparation. The goal of this study was to explore surrogates' preparation among a diverse cohort of English- and Spanish-speaking surrogates.

Methods: Surrogates were recruited if they were named the decision-maker by English- and Spanish-speaking older patients enrolled in an ACP trial at a San Francisco public and VA hospital. We assessed surrogate-reported ACP engagement, surrogate confidence and readiness (5-point Likert scales), and associations of confidence/readiness with surrogate characteristics using t-tests.

Results: Of 1,400 patients, 625 (45%) referred a surrogate, of whom 422 surrogates enrolled. Surrogates' mean age was 53 years ±14.5, 67% were women, 73% identified as a non-white race/ethnicity, 29% were Spanish-speaking, and 39% had ≤ high school education. Of surrogates, 15% reported that they were never asked to play this role, 46% reported patients never discussed their wishes for medical care, and 51% reported no official documentation had been signed designating their role. On 5-point scales, surrogates reported higher confidence (4.44 (0.63 ± SD 0.62)) than readiness 3.7 (1.22) to discuss patients' wishes, $p<0.001$. They also reported higher confidence 4.59 (0.73) than readiness 3.75 (1.35) to make future medical decisions, $p<0.001$. Composite confidence and readiness scores were lower among surrogates who identified as non-white vs white (4.17 (0.63) vs 4.60 (0.45)), were Spanish- vs English-speaking (3.88 (0.70) vs 4.39 (0.49)), and had ≤ high school education vs higher attainment (4.02 (0.67) vs 4.46 (0.52)), $p<0.001$ for all.

Conclusions: Among surrogates identified by English- and Spanish-speaking older adults, preparation was low with several surrogates having never been asked to play the role and approximately half never having discussed patients' wishes or been formally designated. Readiness was rated lower than confidence in communication and decision-making and lower scores were associated with being Spanish-speaking and having lower education. Surrogate interventions are needed to better prepare surrogates and decrease health disparities in ACP and end-of-life care.

B72

Impact of Function Focused Care in Assisted Living Using the Evidence Integration Triangle (FFC-AL-EIT) Intervention on Residents and Facilities

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Background: Function Focused Care is a philosophy of care in which caregivers are taught to engage residents in physical activity during all care interactions.

Purpose: The purpose of this study was to evaluate implementation of FFC-AL-EIT based on the Reach Effectiveness Adoption Implementation and Maintenance (RE-AIM) Model.

Methods: This was a cluster randomized controlled trial that included 85 assisted living facilities and 781 residents. The 12-month FFC-AL-EIT intervention was facilitated by a research nurse working with a facility stakeholder team and champion to implement the four step approach: (1) Assessment of environment and policy; (2) Education of staff; (3) Establishment of resident goals; and (4) Ongoing motivation and mentoring. Facility outcomes (baseline, 12 and 18 months) included changes in the environment, policies and service plans to support function and physical activity and quality of care interactions. Resident outcomes (baseline, 4 and 12 months) included function, participation in function focused care, physical activity, mood, agitation, and resistiveness to care.

Results: The majority of the participants were female (71%), white (97%), had a mean age of 88.02 (SD=1.92) and mean score of 2.39 (SD =.77) on 3/3 word recall. Reach was based on participation of 85 out of 90 volunteer sites. Facility effectiveness was based on significant improvement in environment and policy support for function focused care and quality of care interactions. Resident effectiveness was based on less decline in function, more performance of function focused care activities, less depression, agitation and resistiveness to care. Adoption was supported with 10.00 (SD=2.00) monthly meetings held, 77% of settings engaged in study activities as or more than expected, and direct care workers providing function focused care (63% of interactions at baseline, 68% at 4 months, 90% at 12 months). Barriers and facilitators to implementation were identified. The intervention was implemented as intended and education was received (88% correct on FFC knowledge testing). Evidence of maintenance from 12 to 18 months was based on sustained treatment site environments and policies.

Conclusion: The Evidence Integration Triangle is an effective implementation approach for FFC-AL-EIT and for use in assisted living.

B73

Aerobic exercise training decreases multi-indicator, physiology-based measures of biological aging

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Biological aging measures have been proposed to evaluate the effects of interventions that extend healthspan. Measures of biological aging show evidence of geroprotective effects from caloric restriction in a human randomized trial. We used the same methods to evaluate the impact of a six-month, supervised exercise intervention on multi-indicator, physiology-based biological aging measures.

The STRRIDE studies (NCT00200993, NCT00275145, and NCT00962962) evaluated aerobic training (AT) amounts and intensities, resistance training (RT), combined AT and RT, and AT in conjunction with a diet intervention in adults with cardiometabolic risk (n=927). We derived Klemera–Doubal Method Biological Age and homeostatic dysregulation (HD) using available biomarker data collected at baseline and after completion of the six-month exercise intervention (n=351; 56% female; age range 27-76). We used ordinary least squares regression to test exercise effects on biological aging measures.

STRRIDE participants with greater KDM Biological Age advancement (KDM BAA) at baseline had poorer cardiorespiratory fitness (relative VO2 max β=-0.08 95% CI [-0.12, -0.02]; p=0.001), controlling for chronological age. Greater intensities of AT decreased KDM BAA and homeostatic dysregulation (KDM BAA: β=-1.62 years, 95%CI [-2.88,-0.36], p=0.012; HD: β=-0.14 HD units, 95% CI [-0.03,-0.003], p=0.012); greater amounts of AT increased KDM BAA and HD (KDM BAA: β=2.03 years, 95%CI [0.47,3.58], p=0.011; HD: β=0.02 HD units, 95%CI [0.01,0.034], p=0.004). RT alone or the inclusion of a diet intervention did not affect KDM BAA or HD. The beneficial effects of exercise training on Biological Age measures

was attenuated in participants with greater baseline Biological Age advancement. Our results support the use of multi-indicator, clinical biomarker-based measures to capture the beneficial effects of exercise on biological aging and suggest that exercise modality (AT or RT) and amount and intensity of AT exert differential effects on multi-indicator, physiology-based biological aging measures.

B74

Empowering Patients through PREPARE Results in Supportive Clinician Communication: The Reciprocal Nature of Advance Care Planning Conversations

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Background: A patient-facing program (PREPAREforYourCare.org) empowers patients to actively participate in advance care planning (ACP) discussions, but it is unknown if patient participation reciprocally encourages clinician communication. Our objectives were to determine whether PREPARE, which lacks content for clinicians, could increase clinician participation in ACP communication, and whether patient participation mediates this.

Methods: We combined data from two randomized trials at two safety-net hospitals in which English and Spanish speaking adults ≥55 years old with ≥2 chronic conditions were randomized to PREPARE plus an advance directive (AD) versus an AD alone. We audio-recorded a sample of primary care visits and used the validated Clinician Participation Coding Scheme to calculate the number of clinician ACP utterances in the categories of information-giving, recommendations, or partnership/supportive talk. We examined differences by study arm using mixed effects negative binomial models, adjusting for health literacy, prior patient ACP, and clustering by clinician. To assess for possible mediation, we also adjusted for active patient participation.

Results: Among 393 patients, mean age was 66±8 years, 31% had limited health literacy, 25% were Spanish speaking. There were 179 clinicians (mean 2.2 [1.9] patients each). ACP-related information-giving occurred in 67% of recordings, recommendations in 85%, and partnership/supportive talk in 62%. In adjusted analyses, PREPARE resulted in 51% more partnership/supportive talk compared with the AD alone (mean 4.5 [8.9] vs 2.9 [6.0]) utterances; incidence rate ratio 1.51 [95% CI 1.02-2.24]). There were no differences by study arm in information-giving or recommendations. After adjusting for active patient participation, no differences in clinician utterances remained.

Conclusions: Compared to an AD alone, the patient-facing PREPARE program resulted in increased clinician partnership/supportive ACP communication with diverse older adults. Patient empowerment by PREPARE reciprocally encouraged clinician communication. Enhanced patient-clinician communication represents an important mechanism by which PREPARE may help decrease disparities in ACP.

B75

The Impact of COVID-19 Related Social Restrictions on Older Adults' Psychosocial Status: A Qualitative Study

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Background: The COVID-19 pandemic and its associated mitigation strategies (e.g. social distancing), have disproportionally impacted older adults (OA) and increased their risk for social isolation and loneliness. This study evaluated the impact of COVID-19 related mitigation strategies on the psychosocial health of OA and their caregivers (CG).

Method: English-speaking OA ≥ 69 years and CG were randomly selected from an academic outpatient geriatric practice and interviewed by telephone between 4/14/20-7/22/20. OA were asked about decisions to stay home, reasons/precautions taken when leaving home, emotional wellbeing, unmet needs, ability to keep in contact with others, and activities during the pandemic. CG were asked about their ability to provide care, precautions taken, OA compliance and coping with social distancing, and types of support provided to OA.

Results: OA (*N*=26) mean age was 81.4 (SD=7.5), 58% were female (*n*=15), and 77% white (*n*=20). CG (*N*=29) mean age was 60.0 (SD=10.3), 76% were female (*n*=22), 72% white (*n*=21), and 83% identified as a child of OA (*n*=24).

Top resources used by OA included contactless delivery (54%), family, friends, neighbors (46%), online shopping (23%), and contactless pick-up (12%). OA communicated with family/friends via telephone (96%), video-chat (35%), socially distanced visits (31%), email/text (27%), and social media (4%). OA frequently reported feeling scared (23%) and anxious, worried or nervous (31%).

Preliminary results for CG: Most CG reported reduced visitation (71%) and increased vigilance (71%). COVID-19 adaptations included increased communication (57%), PPE (43%), and social distancing (29%). Their concerns for caring for OA predominantly involved keeping the OA safe (43%), impact of social isolation (57%), functional and cognitive decline (14%), and meeting physical needs of OA (14%). Resources CG used to help OA included online purchases/local deliveries (86%), virtual technology for socialization (43%), and picture slideshows (14%). CG also indicated being psychologically affected (57%) by the pandemic.

Conclusion: OA endorsed some degree of fear and anxiety, but overall adjusted well, and relied heavily on their CG. CG expressed psychological distress with their primary concern being the physical and psychological well-being of the OA.

B76 Student Presentation

Characterization of age-associated gut microbial dysbiosis and plasma metabolite alterations in people living with HIV (PLWH)

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Background: HIV-1 infection and aging are independently associated with gut microbial dysbiosis and neurocognitive impairment. However, the interactive effects of HIV-infection and aging on the development of specific pathogenic features of gut microbial dysbiosis and consequent metabolic abnormalities associated with neurocognitive dysfunction remain largely undetermined and were examined in the present study. **Methods:** PLWH participants (n=31) were enrolled from the HIV Care Clinic, UofL Medical Center. Fecal specimens, plasma, and demographic characteristics including age (50-70) were obtained. We performed metagenomic analysis of fecal microbiome employing 16S rRNA gene sequencing using the Illumina MiSeq platform and targeted metabolomics analysis of plasma employing direct injection mass spectrometry with a reverse-phase LC-MS/MS. Statistical analyses included the non-parametric Mann Whitney test and Spearman correlations. **Results:** Metagenomics analysis showed that gut dysbiosis associated with aging in PLWH is characterized by a significant reduction of the *Firmicutes/Bacteroidetes*(F/B) ratio and beneficial butyrate-producing family *Lachnospiraceae* and *Veillonellaceae* (r>0.38, p=0.05). Notably, the butyrate-producing families as a collective were significantly reduced (p=0.02) in the >60 age group. Further, metabolomics analysis of plasma showed that correspondent with a decrease in butyrate-producing bacteria, increasing age was associated with a significant decrease in butyric acid (r=-0.41, p=0.04) along with a decrease in i) serotonin (r=-0.42, p=0.04), ii) primary conjugated bile acids- glycocholic acid (GCA; r=-0.46, p=0.02) and glycochenodeoxycholic acid (GCDA; r=-0.45, p=0.03), iii) glutamate (r=-0.43, p=0.03) and glutamate to

glutamine ratio (Glu/Gln, r=-0.50, p=0.01). **Conclusions:** Aging in PLWH is marked by loss of butyrate-producing bacteria (microbial dysbiosis) and is associated with pathogenic alterations in plasma metabolites that are linked with neurocognitive impairment.

B77 Student Presentation

Predictors of Digital Health Use among Rural and Nonrural Older Adults

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Background: Adults ≥65 years are the sickest and fastest-growing segment of our population. Reduced availability of healthcare services for older adults (OA) living in rural areas leads to increased prevalence and severity of health problems. Telehealth has potential to improve health care access; however, little is known about digital health use (DHU) among OA. This study aims to identify predictors of DHU among OA and compare effects of these predictors in rural and nonrural populations.

Methods: Data were drawn from the National Health and Aging Trends Study 2019 cohort of 4,134 Medicare beneficiaries aged ≥ 65 years. 22 potential predictors for DHU were selected based on clinical reasoning and literature review. Variables that appeared significant in univariate analyses ($p<0.10$) were further evaluated using logistic regression. We used an iterative model building process to identify robust predictors of digital health usage ($p<0.05$), accounting for missing data and the complex survey design.

Results: An estimated 30.4% (95%CI: [25.2,36.15]) of rural residents use digital health, compared to 43.3% [40.2,46.3] of nonrural residents. Age, education level, and income level were particularly robust predictors for DHU. For example, 64% [46.7,78.1] of Medicare beneficiaries aged 65-69 use digital health, which decreases with increasing age to only 12.7% [9.5,16.7] of those aged 90+. The predictive model confirms these trends: older age, Black or Hispanic race, being unmarried or separated, good driving ability, depression, and dementia are all negatively associated with DHU. Higher education level, higher income, increased comorbidities, and medication use show positive association with DHU. The model demonstrates good discrimination (C-statistic=82%) and calibration (HL $p>0.05$). Rural populations are more likely than nonrural populations to report predictors decreasing likelihood for DHU.

Conclusions: OA living in rural areas demonstrate lower levels of DHU; however, geographic locale does not exist in isolation. There are larger-scale social differences that affect DHU, largely education and income level. Physicians should keep this in mind when offering digital health options and may consider offering more comprehensive demonstrations and additional supportive services to OA falling within at-risk demographics.

B78

Model development to predict hip fracture in nursing home residents

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Background:

Injurious falls are the leading cause of hospitalization for US nursing home (NH) residents and few tools exist to effectively identify fall risk in this setting. We previously developed the Fracture Risk Assessment in Long-term (FRAiL) care model to predict 2-year risk of hip fracture in NH residents using data from the Minimum Data Set (MDS) v2.0. The objective of this preliminary analysis is to determine the feasibility of using machine learning methods and MDS v3.0 data to model 2-year risk of hip fractures in NH residents.

Methods:

US long stay NH residents (100+ days) between January 1, 2016 and December 31, 2017 were included in this retrospective cohort study. Hip fractures were identified using Medicare Parts A and B claims, and resident characteristics were extracted from the MDS v3.0. A core set of 10 variables for inclusion in the final model was determined using a modified Delphi approach: gender, age, race/ethnicity, visual impairment, cognitive function scale, activities of daily living (ADLs), orthostatic hypotension, diabetes, prior hip fracture, and history of falls. The remaining variables were identified through multivariable LASSO logistic regression.

Results:

Mean age was 84±9 years and 70% were female (N=747,953). Over a mean follow up of 1.8 years, 13,712 (1.8%) hip fractures occurred. Of the 10 core characteristics, history of hip fracture (OR 1.78), history of any fall (OR 1.44), and orthostatic hypotension (OR 1.26) were most strongly associated with hip fracture. Protective factors included African American race (OR 0.49), Hispanic race (OR 0.84), diabetes (OR 0.88), and female gender (OR 0.83). The LASSO regression selected 20 additional variables for inclusion, including self and staff reported ADLs. The C-statistic was 0.691 (95%CI 0.687-0.696).

Conclusions:

This model, developed from readily available, routinely collected Medicare claims and clinical assessment data, is successful in identifying the 2-year absolute risk of hip fracture. Machine learning is a feasible strategy for variable selection, which will inform future development and validation of a clinically useful 6-month and 2-year fall related injury risk model. Machine learning should be compared with standard regression based prediction approaches.

B79

Characteristics Associated with Receiving Social Work Services for Elder Abuse in a National Cohort of Older Veterans

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Background: Elder abuse (EA) is common and has devastating health impacts yet is not routinely documented in most health systems, limiting researchers' efforts to study large cohorts of older adults at risk. Since 2010, Veterans Health Administration (VHA) social work (SW) encounters have indicated if EA was addressed, presenting an opportunity to study EA patterns across a large integrated health system. In this case-control study, we examined patient characteristics associated with receipt of VHA SW services for EA.

Methods: Cases were Veterans age ≥60 years who saw SW for indication "abuse/neglect" from 2010-18 and had a primary care (PC) visit within 60 days of the SW visit. Five controls per case were randomly selected from Veterans age ≥60 years who received no EA services and had a PC visit within 60 days of the matched case SW visit. We fit adjusted logistic regression models with a facility fixed-effect to examine the association of sociodemographic, health-related and health service utilization characteristics with receiving SW services for EA.

Results: Of 5,567,664 Veterans age ≥60 with ≥1 PC visit in the study period, 15,752 (0.3%) received SW services for EA within 60 days of a PC visit (cases). Cases had a mean age 74, and were 16% Black, 13% Hispanic, and 54% unmarried. In adjusted models comparing cases to controls (n=77,710), factors associated with receiving EA services included age ≥85 (aOR 3.56 v. age 60-64; 95%CI 3.24-3.91), female sex (aOR 1.96; 95%CI 1.76-2.21), child as next of kin (aOR 1.70 v. spouse; 95%CI 1.57-1.85), lower neighborhood

socioeconomic status (SES; aOR 1.18; 95%CI 1.15-1.21), dementia diagnosis (aOR 3.01; 95%CI 2.77-3.28) and receiving a VA pension (aOR 1.34; 95%CI 1.23-1.46).

Conclusions: We used unique VHA data to identify the largest cohort of US patients receiving care for EA to date, and our findings identified novel EA risk factors (e.g., low neighborhood SES, pension receipt), as well as previously described risk factors (e.g., dementia). Identified characteristics could be used to target EA detection strategies to those at highest risk and tailor interventions towards unique risk factor profiles.

B80

Physical activity in older adults who are cognitively impaired without dementia: what happens vs. what is possible

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Background: Many older adults have cognitive impairment that is not severe enough to meet criteria for dementia (Cognitive Impairment, No Dementia: CIND). Physical inactivity may increase risk of progression to dementia in people with CIND, but little is known about the factors associated with physical inactivity in this group.

Methods: We studied 1875 community dwelling adults (over age 65) with CIND in the Health and Retirement Study (HRS). CIND was identified using the validated HRS cognitive battery. Participants were asked how often they engage in moderate (eg, walking) and vigorous (eg, jogging) intensity physical activity. We defined physical inactivity as moderate or vigorous physical activity (MVPA) once a week or less. Unadjusted and adjusted associations of physical inactivity with sociodemographic, health, and physical function variables were tested using chi-square and modified Poisson regression adjusted for age, sex, and race. In participants identified as physically inactive, we also determined whether they were capable of being physically active, defined as reporting MVPA at least 1-3 times a month or reporting no difficulty walking or climbing stairs.

Results: Mean participant age was 77 and 58% were women. The prevalence of physical inactivity was 56%. The largest adjusted risk ratios (aRR [95% CI]) for physical inactivity were self-rated health as poor (77%; aRR: 2.28[1.58–3.30]) versus excellent (34%), and difficulty walking across the room (87%; aRR: 2.10[1.88–2.34]) and one block (79%; aRR: 1.91[1.68–2.18]) versus no difficulty (41%). Physical inactivity was also associated (aRR < 1.85) with older age, women, lower assets, lower education, specific health conditions, depression, higher BMI, current smoking, not drinking alcohol, and significant pain. Sixty-one percent of physically inactive participants were capable of being physically active.

Conclusions: More than half of older adults with CIND are physically inactive, yet most of them are capable of physical activity. Study findings suggest a need for physical activity interventions tailored to needs of older adults with CIND.

B81 Encore Presentation

The effect of socioeconomic disadvantage on functional decline following critical illness in older adults

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Background: Socioeconomic disadvantage is associated with greater long-term mortality in older adults who survive critical illness. Whether socioeconomically disadvantaged older adults are at greater risk of functional decline compared to their less vulnerable counterparts is not known. We sought to examine the association between socioeconomic disadvantage and functional decline in a nationally representative sample of Medicare beneficiaries.

Methods: We identified community-dwelling older adults in the National Health and Aging Trends Study (NHATS), a nationally representative survey of Medicare beneficiaries ages >=65, who underwent annual assessments of disability in 7 functional activities. Survivors of ICU hospitalization were identified using critical care revenue codes in linked Medicare claims. We used a negative binomial Poisson model to evaluate the association between dual-eligibility and count of disabilities (range 0-7) assessed in the NHATS interview following discharge from the ICU hospitalization. Covariates included age, gender, education, living alone, frailty, hospital length of stay, mechanical ventilation, and count of disabilities in the interview preceding ICU admission.

Results: We identified 641 participant-ICU stays representing 3,767,695 ICU hospitalizations after survey-weighting. Dual-eligible beneficiaries were more frequently males (90.2% vs 62.1%), of minority race (38.7% vs 13.1%), had less than high school level education (52.0% vs 17.8%), and lived alone (43.6% vs 32.1%), compared with those without Medicaid. Their median post-ICU disability count was 2.18 (IQR 0.00, 4.83) compared with 0.01 (IQR 0.00, 2.47) for participants without Medicaid. Dual-eligible status was associated with a 32% increase in post-ICU disability count relative to non dual-eligible beneficiaries (adjusted RR 1.32, 95% CI 1.04, 1.67).

Conclusions: In this nationally representative sample of older adults who survived ICU hospitalization, socioeconomic disadvantage was associated with greater risk of post-ICU disability after accounting for pre-ICU disability, frailty, and other relevant characteristics. This warrants investigation into factors underlying this disparity as well as consideration for post-ICU rehabilitation programs.

B82

Risk of death and hospitalization associated with pimavanserin use: a population-based cohort study of older adults

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Background: Pimavanserin is a novel antipsychotic approved by the U.S. Food and Drug Administration in 2016 for management of hallucinations and delusions associated with Parkinson's disease. Both randomized and observational evidence has raised concerns regarding the potential association between pimavanserin use and mortality. Thus, we assessed the risk of death and hospitalization associated with pimavanserin use versus nonuse among a diverse sample of long-term care residents in the United States.

Methods: We conducted a retrospective cohort study of long-term care residents aged ≥65 years with Parkinson's disease using the Minimum Data Set 3.0 linked Medicare claims data from November 2015 to December 2018. We used propensity score-based inverse probability of treatment weighting (IPTW) to balance 24 baseline characteristics including age, sex, race, comorbid conditions and concomitant medication use between the pimavanserin users and nonusers. We estimated the risk of death and hospitalization using IPTW Cox proportional hazards regression and Fine-Gray competing risk regression models, respectively.

Results: The study cohort comprised of 2,186 pimavanserin users and 18,212 nonusers. Pimavanserin use vs. nonuse was associated with a higher risk of death at 90 days after initiation (rate per 100 person-years, 46 vs. 40; IPTW adjusted hazard ratio [aHR], 1.20; 95% confidence intervals [CI], 1.02-1.41) that persisted after 180 days (rate per 100 person-years, 48 vs. 39; IPTW aHR, 1.28; 95% CI, 1.13-1.45)

and 1 year (rate per 100 person-years, 58 vs. 39; IPTW aHR, 1.56; 95% CI, 1.42-1.72). Pimavanserin use vs. nonuse was associated with an increased risk of 30-day hospitalization (rate per 100 person-years, 151 vs. 110; IPTW aHR, 1.24; 95% CI, 1.06-1.43), but not 90-day hospitalization (IPTW aHR, 1.10; 95% CI, 0.99-1.24).

Conclusions: Pimavanserin use was associated with an early increased risk of hospitalization followed by a higher risk of death that persisted up to 1 year. The findings support the safety concerns regarding use of pimavanserin for the approved indication in patients with Parkinson's disease.

B83 Resident Presentation

Excessive Daytime Sleepiness and Risk of Ten Year Incident Disability: The Kuakini Honolulu Heart Program

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INTRODUCTION: Studies of the association between excessive daytime sleepiness (EDS) and risk of incident disability have had mixed results. We evaluated excessive daytime sleepiness as a risk factor for 10-year incident disability in a cohort of older Japanese-American men.

METHODS: The Kuakini Honolulu Heart Program is a longitudinal cohort study of cardiovascular disease in Japanese-American men in Hawaii since 1965. At exam 4 (1991–93), 3,741 men ages 71-93 years participated. EDS was measured by self-report to the question, "Are you sleepy most of the day?" Disability was defined by self-reported deficits in any of 6 questions about activities of daily living (ADLs; walking, transferring, feeding, dressing, bathing, or using the toilet), or in any of 5 questions about instrumental activities of daily living (IADLs; light housework, shopping, cooking, managing finances, or using the telephone). After excluding those with prevalent disability at baseline and missing sleep data, our analytic sample included 2,576 men who were prospectively followed for incident disability for 10 years.

RESULTS: EDS was reported in 180 (6.99%) men, and was associated with higher rates of incident disability at 3 and 10 years of follow-up. Using multivariate logistic regression adjusting for baseline age, education, cardiovascular risk factors and alcohol intake, men with EDS had higher odds of 3-year incident ADL and IADL impairment (OR=2.03, 95% CI=1.22-3.40, p=0.007; and OR=1.93, 95% CI=1.29-2.88, p=0.001; respectively). EDS also predicted higher odds of 10-year incident ADL and IADL impairment (OR=1.85, 95% CI=1.03-3.32, p=0.039; and OR=1.85, 95% CI=1.09-3.16, p=0.023; respectively). Those with prevalent chronic diseases at baseline (CHD, CVA, cancer, COPD, Parkinson's, dementia or cognitive impairment) had slightly stronger associations with incident disability than those without chronic diseases.

CONCLUSION: Among older Japanese-American men in Hawaii, EDS increased risk of incident disability over 10 years follow-up. Given that daytime sleepiness is potentially modifiable, clinical screening for EDS with subsequent sleep hygiene counseling and treatment of underlying etiologies such as obstructive sleep apnea may lower risk for late life disability.

B84

Potentially Inappropriate Medication Use and Adverse Health Outcomes in People with Dementia

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Background: Potentially inappropriate medication (PIM) use is common in people with dementia. We sought to examine the association between PIM use and adverse health outcomes (adverse drug events (ADEs), emergency department (ED) visits and hospital admissions) in people with dementia compared to those without dementia.

Methods: We analyzed data from the Adult Changes in Thought (ACT) study, a prospective cohort of community-dwelling older adults without dementia at enrollment. We included those newly diagnosed with dementia and matched controls without dementia who received PIMs, defined using the Screening Tool of Older Person's Prescriptions (STOPP) version 2 criteria and the 2019 American Geriatric Society Beers criteria. We used cause-specific Cox proportional hazards model to evaluate associations between PIM use and ADEs, ED visits and hospital admissions, accounting for competing risks, and adjusting for age at index and Charlson comorbidity index score.

Results: People with dementia exposed to PIMs had a higher risk of ADEs (STOPP criteria PIM: cause-specific adjusted hazard ratio [aHR]= 3.11 [95% confidence interval (CI): 1.75-5.53]; Beers criteria PIM: aHR = 5.81 [95% CI: 2.26-14.97], ED visits (STOPP criteria PIM: aHR = 2.75 [95% CI: 1.81-4.18]; Beers criteria PIM: aHR = 3.19 [95% CI: 2.18-4.69], and hospital admissions (STOPP criteria PIM: aHR = 1.75 [95% CI: 1.10-2.79]; Beers criteria PIM: aHR = 2.58 [95% CI, 1.60-4.16]) compared to those without dementia also exposed to PIMs.

Conclusions: People with dementia had a higher rate of adverse health outcomes associated with PIM use, as compared to those without dementia. Our study suggests people with dementia may be a particularly important patient group to focus on to optimize medication safety in older adults.

B85

Positive or Refusing Screenings for Depression and Cognitive Impairment Predicts Increased In-Home Supportive Services Hours

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Background: In-Home Supportive Services (IHSS) provides assistance with ADLs and IADLs to adults who are over 65, blind, or disabled and receive Medicaid. Monthly hours of service are awarded based on a social worker's assessment of function, but depression and cognitive impairment are not assessed. This study sought to determine the prevalence of these conditions in this population and how they affect the number of hours a person receives.

Methods: 9,423 San Francisco residents referred for IHSS from April 2018 – April 2019 were screened for depression (using PHQ-2) and cognitive impairment (using Mini-Cog) during intake. Sex, age, race/ethnicity, language, and function data were collected as part of routine intake. The main outcome was number of monthly IHSS hours awarded. Simple linear regression was used to evaluate how resident characteristics affected the number of monthly hours.

Results: The study population was 62% female; two-thirds were age 70 and older. The population was 63% Asian (55% Chinese-speaking) and 41% were completely dependent in one or more ADLs. 15% screened positive for depression and 15% refused screening. 26% screened positive for cognitive impairment and 34% refused screening. The number of IHSS hours awarded ranged from 4 to 283 (median 89). Age, gender, race/ethnicity, and function were all associated with monthly hours ($p<0.001$). Those without depression received 94 hours per month, those with depression received 98 hours, and those who refused screening received 118 hours ($p<0.001$). Those without cognitive impairment received 84 hours per month, those with cognitive impairment received 102 hours, and those who refused screening received 113 hours ($p<0.001$).

Conclusions: In this IHSS population, depression and cognitive impairment were common and many individuals refused to complete the screenings. Depression or cognitive impairment was predictive of receiving more monthly hours, but those who refused the screenings received the most hours. These findings suggest that refusal to do an assessment predicts high needs for in-home support and that these clients could be referred for more in-depth assessments of cognition, mental health needs, and additional resources.

B86

The Impact of Social Isolation on Disability and Mortality among Older Survivors of Critical Illness

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RATIONALE: Social isolation, defined as few or infrequent social connections, is associated with higher mortality among older adults. However, little is known about whether social isolation impacts post-ICU recovery among older adults.

METHODS: Data were drawn from the 2011 wave of the National Health and Aging Trends Study (NHATS). Patient-ICU stays were identified using critical care revenue codes in Medicare claims. The primary exposure was a validated measure of social isolation assessed prior to ICU admission. Higher values (range, 0-6) indicate greater social isolation. The primary outcome was a count of disabilities in 7 activities of daily living (ADLs) following discharge. Patients were eligible for the primary outcome if discharged alive, were not maximally disabled prior to admission, and had a follow-up interview within 1 year. The secondary outcome was 1-year mortality.

Negative binomial regression models with generalized estimating equations were used to model disability counts, with the results presented as rate ratios (RR). Cox-Proportional Hazards regression models were used to model time-to-death from hospital admission and presented as hazard ratios (HR). Models were adjusted for pre-ICU disability, age, sex, dementia status, frailty, hospital length of stay, mechanical ventilation (yes/no), Medicaid eligibility, comorbidity counts, and rural residence. NHATS survey weights were used to generate nationally-representative estimates. Missing data was handled using multiple imputation.

RESULTS: The full analytic sample included 997 patient-ICU admissions. The mean age of the sample was 79.1 years (95% CI 78.6-79.7) with a median (IQR) social isolation score of 2.4 (1.4-3.3). In adjusted models, each point on the social isolation scale (range, 0-6) was associated with a 7% increase in post-ICU disability count (RR=1.07, 95% CI 1.01-1.14), and a 13% increase in risk of death (HR=1.13, 95% CI 1.03-1.24).

CONCLUSIONS: Increasing social isolation is associated with increased disability burden and mortality after a critical illness among older adults. Older ICU patients should be routinely screened for social isolation.

B87

Racial Disparities in Psychoactive Prescriptions in Veterans with Falls Risk

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Background: Psychoactive medications increase risk of falls in older adults, and prior studies have demonstrated racial differences in utilization. We examined racial differences in psychoactive prescriptions in older Veterans at high fall risk.

Methods: Cross-sectional study of Durham VAHCS Veterans aged ≥ 65 years who screened as high risk for falls at primary care visit or with an acute visit for fall in the last year. All individuals with Black or White race recorded in the medical record and an active prescription for ≥1 psychoactive medications (antidepressants, antiepileptics, benzodiazepines, anticholinergics, antipsychotics, opiates, sedative hypnotics) were included (n=7,951). Variables were abstracted from the VA electronic health record's Regional Data Warehouse. Poisson modeling was utilized to estimate the association of number of psychoactive medication classes with race using models with covariate adjustments in clusters.

Results: Compared to Whites (n=5,207), Black Veterans (n=2,744) had significantly higher utilization of mental health care (37% vs. 28%, $p<0.01$); 32% of Blacks and 30% of Whites were prescribed ≥2 psychoactive medications. A significantly higher proportion of Blacks (36% vs. 29%) were prescribed anticholinergics and antipsychotics, while significantly more Whites (23% vs. 17%) received opiates, benzodiazepines, and sedative hypnotics. Adjusting for age and gender, Blacks had a 5% higher rate of psychoactive prescriptions (OR 1.05, (95% CI 1.01-1.10)). However, after adjusting for mental health care utilization, Blacks had a 9% lower rate of psychoactive prescriptions (OR 0.91, (0.87-0.95)). Adding comorbidities to the model did not change this finding.

Conclusions: In this single center study, we identified disparities in psychoactive medication prescribing for Black Veterans. Future studies could determine whether overdiagnosis of mental health disorders and/or undertreatment of pain and insomnia could explain these findings. The relatively lower use of psychoactive medications in Black Veterans may represent an advantage for fall risk.

Poisson model of association between race and number of psychoactive medications

Variable	Unadjusted Risk ratio (95% CI)	Adjusted for Demographics Risk ratio (95% CI)	Adjusted for Demographics & Mental Health Utilization Risk ratio (95% CI)	Fully Adjusted Model Risk ratio (95% CI)
Black race (White reference)	0.98 (0.93-1.02)	1.05 (1.01-1.10)	0.91 (0.87-0.95)	0.91 (0.87-0.95)

B88

Social Vulnerability Index: a composite measure of social risk in older adults

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Background: Social determinants are important to the healthy aging of older adults but there is no composite, patient-level measure of social risk. We set out to create a conceptually-sound, patient-level social vulnerability index (SVI).

Methods: We included all adults ≥65 years from the 2010 Health and Retirement Study to create a social risk model to predict death at 5 years. We identified 150 social risk factors mapping to four domains of the Social Frailty conceptual model: general resources, social resources, social behaviors, fulfillment of social needs. Age was not considered as a predictor. We selected a subset of predictors using LASSO. Using this subset of predictors, we fit generalized linear models in 50 bootstrapped samples and report results of internal validation (i.e., out-of-bag sample).

Results: We included 4302 older adults. Over 5 years, 960 died (22%). The SVI includes 32 predictors including measures of general resources (14), social resources (5), social behaviors (6), fulfillment of social needs (7), Table. In internal validation, the SVI discriminated well (AUC 0.726). When added to a prediction model of age, gender, race, and comorbidities, the SVI improves discrimination (AUC from 0.764 to 0.781).

Conclusion: In older adults, the SVI can identify those at higher-than-average mortality risk. The SVI has potential clinical applications (e.g., social history) and research applications (e.g., risk adjustment).

Domain	Predictor	Adjusted odds ratio for death
Fulfillment of Basic Social Needs	How much of the time do you feel isolated from others? (often, sometimes, hardly)	0.89
Fulfillment of Basic Social Needs	Feel "in tune" with people around me sometimes, hardly, or never	1.22
Fulfillment of Basic Social Needs	How much of the time do you feel that you are part of a group of friends? (often, sometimes, hardly)	1.09
Fulfillment of Basic Social Needs	People act as if they think you are not smart happens less than once a year or never	0.77
Fulfillment of Basic Social Needs	Friends understand the way you feel about things a little or not at all	1.22
Fulfillment of Basic Social Needs	How close is your relationship with your partner or spouse is not very close or not close at all	0.60
Fulfillment of Basic Social Needs	Can reply on spouse some, a little or not all if you have a serious problem	0.74
Social Behavior and Activities	How often do activities with grandchildren, nieces/nephews, or neighborhood children? (7pt scale from Daily to not in last month)	1.18
Social Behavior and Activities	How often do any other volunteer or charity work? (several times a week or more)	1.66
Social Behavior and Activities	How often do to a sport, social, or other club? (7pt scale from Daily to not in last month)	1.04
Social Behavior and Activities	Speak to children every few months or less often	1.47
Social Behavior and Activities	Write to children every few months or less often	1.22
Social Behavior and Activities	Write or email your friends every few months or less frequently	1.34
Social Resources	Count of children have a close relationship with	1.03
Social Resources	Number of living siblings	0.93
Social Resources	Mother alive	0.37
Social Resources	Married, spouse absent	1.83
Social Resources	Widowed	1.44
General Resources	Not at all satisfied with retirement	1.58
General Resources	Working for pay	0.46
General Resources	High-school graduate	0.82
General Resources	Identify as Hispanic/Latinx	0.50
General Resources	How satisfied are you with the total income of your household? (5pt scale completely satisfied to not at all satisfied)	0.87
General Resources	Health insurance covered by current or previous employer?	0.75
General Resources	Unemployed	0.16
General Resources	Had a child die	1.27
General Resources	Ever been in a major fire, flood, earthquake, or natural disaster	1.43
General Resources	Ever fired a weapon in combat or been fired upon in combat?	2.22
General Resources	Have not been unemployed and looking for work for longer than 3 months at some point in the past five years?	1.87
General Resources	How satisfied with your daily life and leisure activities? (5pt scale completely satisfied to not at all satisfied)	1.11
General Resources	Disagree even slightly that the area within a 20-minute walk or about a mile from your home is kept very clean	1.29
General Resources	Have the same or more control over financial situation in last year	0.61

B89

Methodology for COVID-19 Symptom and Antibody Monitoring in Community Dwelling Older Adults

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Background: The COVID-19 pandemic has broadly impacted health care delivery and research, and particularly for older adults. However, studies on COVID-19 seek to prioritize inclusion of older adults, given the high morbidity and mortality in this population. While large-scale population health surveys have been a recognized method in geriatrics research, online symptom-based monitoring paired with mail-in serologies represent a novel approach. Our findings describe reach and uptake of this pragmatic method in community dwelling older adults.

Methods: The Community Research Partnership has ongoing recruitment, and participants started enrolling in April, 2020. Participants volunteered to complete daily online short surveys to collect information on symptoms, possible COVID-19 exposures, mask use, and health habits. A subset of the study population with demographic representation was mailed home fingerstick serology kits for antibodies to SARS-CoV-2 virus. Statistical analysis used Chi-square tests to compare survey data completion rates and return rates of serology kits.

Results: The Wake Forest University study site had over 18,000 active participants with results current as of December, 2020. Of those, 6,400 were older adults (age 60 and above; 35%). Compared with middle-aged adults (ages 40-59), older adults were more likely to consistently fill out daily surveys (RR 1.18, $p<0.0001$). Comparisons by decade of older adults found no significant differences in survey completion rate (reference age 60-69: 72% [n=4048], 70-79: 76% [n=2227], 80-89: 74% [n=337], and 90+: 77% [n=18]). Older adults had a higher return rate of completed test kits compared to middle-aged adults (77% vs 66%; RR 1.7 $p<0.0001$), and no difference was found in return rate of serologic testing within the group of older adults (77% in 60-79 vs. 75% in 80+; $p=0.5$).

Conclusions: We found higher rates of completion of an online survey for monitoring COVID-19 symptoms and return mailed home serology kits in older adults compared to middle-aged adults, including at the oldest age of the spectrum. Limitations include selection biases for technology-literate adults. However, these results suggest adequate reach and uptake of these online and mailing methods to study community-dwelling older adults in the COVID-19 pandemic.

B90

Older Adults with Advanced Cancer are Selective in Sharing and Seeking Information with Social Networks

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Background: Older patients with advanced cancer rely on their social networks for information about the disease and help making complex decisions. Yet, little is known about how patients interact with social network members, termed social contacts (SCs), and the nature of communication. This qualitative study aimed to characterize the processes by which patients engage with SCs regarding their illness.

Methods: Patients 65+ with advanced cancer and considering treatment (n=29) and SCs (n=18) underwent semi-structured interviews asking 1) about their illness understanding; 2) to identify SCs with whom patients discuss health-related matters; and 3) to describe the content, process, and impact of those illness-related conversations. Transcribed interviews were open coded by 4 pairs of coders. Eight patient interviews and 4 SC interviews were randomly selected for initial analysis to develop a coding schema. Three coders analyzed the remaining transcripts. An audit trail recorded discrepancies, resolved through weekly discussions to reconcile code definitions. Codes were categorized and emergent themes were identified to generate hypotheses.

Results: We found that patients engaged in "selective sharing", a process of selecting with whom to share information, what to share, and from whom they seek information, support, and advice. Selective sharing was connected to multiple contextual factors; geographical distance of social contact, length of relationship, and frequency of communication with SC. Patients sought emotional support from SCs they had known longer, talking weekly or daily. Patients preferentially shared cancer-related information, and sought advice, and instrumental support from family with medical backgrounds regardless of geographical distance or perceived emotional closeness. Other data on differences between patient and SC responses will be presented.

Conclusions: A better understanding of the influence and roles of SCs in patients' information seeking, decision-making, and means of support may improve medical communication, disease understanding, and support goals-concordant care.

B91

Barriers to advance care planning for veterans living with HIV in the context of the patient-clinician relationship

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Background: As a result of the development of effective antiretroviral therapy, people living with HIV (PLWH) have been reaching older adulthood. For PLWH during the first years of the HIV/AIDS epidemic, advance care planning (ACP) formerly involved rapid transition with AIDS to hospice care, but now often includes use of palliative care and hospice services for non-HIV terminal diagnoses. As little is known about how older PLWH now approach ACP, the purpose of this study is to understand barriers to ACP within the context of the patient-clinician relationship.

Methods: We used a thematic analysis approach to analyze 25 transcripts from semi-structured interviews conducted with HIV+ veterans ages 50-72. Interviews ranged from 47 to 198 minutes, with a mean length of 98 minutes. Veterans were recruited from an urban VA medical center and were part a larger study, the Veterans Aging Cohort Study (VACS). Their characteristics – 60% African-American and 80% male – mirrored the hospital population.

Results: Less than half of participants (48%) indicated engaging in any ACP for end of life. Five themes emerged that were barriers to ACP: a self-image among PLWH as "survivors"(and a reluctance to think about ACP); a history of mistrust of the medical system; fragile social ties and a desire to avoid disclosure of HIV status; self-reliance (not needing support from other people); and unresolved grief regarding life choices that limited participants' willingness to acknowledge their own mortality.

Conclusions: As clinicians prepare to have ACP conversations with older PLWH, it is evident that their unique history as members of this patient population may impact their participation in these conversations. We have created an explanatory model based on these findings. Further exploration into each patient's experience will improve our ability to execute their wishes at the end of life.

B92

POLST Preference Concordance

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Background

Although POLST is widely used in nursing facilities (NFs), it is unknown how well POLST reflects the patient's current treatment preferences (concordance).

Methods

Residents (n = 123) and surrogates (n = 152) were interviewed about current treatment preferences at 29 Indiana NFs. Concordance was determined by comparing existing POLST orders with current treatment preferences.

Results

Overall, 55.7% (123/221) of eligible residents and 44.7% (152/340) of surrogates participated (total n = 275). POLST concordance was 44%, and was higher for comfort-focused POLSTs (68%) than for non-comfort-focused POLSTs (27%) ($p < .001$). In the unadjusted analysis, increasing resident age (OR 1.04, 95% CI 1.01 – 1.07, $p < .01$), better cognitive functioning (OR 1.07, 95% CI 1.02 – 1.13, $p < .01$), surrogate as the decision-maker (OR 2.87, OR 1.73 – 4.75, $p < .001$), and comfort-focused POLSTs (OR 6.01, 95% CI 3.29 – 11.00, $p < .01$) were associated with concordance. In the adjusted multivariable model, only having a comfort-focused POLST was associated with higher odds of POLST concordance (OR 5.28, 95% CI 2.59 – 10.73, $p < .01$).

Conclusions

Less than half of all POLST forms were concordant with current care preferences, placing patients at risk for receiving unwanted care. Findings suggest a need to improve the quality of POLST use in nursing facilities and focus its use among residents with stable, comfort-focused preferences given higher concordance rates for those patients.

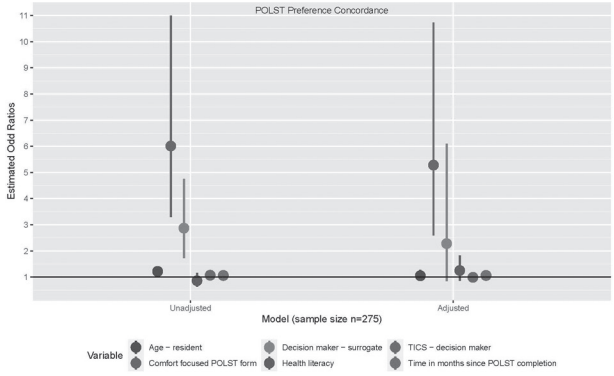

Figure 1. Unadjusted and adjusted model of variables associated with POLST preference concordance

Figure 1.

B93

"I needed someone to hold my hand" – Experiences with anticipatory guidance for patients living with dementia and their caregivers at a memory specialty center

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Background: After a diagnosis of Alzheimer's disease and related disorders (ADRD), patients and caregivers are not always told what to expect about the future disease course or how to plan for anticipated functional and cognitive decline. This study aimed to identify patient and caregiver experiences with receiving anticipatory guidance about ADRD from a tertiary behavioral neurology clinic.

Methods: We conducted semi-structured interviews with people living with ADRD, and active and bereaved family caregivers from a tertiary behavioral neurology clinic between November 2018 and July 2019. Interviews about palliative care needs were recorded, transcribed, systematically summarized, and deidentified. An interdisciplinary team conducted a thematic analysis to identify anticipatory guidance received from clinical or non-clinical sources and areas where respondents wanted additional guidance.

Results: Of 40 participants, 9 were patients with ADRD, 16 were active caregivers, and 15 were bereaved caregivers; the main diagnosis (n=14) was Alzheimer's. Patients had a mean age of 75 and were primarily male (n=6/9); caregivers had a mean age of 67 and were primarily female (n=21/31). Participants reported clinicians supplied guidance about changing diet and exercise, and limited information on expected disease course and planning for the future. Participants reported obtaining helpful information from support groups, community organizations, or the internet. Participants wanted additional anticipatory guidance from clinicians, especially in regard to prognosis, expected disease course, help with legal, financial, and advance care planning, and connection to additional supports.

Conclusions: Patients with ADRD and caregivers want more information about expected disease course, prognosis, and help planning after diagnosis. This study demonstrates an opportunity for continued refinement of communication around anticipatory guidance and subsequent care provision. Palliative care communication frameworks can be adapted for neurology specialists and primary care physicians to better address the broad range of patient, caregiver, and provider needs.

B94

How do programs determine periprocedural code status for transcatheter aortic valve replacement? A qualitative analysis of program policies, practices and contradictions

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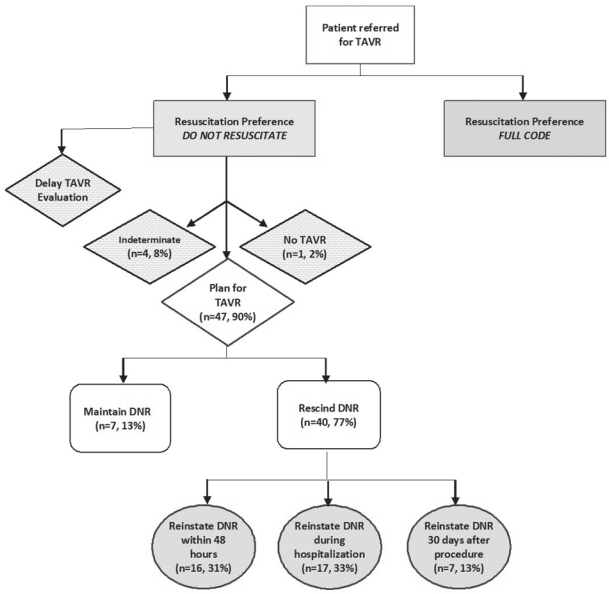
BACKGROUND: Little is known about how Transcatheter Aortic Valve Replacement (TAVR) programs accommodate older adults' goals of care.

METHODS: Semi-structured interviews with 52/73 (71%) TAVR coordinators in WA/CA states in 2019.

RESULTS: Nearly all programs (94%) reported routinely addressing peri-procedural code status, yet only 25% had formal policies. Few programs (13%) perform TAVR for those with pre-existing DNR that is sustained while 2% decline them. Most programs (81%) reverse or suspend DNR solely to perform TAVR, with variable time frames for reinstatement: 31% post-procedure (within 48 hours); 33% during hospitalization (day 2 to discharge); and 13% after 30 days post-discharge, typically after outpatient follow-up. Notably, 88% do not routinely document code status at the time of hospital discharge.

CONCLUSIONS: The majority of programs require patients to suspend code status for the peri-TAVR period yet have highly variable time frames and documentation practices regarding reinstating DNR, potentially leading to interventions misaligned with patient preferences. Some programs exclude patients with extant DNR orders, which may deny these patients access to beneficial treatment aligned with patients' goals.



Transcatheter Aortic Valve Replacement (TAVR) Program Periprocedural Code Status Practices

B95 Student Presentation

"I don't want to make any mistakes": Staff Perceptions of Advance Care Planning Among Older, Homeless-Experienced Permanent Supportive Housing Residents

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Background

Older adults who are homeless have low rates of advance care planning (ACP) despite high rates of morbidity and mortality. The rehousing of homeless-experienced individuals into Permanent Supportive Housing (PSH) may present a unique opportunity to engage this population in ACP; yet, this is unknown. Therefore, we explored PSH staffs' perceptions of conducting ACP in PSH for diverse older homeless-experienced adults.

Methods

We interviewed 10 staff members at PSH sites in San Francisco. We used a semi-structured interview guide based on the Capability (C), Opportunity (O), Motivation (M) and Behavior (COM-B) implementation framework. Interviews explored staff barriers, facilitators, and solutions to ACP and an easy-to-read advance directive (AD) (PREPAREforYourCare.org). We analyzed qualitative data using thematic content analysis.

Results

We categorized themes according to the COM-B framework. Barriers included (C) lack of skills and knowledge, (O) lack of standardized processes and resident mistrust ("[residents] maybe trust one person in the building…and the next day they might not trust them"), and (M) pessimism ("Clients will just tell us, 'I don't care…you make the decisions.'") and lack of self-efficacy ("I don't…want that responsibility", "I don't want to make any mistakes"). Facilitators included (C) the easy-to-read ADs, (O) resident/staff relationships ("…they are family to me"), (M) belief that ACP is impactful for staff and residents ("When somebody has something prearranged …the process is totally different") and emotion around end of life ("For me it's traumatizing"). Solutions included (C) providing easy-to-read tools and staff conversation guides, (O) creating AD supplements with PSH-resident specific information, standardizing workflows and normalizing ACP conversations ("bring [ACP] up as much as possible"), and (M) implementing staff trainings and support ("We should be prepared and supported throughout that process").

Conclusions

It may be feasible to engage homeless-experienced adults in ACP in the PSH setting. To optimize success, programs may need to provide easy-to-read ACP information with PSH-specific information, create standardized workflows, and implement staff training and support.

B96

Attitudes Among Medical Residents Caring for Patients Requiring a Court-Appointed Guardian

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BACKGROUND: As the population ages, resident trainees will be more likely to encounter patients with diminished decisional capacity. We examined residents' attitudes toward court-appointed guardianship to inform future educational initiatives.

METHODS: We conducted a cross sectional study using an online survey (Qualtrics). The study met criteria for exemption from University of Michigan (UM) IRB. All residents from UM emergency

medicine, family medicine, general surgery, internal medicine, and med-peds were invited to complete the survey via email. We obtained respondent demographic data. Residents were asked to describe their level of experience with patient guardianship and asked to rate the likelihood that obtaining a legal guardian would benefit the patient across several identified needs.

RESULTS: In total, 102 residents provided responses, representing a 31% response rate. Respondents represented residents from internal medicine (45%), emergency medicine (18%), general surgery (12%), family medicine (12%), and medicine-pediatrics (10%). Residents reported having substantial experience caring for incapacitated patients; 43% had cared for ≥5 patients requiring guardianship. A majority (64%) of respondents believe guardianship appointment allows for selection of an appropriate code status, while 48% believe it increases adherence to patient care preferences. 85% responded that guardianship is likely to result in a safe discharge destination, and 53% thought it enables utilization of home health aides. 34% responded that a guardian allows for improved medication adherence. Over half (53%) indicated a guardian allows for safe management of a patient's finances while 26% were unsure.

CONCLUSIONS: Our study indicates that, despite experience with this patient population, further education is needed for residents regarding the role of guardianship. Specifically, educational interventions appear to be needed that encompass practical aspects of implementing care plans for vulnerable older adults with appointed guardians, notably in the domains of patient preferences, code status, medications, and finances.

B97

Public Opinions Surrounding Geriatric Surgery: A Qualitative Study

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Background: Increasing numbers of older adults are undergoing surgery despite often elevated risks of complications and postoperative mortality. Yet little is known about the public's understanding and opinions towards surgery in older adults and the care they receive.

Methods: A thematic analysis was performed on reader comments posted in response to six popular press newspaper articles from the USA relating to geriatric surgery. Articles were published in 2019 in online editions of print newspapers and found on Google News using Boolean search terms including 'surgery' AND 'older' OR 'elderly.' An inductive approach was used to iteratively develop a codebook which was then applied to the comments to identify the most prevalent themes.

Results: We identified a total of 908 reader comments. The most prevalent themes were: 1) wariness/distrust towards healthcare, *"Surgery is sometimes overkill. The patient should speak up and say "no" if necessary, or at least postpone it several months to consider other options.";* 2) problems experienced: ineffective communication and unrealistic expectations, *"Following surgery when I asked why I was having difficulty, the surgeon said, 'Ask your primary care doctor. When I finish cutting, I'm through with my responsibility.'"* and 3) recommended solutions: the need for multidisciplinary teams and patient-centered communication, *"An interdisciplinary goals of care meeting, proactively...is optimal. Each service can weigh in on the relative merits of the case, and help the patient/family make a decision that is consistent with the physical, emotional, social, and spiritual well-being of the patient."*

Conclusions: Commenters viewed geriatric surgery with wariness/distrust based on prior experiences with surgery and encounters with the medical system. Specialized surgical care specific to older adults may be able to mitigate these poor experiences, particularly by improving communication and setting realistic expectations in line with the patients' goals. The perspectives provided by readers of online newspaper articles may be used to inform improvement initiatives and enhance the surgical experience of older adults.

B98 Student Presentation

Perceptions of a Fresh Food Rx

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Background: Food Insecurity (FI), the unpredictable availability of nutritionally-balanced food to maintain health, is a growing public health issue. This study aims to elicit perspectives of older adults at risk for FI and evaluate the potential impact of a Fresh Food Rx (FFRx) program.

Methods: Five focus groups (n=26) were conducted in February-March, 2020, with Hispanic, Spanish-speaking and African American, English-speaking older adults. Existing fresh food infrastructure, relevant nutritional support programs, facilitators and barriers to accessing and cooking healthy food, and perceptions of a FFRx program were evaluated. Focus groups were recorded and transcribed with a thematic analysis performed by a professional qualitative research team, using Atlas.ti Version 8.4 to inductively identify emerging themes.

Results: Four themes emerged. 1) Factors influencing food access, 2) Factors affecting cooking behavior: time constraints, participants' level of enjoyment with cooking, familiarity with produce preparation, and cultural and communal role of cooking and eating. 3) Factors affecting healthy eating patterns: food likeability, knowledge of sustainable diets, support for behavior change, and recognition of cultural dietary patterns. 4) Feedback on FFRx, including produce boxes and cooking classes, was positive. Participants preferred local, farm-fresh food and were interested in learning ways to prepare vegetables. Concerns about the stigma of receiving community aid and previous low participation in health coaching programs were voiced.

Conclusions: Overall, participants were interested in receiving and learning about healthy foods and ways to prepare them. A FFRx program that includes the distribution of produce and healthy lifestyle education would meet this interest. Social, cultural, and financial barriers to healthy eating may not be immediately resolved, but, these barriers can be addressed over time with consistent, sustainable programs.

Participants' Representative Quotes

Themes	Subthemes	Illustrative Quotes
Factors influencing food access	Barriers	"We've got folks who would pay $10 for somebody to take them to the grocery store. Okay. Now you're already living off of a limited income and you're paying $10 to have someone take you to the store."
	Facilitators	"Generally I go where I see sales. My house receives magazines from Food Lion and Lowe's, and sometimes I receive two-for-one this, two-for-one that in another places, and I go running around to buy what I need where things are on sale, to save money."
Factors influencing cooking behaviors	Barriers	"When we are working, we don't have time to go home and cook and all that. Or sometimes, when we're working, at lunchtime we ask, 'What should we eat?' We... end up eating a lot of junk food."
	Facilitators	"My dad was Italian, so my mom made pasta… every type of pasta. She made it all. The dough, the filling, and because we watched how she made it, my sisters and I learned. And yes, I like a lot to cook. It's hereditary."
Factors influencing healthy behaviors	Barriers	"I think that the people that say that they have enough money [it] is because of the quality of the food, because tortillas [are] very cheap, but if we want to eat healthy, it is hard to have enough money."
	Facilitators	"My husband has lost 15 pounds…we have moved from rice, for example, to a wheat tortilla with a little grilled chicken. I only choose two days of the week or one day to make a meal with rice or beans, and complete. But for the rest of the week, the breakfast is oatmeal, a turkey sandwich at night with tea or something like that. I have varied our diet and it is better; we feel better."
Feedback about FFRx	Produce boxes	"If it's locally grown or organic, then we know what we're getting as opposed to things that are coming in from California or Florida. I'd much rather have local grown [food]."

B99 Student Presentation
Identifying Goals for Advanced Care Planning in Patients with Dementia
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Background: Advance care planning (ACP) improves end-of-life outcomes for patients with dementia (PwD), improves the lives of caregivers, and decreases healthcare costs.[1] It is particularly important for PwD, as decision making capacity decreases with disease progression. Despite acknowledged importance of ACP, less than 40% of PwD engage in ACP.[2] Physicians, patients, and caregivers identify reluctance to engage in ACP due to lack of comfort, time constraints, emotional barriers, and challenges identifying what matters most to patients.[3] This study aimed to address a gap in knowledge about what matters most to patients related to ACP by engaging PwD and caregivers to identify a list of patient-important outcomes (PIOs) for ACP.

Methods: We conducted semi-structured interviews with PwD and caregivers at an academic health center in Philadelphia, PA to explore PIOs related to care planning. Interviews were recorded, transcribed, and coded using conventional content analysis. We generated a list of unique PIOs from the "goals" node, and sorted the PIOs into higher domains.

Results: We interviewed 17 patients (70.5% Black, 52.9% male) and 8 caregivers (97.5% White, 100% female). Data included 28 unique PIOs in 6 domains: social life, family involvement, current lifestyle, physical independence, financial independence and healthcare goals. Of the 28 POIs, 86% (24/28) were focused on quality of life and only 14% (4/28) were healthcare-specific goals.

Conclusion: We identified 28 PIOs related to ACP for PwD, with the majority of the PIOs representing issues of quality of life. Findings suggest that ACP approaches focused primarily on identifying and maximizing quality of life goals rather than health outcomes are needed. Future work focused on integrating these PIOs into ACP discussions to facilitate identification of what matters most to patients may help facilitate participant comfort with and increase value of these discussions.

1 2020 Alzheimer's disease facts and figures. Alz & Dem. 2020;16(3):391–460.

2 Sampson EL, Candy B, S Davis, et al. Living and dying with advanced dementia: A prospective cohort study of symptoms, service use and care at the end of life. Pall Med. 2017;32(3):668–681.

3 Poppe M, Burleigh S, & Banerjee S. Qualitative Evaluation of Advanced Care Planning in Early Dementia (ACP-ED). PLoS ONE. 2013;8(4).

B100 Student Presentation
Use of photos to understand the context of patient lives
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Background: Photovoice is a qualitative tool for older adults to share their narratives using photos. There is limited guidance on how to analyze photos. We piloted a photo-coding approach to analyze photos from a Photovoice study on the dietary behaviors of older Filipino adults with cardiovascular disease (CVD) to identify contextual information that may be helpful in the clinical care of older adults.

Methods: We used participant-generated photos from a community-based Photovoice study of 38 older Filipino adults with CVD. Participants were asked to take photos that depict their "food experience." Coders identified photos that included contextual elements beyond food (e.g., food preparation area, family members, medications) that were included in this study. We iteratively developed a codebook through open coding of photo foreground and background. Photos were independently reviewed by two coders who applied separate codes for the photo foreground and background in Dedoose.

Results: 166 out of 774 patient-generated photos met criteria for analysis. Figure 1 presents examples of the photo-coding process which identified contextual elements beyond dietary behaviors that could be important in patient-centered care of older adults with chronic disease.

Conclusions: Patient-generated photos could be a compelling approach to gather contextual elements relevant to older adults' home life and chronic disease self-management practices.

Figure 1. Examples of the photo-coding process to identify contextual elements beyond dietary behavior.

Figure 1A.
The foreground (red box) of this photo depicts a small and low dining table with food and diet-related information.

The background portrays social support with other figures being present. The participants' housing conditions are also featured, such as a cluster of items, tight spaces, and a multi-purpose area, in which the area serves as both a bedroom and dining space.

Figure 1B.
The foreground (red box) of this photo depicts a small, low, and makeshift dining table formed out of stacked items. Food and diet-related information is also showcased. Both personal culture, such as religious items, and social support, through a shared food experience, are displayed.

The background portrays personal culture through religious artifacts. It also features housing conditions, such as food storage, clusters of items, and tight spaces.

B101 Student Presentation
"Just Me and What I Do": Meaningful Activities among Dementia Caregiving Dyads in the Home
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Background: Engagement in meaningful activities enhances quality of life for people living with dementia (PLWD) and their caregivers (dementia caregiving dyads). Little is known about how engagement in meaningful activities among dementia caregiving dyads in the home changes over time.

Methods: Qualitative study design. We recruited PLWD and primary live-in caregivers through three Geriatrics clinics and collected all data through face-to-face, in-home visits with both members of the dementia caregiving dyad. Questions included demographics, functional status, dementia severity, and self-identified meaningful activities at time of data collection and prior to dementia onset. Using a process of open and axial coding, we grouped activities into different scenarios and content categories and mapped them against dementia severity and caregiving relationship type.

Results: PLWD (n=21) were an average 84 years old (SD=8), 38% women, 38% people of color, and 71% dependent in 3+ ADLs. Dementia severity in PLWD was 14% mild, 71% moderate-to-severe, and 14% end-stage. Caregivers (n=20) were an average 59 years old (SD =16), 81% women, and 81% people of color. Caregivers included 8 live-in professionals, 7 partners/spouses, 3 adult children, 2 friends and 1 sibling. Two overarching scenarios emerged. In the first scenario, continued engagement in meaningful activities, which included 3 content categories: family and social (e.g. visiting adult

children), spirituality and religion (CG reading the bible to PLWD), and ADL-based activities (e.g. eating favorite foods). In the second, discontinued engagement in meaningful activities, which included 4 content categories: IADL-based activities (e.g. cooking), entertainment and games (e.g. playing dominoes), physical exercise, and travel. Meaningful activities in scenario 1 were continued despite progression of dementia, whereas those in scenario 2 were affected by cognitive decline, functional decline, caregiver training/experience, and caregiver burden or health issues.

Conclusion: Activities that were dependent on cognitive and functional status were discontinued as dementia severity increased, suggesting that caregiver training interventions may help to support continued engagement in meaningful activities throughout the progression of dementia.

B102

Functional decline & recovery after acute myocardial infarction: a qualitative study

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Background

Up to half of older adults who survive acute myocardial infarction (AMI) report declines in function and independence. This qualitative study explored older patients' experiences with functional decline and recovery following hospitalization for AMI.

Methods

AMI patients age 75 and older were recruited while hospitalized at a large tertiary academic medical center. Participants were contacted one week post-discharge. Those who reported a decline in at least one basic or instrumental activity of daily living, compared with their status 1 month before hospitalization, were invited to participate. Topics included respondents' experiences with functional change before, during, and after their AMI, perspectives on contributors to functional decline, and perceived barriers and facilitators to recovery after discharge. Interviews (n=16) were coded by an epidemiologist, geriatrician, and social worker.

Results

Four themes emerged: 1) Varied, multifactorial attribution of functional decline after AMI: some identified sequelae of AMI (e.g., chest pain, dyspnea) as the cause of their decline, whereas others identified symptoms from new medications (e.g., dizziness from antihypertensives), comorbidities (e.g., arthritis) or toxicities of hospitalization (e.g., bedrest, poor sleep). 2) Adaptation and avoidance: respondents adapted their routines to their new limitations, with some discontinuing activities that were difficult for them. Others adapted their routines temporarily, with a goal to return to their pre-AMI functional status. 3) Unmet needs: respondents reported unmet physical and emotional needs that impacted their functional health, including lack of social support and unanticipated mental health effects of their AMI. 4) Perspectives on probability of recovery: some respondents reported that the AMI had "done them in" and expressed pessimism about functional recovery in light of advanced age or chronic conditions.

Conclusion

The findings illustrate that functional decline after AMI is multifactorial and thus should be addressed with a multifaceted approach. Potential opportunities for preventing functional decline after AMI and improving recovery include addressing in-hospital toxicities or enhancing post-discharge support via home health care, rehabilitation, and mental health or social support services.

B103

Challenges and opportunities when caring for people with dementia in primary care safety net settings

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Background: Alzheimer's disease and related dementias (ADRD) are frequently underdiagnosed in primary care, often due to competing clinical concerns. Furthermore, there are significant treatment and care inequities in ADRD among populations facing health disparities. Failing to identify ADRD can lead to more rapid cognitive decline, and increased hospitalziations, health care costs, and mortality. The goal of this study was to understand the experiences and needs related to the evaluation and care of patients with ADRD from the perspective of primary care providers working in safety net settings.

Methods: Semi-structured interviews with primary care providers. Interviews focused on practices, challenges, and opportunities when evaluating and caring for patients with ADRD, resources available and needed, and education and training that would enable providers to better care for these patients. Data was analyzed using qualitative coding and thematic analysis.

Results: The 20 participants were primary care providers who work in safety net settings in diverse regions of California. We identified six key themes: (1) The importance providers place on understanding their patients holistically through longitudinal relationships; (2) The importance providers place on maintaining a patient-centered agenda in the context of dementia; (3) Challenges doing a dementia workup when patients have uncontrolled chronic conditions such as diabetes or face structural barriers such as homelessness; (4) Challenges disentangling trauma, mental health concerns, substance use, and dementia when identifying if a patient is experiencing cognitive impairment; (5) Challenges communicating with and co-managing patients with neurology specialists; and (6) The wide variation in provider knowledge, training, and experience with ADRD.

Conclusions: Participants identified opportunities to build on their strengths as primary care providers and improve their practice in dementia. Data from this study will support the development of interventions to better address the needs of patients with ADRD in primary care. The goal of future work is to reduce health disparities in dementia care.

B104 Student Presentation

Discontinuing cancer screening for older adults: a comparison of clinician decision-making across breast, prostate, and colon cancer screenings

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Background: Guidelines recommend against routine screening for breast, prostate, and colon cancers in patients with <10-year life expectancy. Yet, many of these patients continue to be screened. While previous studies have examined clinician perspectives regarding cancer screening broadly or focused on one type of screening, little is known about clinicians' decision-making across different types of cancer screenings. We aimed to better understand the similarities and differences in clinician decision-making for breast, prostate, and colon cancers in older adults.

Methods: We conducted semi-structured interviews with 30 primary care clinicians in Maryland. We used chart-stimulated recall to prompt each clinician about specific breast, prostate, and/or colon cancer screening decisions in 2-3 of their patients. The audiotaped interviews were transcribed verbatim, and qualitative content analysis was used to identify major themes.

Results: Participants were mostly physicians (24/30) and women (16/30). Four major themes highlighted variability across cancer screening types: (1) Clinicians used different age thresholds for stopping different cancer screenings, usually at ages older than recommended in guidelines, and more often adhered to a strict stopping age for colon cancer screening than other screenings; (2) Across cancer screenings, some clinicians prioritized minimizing direct harms from the screening, some prioritized the accuracy and effectiveness of the screening, some focused on the ease and efficacy of treatment, while others focused on the potential cancer morbidity; (3) Clinicians were more aware of the harms for prostate and colon cancer screenings than for breast cancer screening and consequently less often discussed breast cancer screening harms with patients; and (4) Clinicians relied on gastroenterologists for colon cancer screening but were less consistently involved with specialists for breast and prostate cancer screenings.

Conclusions: Clinicians often considered screening for distinct types of cancers differently and their evaluation and communication of screening-related benefits and harms varied by cancer type. These results highlight the complexity and nuances in clinicians' cancer screening considerations and can inform future efforts to improve screening practices.

B105

Improving Aging in Place for Older Adults with Low Incomes: Perspectives of Home Health Aides

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BACKGROUND: Older adults with low incomes experience disproportionate rates of cognitive and functional impairment and an elevated risk of nursing home admission. Home health aides (HHAs) may have insight into how to optimize aging in place for this population, yet little is known about HHAs' perspectives on this topic.

METHODS: We conducted 6 focus groups with 21 English-speaking and 10 Spanish-speaking HHAs in Philadelphia and New Jersey. HHAs discussed their interactions with clients and shared their perspectives on factors that influence aging in place for older adults with low incomes. Transcripts were analyzed using qualitative thematic analysis.

RESULTS: The overarching theme was that HHAs' overall goal is to create a "comfortable and safe" environment to facilitate clients' aging in place. Three sub-themes illustrated how HHAs achieve this goal. First, HHAs reported that they push the formal boundaries of their role as a HHA. They provide not only nursing support, but also emotional support, and serve as "surrogate family." For example, HHAs escort clients to doctor's appointments, engage them in light exercise, and provide companionship to reduce depression or loneliness. Second, HHAs shared that their role provides insight into clients' changing health. Since HHAs often spend more time in clients' homes than family members or healthcare providers, HHAs detect early warning signs of functional and cognitive decline, including falls, depression, and confusion. Third, HHAs discussed that their frequent contact with clients allows them to identify factors that impact aging in place. They noted factors that worsened clients' functional and cognitive decline, such as insufficient adaptive equipment, social isolation, and outdated care plans that no longer reflected clients' needs; factors that facilitated clients' aging in place included utilization of community-based services, family support, and communication between healthcare team members.

CONCLUSIONS: Our findings suggest that HHAs have important insights into improving aging in place for older adults with low incomes and their perspectives should be incorporated into care planning and intervention delivery.

B106 Student Presentation, Encore Presentation

Aging in Place in Subsidized Housing: Roles and Perspectives of Staff Members

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BACKGROUND:

Nearly 3 million older Americans with low incomes live in subsidized housing. This population has disproportionate rates of functional impairment, cognitive impairment, and nursing home admission. Staff members who work in subsidized housing may have unique insight into how to improve aging in place for this vulnerable population, but little is known about their perspectives.

METHODS:

We conducted 12 focus groups with 69 staff members from 7 subsidized housing sites. Staff included property managers, service coordinators, maintenance workers, administrative assistants, and security guards. Interviews explored participants' roles, responsibilities, and perspectives on aging in place for older adults living in subsidized housing. Transcripts were analyzed using qualitative thematic analysis.

RESULTS:

Focus groups revealed three main aspects of staff roles and responsibilities: their unique insight into residents' lives, capacity to detect early indications of health decline, and ability to act on such warning signs. First, the majority of participants noted that they "wear multiple hats" and their roles go beyond professional responsibilities to maximize residents' quality of life. As a result, staff members often adopt personal roles akin to serving as residents' "surrogate family" members. Second, their roles and responsibilities give staff a unique window into residents' lives, enabling them to detect early warning signs. For example, staff often observe changes in residents' physical appearance and hygiene, mood, behavior, and function, indicating possible physical illness, mental illness, or cognitive impairment. Last, while staff are able to address some warning signs (e.g. by involving families, connecting residents to community resources, and advocating on their behalf), they are limited by a lack of key resources (e.g. reliable transportation, on-site clinical staff).

CONCLUSIONS:

Due to their roles and responsibilities, staff have unique insight into how to promote aging in place for older Americans living in subsidized housing. Our findings suggest that they are a valuable and underutilized resource for identifying at-risk residents in subsidized housing and helping to deliver interventions to promote aging in place.

B107 Student Presentation, Encore Presentation

Hospital to Nursing Home Transitions of Care for Older Adults with Opioid Use Disorders: A Needs Assessment

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Background: Opioid related inpatient stays increased 54.4% and the number of opioid-related ED visits doubled among patients aged 65 and older from 2010-2015. 29-49% of residents in skilled nursing facilities (SNFs) have a lifetime diagnosis of substance use disorder. As care transitions are a vulnerable time with high risk for error, assessment of care transitions for patients with opioid use disorder (OUD) may improve patient safety, decrease hospital readmission rates, and ensure equitable care for patients with OUD. This study was designed to identify barriers to successful transitions of care to SNFs for patients with OUD.

Methods: A needs assessment was conducted to identify barriers to effective care transitions for patients with OUD from a large academic medical center in Chicago to partnered skilled nursing facilities (SNFs). On the hospital side, informal interviews were conducted with four inpatient social workers, two physicians and two quality and safety personnel. In addition, 24 semi-structured interviews were conducted with nursing home staff including directors of nursing, administrators, nurses, and physicians. All nursing home interviews were transcribed and coded using ATLAS.ti 8 (ATLAS.ti Scientific Software Development GmbH, Berlin) using a constant comparative method. A fishbone diagram and a process map were utilized to identify barriers in transitions of care from hospital to SNF. Interviews with hospital employees were determined to be quality improvement; interviews with SNFs were approved by an IRB.

Results: These interviews show that hospitals routinely struggle to place patients with OUD into nursing homes. Many local SNF protocols do not allow admission of patients with OUD. Other discharge barriers include patient access and facility ability to administer Medication Assisted Treatment (MAT), insurance coverage for MAT, and a lack of X-waivered physicians at receiving sites. Our study results are limited to a single site medical center and a single nursing care network in Chicago.

Conclusions: This needs assessment identifies many barriers to safe and effective care transitions for this group of patients. A standardized discharge protocol may be considered to help improve discharge pathways to address barriers to discharge for patients with OUD.

B108 Student Presentation

"There's a whole world, and I ain't in it": Older Adults' Experiences with Technology During the COVID-19 Shelter-in-Place Orders

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Background: Concerns have been raised regarding older adults' access to and comfort with technologies to overcome physical distancing restrictions during the COVID-19 pandemic. Our objective was to better characterize the "digital divide" older adults may have experienced during shelter-in-place.

Methods: Semi-structured in-depth interviews were conducted with a purposive sample of 13 community-dwelling older adults with diverse experiences with technology, recruited from two community sites and a geriatrics practice in San Francisco. Concurrent data analysis using a grounded theory approach was completed by two independent coders to identify salient themes.

Results: Participants were 77 years on average (range 64-93), 69% female, 23% Black, 69% lived alone, and 54% reported at least one ADL impairment. Two themes emerged in how participants positively adapted to COVID-19 restrictions and emotionally coped through the use of technology. First, many reported discovery of new technologies to maintain or develop new connections, including Zoom-based community groups and telehealth services ("there's all kinds of virtual programs where you can exercise"). Second, older adults were resourceful in identifying community resources and enlisting family members to learn ("I had to ask one of my granddaughters how to make the chat thing work"). Two themes emerged regarding barriers to technology use. First, older adults identified internal barriers such as stigma and shame and concerns about privacy or overuse of technology ("my daughters have said that I overshare, so I don't want to set myself up"). Second, identified external barriers included lack of support for sudden breakdowns (from family and/or community), difficulty navigating technical details (passwords, upgrades, security protocols), and perceived structural ageism ("we act as if seniors can't hold that information"). Overall, participants described virtual interaction as inferior to in-person, but noted that video interaction was preferable to phone and "better than nothing."

Conclusions: While technology was central to many older adults' ability to adapt to COVID-19 restrictions, barriers and frustrations were common. Identified facilitators and barriers can inform technology-based interventions that bridge the digital divide among older adults to improve health, social well-being, and quality of life.

B109 Encore Presentation

Insights Gained on Deprescribing Opioids and Benzodiazepines to Reduce Older Adult Falls

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Background: As part of a randomized control trial to reduce falls in older adults (funded by Centers for Disease Control), we sought to evaluate perceptions of deprescribing opioids and benzodiazepines (BZDs) among older adults and their healthcare providers.

Methods: We conducted a web-based survey (adapted from the Canadian Deprescribing Network) and focus group among health care professionals in North Carolina outpatient clinics. Surveys solicited demographics, perceived barriers to the provision of falls education and de-prescribing services, and factors that facilitate the provision of these services. Focus group questions asked about deprescribing practices for opioids and BZDs; recommendations for reducing dosages and potential adjunctive therapies; and concerns of dependence, withdrawal, and overdose. Patients who were prescribed opioids and BZDs were interviewed virtually to understand their perspectives on deprescribing.

Results: Surveys were administered to providers in control and intervention clinics (n=29). Providers expressed high confidence in their abilities to weigh risks and benefits of deprescribing opioids and BZDs, but low confidence in deprescribing when they were not the original prescriber or unable to inform them. The focus group included 7 providers from 2 intervention clinics. Barriers to deprescribing identified included patient resistance, lack of knowledge, and lack of time to discuss during regular clinic visit. Providers also expressed concerns about deprescribing medications initiated by other prescribers. Key facilitators included: patient trust in physician, patients being agreeable to reduce medications, and use of gradual tapering. Patient interviews are currently being analyzed.

Conclusion: Deprescribing interventions for opioids and BZDs may be most effective by establishing patient-provider trust and using gradual tapering schedules agreed upon by the patient. Barriers and facilitators were subsequently used to optimize training and provider resources for the deprescribing intervention.

B110 Resident Presentation

Caregiver burden among caregivers of community-dwelling older adults with dementia during the COVID-19 pandemic

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Background: Coronavirus Disease 2019 (COVID-19) and consequent social isolation has disproportionately impacted the lives of older adults especially those with dementia. Caregivers have faced psychological consequences including increased levels of anxiety, depression and caregiver burden1. A further increase in burden may occur due to more interruptions to the social and healthcare constructs leading to increased healthcare cost and utilization2. The intent of this research is to assess caregiver burden from the pandemic to inform practitioners and program initiatives.

Methods: A longitudinal observational survey design is used to explore change in caregiver burden over a 3-month study period (i.e., baseline and 3 months later). Adult caregivers of community-dwelling older adults with dementia that are receiving care through the MedStar Health System have been recruited for this study. The primary outcome is the Zarit Burden Interview (ZBI), and secondary outcomes are qualitative to assess caregiver's perceptions. The semi-structured questions gauge the caregiver's reflection of the 3 months preceding of: what they wished they had to make their caregiver responsibilities less stressful; changes in caregiving style and attitudes toward COVID-19.

Results: To date, we have conducted 11 baseline interviews with the goal of completing 25. Thus far, the caregiver's age range between 39-84 years, are family members of the care-recipient (10 out of 11) and spend an average of 4-24 hours per day in caregiving for the past 10 months to 3 years. ZBI scores at baseline have ranged from 18 to 59 indicative of mild to moderate upwards of moderate to severe burden. Further findings will be discussed.

Conclusion: By understanding COVID-19 specific caregiver challenges, healthcare team members and community partners can collaborate to identify solutions and create programmatic support.

Ref:

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2. Cheng,S. Dementia Caregiver Burden: A Research Update and Critical Analysis. 64, s.l.: Curr Psychiatry Rep,2017, Vol.19.

B111 Student Presentation

Investigating the Therapeutic Role of Retinoic Acid-Related Orphan Receptor Alpha (RORα) in Heart Failure

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Background: More than 6 million Americans have heart failure (HF), and up to 80% of HF patients are over the age of 65. It is critical to reduce the burden of HF in the aging adult population. Previous research by Jensen *et al.* discovered that Retinoic Acid-Related Orphan Receptor Alpha (RORα) is downregulated in failing heart compared to non-failing heart, but the mechanism is unknown. We hypothesize RORα may provide energy in the aging heart by altering fatty acid oxidation (FAO) and lipid droplet formation (LDF). We investigated (1) how RORα expression alters FAO and LDF in HF and (2) how age impacts FAO and LDF in the presence/absence of RORα.

Methods: Homozygous RORα$^{sg/sg}$ (RORα KO) mice were bred from heterozygous RORα$^{sg/sg}$ C57BL/6J mice to ablate RORα expression. In the HF model, WT (n=13) and RORα KO (n=10) mice were fasted to simulate the energy deficits of HF. Heart size, FAO activity, and FAO/LDF gene expression were compared to those of fed controls (n=8). In the aging model, WT (n=16) and RORα KO (n=15) mice were sacrificed at young (5 mo) and old (17 mo) age to investigate how age affects FAO/LDF activity in the presence/absence of RORα. In both models, gene/protein expressions of mouse hearts were measured using qPCR, microarray, and Western blot. Statistical comparisons were made using two-way ANOVA.

Results: In the HF model, RORα KO mice had decreased ($p \leq 0.05$) heart sizes at baseline compared to WT mice. When HF was simulated, decreased RORα expression correlated with decreased ($p \leq 0.05$) compensatory increases in FAO activity and expression of FAO and LDF genes. In the aging model, increased age correlated with decreased ($p \leq 0.05$) expression of key FAO/LDF genes in both WT and RORα KO groups. RORα expression decreased four-fold ($p \leq 0.05$) with aging alone in the WT group.

Conclusions: Our findings suggest that RORα plays a key role in regulating FAO and LDF activity. Furthermore, the decreased expression of RORα with aging has not yet been reported. The consequent downregulation of FAO/LDF genes in the aging heart may contribute to the susceptibility to HF in the geriatric population. Future studies need to further investigate the cardioprotective role of RORα in aging and its tremendous potential as a gene therapy target in the treatment of HF.

B112 Student Presentation

Short-Term Ketogenic Feeding Rescues a Delirium Mouse Model in Young But Not Aged Mice

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Background: Delirium is a syndrome marked by acute cognitive changes often arising due to bodily insult and is influenced by age. Delirium is associated with higher mortality rates and increased risk of developing dementia. There are no effective pharmacological treatments. One element of delirium pathophysiology may be glycolytic energetic deficits associated with acute inflammation. In our study, we used a short-term ketogenic diet to study how ketone bodies might function as an alternative energy source during energetic deficits in a delirium mouse model.

Methods: We fed young (3 month) and aged (22 month) wild-type C57BL/6 male mice a ketogenic diet (KD) or matched control diet for one week (N=5-8 per group). Mice were then injected intraperitoneally with 0.5mg/kg lipopolysaccharide (LPS, Ultra-Pure LPS-EK) as a model of delirium-like acute inflammation-induced behavioral change. Two hours post-injection, mice were placed in an open field to measure activity and exploratory behavior for one hour. Blood glucose and blood ketone body levels were monitored throughout the week as well as prior to and after LPS injection. Glycolytic and ketolytic mRNA expression levels were measured in the brain using qPCR to elucidate any changes in energy metabolism.

Results: LPS acutely reduces activity and exploratory behaviors in both young and aged mice on control diet ($P<0.002$), and is associated with transient hypoglycemia. Pre-feeding with KD for one week partially rescued the LPS-induced activity reduction in young but not aged mice ($P<0.05$). KD elevated blood ketone body levels similarly in both young and aged mice. Aged mice on KD show reduced brain glycolytic and ketolytic gene expression compared to young mice.

Conclusions: In this delirium mouse model, a short-term KD improved acute LPS-induced deficits in open field activity and exploration in young mice but not in aged mice. We hypothesize that either LPS surpasses the capacity of ketone bodies to meet the aged brain's LPS-induced energetic demands, or based on the reduced induction of glycolytic and ketolytic genes in KD-fed aged group, the response of aged mice to KD is impaired by reduced metabolic flexibility.

B113 Student Presentation

FOXO3 Genotype and Mortality after First Myocardial Infarction in Old Age: The Kuakini Honolulu Heart Program.

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Introduction: The G allele of the FOXO3 single nucleotide polymorphism (SNP) rs2802292 is consistently associated with increased lifespan in multiple populations. It also reduces risk for CHD mortality in older Japanese American men. We investigated the mortality protection conferred by the FOXO3 G allele after having a first myocardial infarction (MI) in old age.

Methods: The Kuakini Honolulu Heart Program is a prospective cohort study of cardiovascular disease (CVD) in Japanese-American men in Hawaii that started in 1965. The fourth exam (1991-93) was conducted in 3,741 men ages 71-93 years. Our analytic sample (N=164) included having a first MI after exam 4 through December 1999, survival greater than 1 month after first MI, and availability of FOXO3 genotype data. Follow up for all-cause mortality was until December 2019 (up to 29 years). We studied the effect of FOXO3 G allele carriers (heterozygous or homozygous) on all-cause mortality.

Results: Age-adjusted mortality rates showed a significant protective effect in those with FOXO3 G genotype compared to those without (179.2 vs. 209.2 per 1,000 person years follow up, p=0.02). Average age of first MI was similar in the two groups, but those with FOXO3 G genotype had a significantly higher age of death (88.1 vs. 85.7 years, p=0.007). Using General Linear Models, we found no significant differences in CVD risk factors between FOXO3 G allele carriers and non-carriers, except higher rates of current smoking among those with the FOXO3 G genotype. Cox regression adjusting for age at initial MI found that presence of the FOXO3 G allele conferred a risk reduction of 32% (RR=0.68, 95% CI=0.50-0.95, p=0.02). After additional adjustment for CVD risk factors, the FOXO3 G allele conferred a risk reduction of 44% (RR=0.56, 95% CI=0.39-0.80, p=0.002).

Conclusions: The FOXO3 G allele (minor allele of SNP rs2802292) confers a significant reduction in mortality after a first MI in older Japanese-American men. These findings suggest another avenue by which FOXO3 contributes to longevity, and also support further research of the FOXO3 gene and protein in its potential role in cardiac repair and regeneration after myocardial infarction.

B114 Student Presentation

Development of a Multi-Protein Inflammatory Index Score to Predict Postoperative Delirium in Older Patients

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Background: Several inflammatory proteins have been associated with postoperative delirium. Though multi-protein inflammatory indices are more predictive of geriatric syndromes (e.g. frailty) than individual proteins, such indices of delirium have yet to be examined. We aimed to: 1) develop preoperative [PREOP] and postoperative [day 2; POD2] multi-protein inflammatory indices to predict delirium, and 2) compare the associations of these indices vs. individual proteins with delirium.

Methods: We used the Successful Aging after Elective Surgery (SAGES) study of adults aged 65+ undergoing major scheduled non-cardiac surgery (N=560). PREOP and POD2 plasma levels of C-reactive protein (CRP), chitinase 3-like protein 1 (CHI3L1/YKL-40), and interleukin-6 (IL-6; POD2 only) were measured using enzyme-linked immunosorbent assays. Multi-protein inflammatory index scores were computed using: a simple summary score (SSS, summation of sample-based quartile ranks for each protein), Z Score summary score (ZSSS, summation of standardized protein Z scores), principal component score (PCS), and the least absolute shrinkage and selection operator (LASSO) method. Delirium was assessed using the Confusion Assessment Method (CAM) and a validated chart review. Generalized linear models were used to assess the relationships between delirium and each individual protein and each multi-protein index.

Results: The SSS yielded the most predictive (PREOP) and strongest associated (POD2) inflammatory index of delirium (C-statistic: 0.64 and 0.71, respectively), and was more strongly associated with delirium than the most strongly associated individual protein (C-statistic: PREOP CRP: 0.62; POD2 YKL-40: 0.68), though the improved prediction was not statistically significant (PREOP p=0.43, POD2 p=0.099).

Conclusions: A multi-protein inflammatory index computed by the SSS method predicted delirium better than any individual protein. These findings support blood-based multi-protein index scores in delirium risk and correlate identification.

B115 Student Presentation

Losartan reverses age-related but not chronic inflammation-related changes in cardiac calmodulin-kinase II

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Chronic elevation of inflammatory mediators is common in frail older adults and predicts a host of adverse cardiovascular outcomes, including heart failure and sudden death. To date, few specific molecular mechanisms have been identified that connect chronic inflammation to age-related cardiomyopathies. Dysregulation in Ca^{2+} and calmodulin-dependent protein kinase II (CaMKII) signaling has been implicated in promoting inflammatory responses in cardiomyopathies but is understudied in the context of aging. We compared myocardial CaMKII signaling in young (32 weeks) and old (104 weeks) wild type (WT) and interleukin 10 null mice (IL-$10^{tm/tm}$), a model of chronic inflammation and frailty. Aged cohorts were treated with 0.6 mg of losartan. Hearts from mouse cohorts were assayed for total and autophosphorylated CaMKII (P-CaMKII) and the phosphorylation status of phospholamban (PLN) (downstream signaling pathway) using western blot techniques. We observed significant increases in total and activated, autophosphorylated, CaMKII (P-CaMKII) (2.4 ± 0.38 vs 1.2 ± 0.12 $p< 0.02$; 9.0 ± 1.9 vs 0.03 ± 0.01 $p< 0.002$), but decreases in the phosphorylation of PLN (0.6 ± 0.3 vs 1.7 ± 0.3 $p<0.03$) at a validated CaMKII target site (T17) in old compared to young WT hearts. Similarly, we found increased P-CaMKII (6.9 ± 1.5 vs 0.7 ± 0.4 $p< 0.004$) and diminished PLN T17 phosphorylation (0.8 ± 0.2 vs 1.5 ± 0.2 $p<0.02$) in old compared to young IL-$10^{tm/tm}$ mice. Old IL-$10^{tm/tm}$ mouse hearts had less total CaMKII compared to old WT mouse hearts (1.1 ± 0.3 vs 2.9 ± 0.2 $p< 0.002$). Four weeks treatment of old WT mice with Losartan was associated with reversal of observed age-related changes in the CaMKII signaling pathway. We observed decreases in total CaMKII, P-CaMKII (2.9 ± 0.2 vs. 1.5 ± 0.2 $p<0.001$; 2.2 ± 0.9 vs 0.47 ± 0.1 $p <0.03$), and an increase in PLN T17 phosphorylation (0.55 ± 0.3 vs 2.23 ± 0.4 $p< 0.007$). The effects of Losartan on the animals aging with chronic inflammation (old IL-$10^{tm/tm}$) was less clear. We observed a losartan associated increase in total CaMKII (1.41 ± 0.02 vs 1.3 ± 0.02 $p<0.02$) but no impact on P-CaMKII or PLN T17 phosphorylation. We interpret our findings to suggest that changes in myocardial CaMKII signaling are a feature of aging that is affected by chronic inflammation.

B116

Phenothiazines to treat Alzheimer's disease

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Background:

Current treatments of Alzheimer's Disease (AD) are largely ineffective and do not address underlying pathophysiological processes. The model organism *C. elegans* has been successfully used to discover compounds to treat human diseases, some now in clinical trials. To develop novel drugs and explore pathways to treat AD, we took on a forward pharmacological approach with a *C. elegans* model for AD, completed with studies to expand results to lifespan as well as healthspan.

Methods:

We screened 2560 drugs from the Microsource Spectrum library for their ability to delay proteotoxicity (indicated by paralysis) in an Abeta transgenic *C. elegans* muscle model of AD (CL2006) in liquid medium. Congeners to a highly represented class of protective drugs were obtained from the NCI library and further screened in liquid medium for efficacy to reduce Abeta related paralysis in CL2006. 20 of these drugs were assessed for effects on lifespan in wild type *C. elegans* (N2) in liquid medium. We extended these experiments by assessing markers of aging (pharyngeal pumping rate and body bends) for the 3 most protective drugs. Finally, we tested the 3 most protective drugs in a *C. elegans* neuronal model of AD, CL2355 with a chemotaxis assay.

Results:

The initial screen identified 131 compounds which significantly delayed paralysis as a readout for Abeta proteotoxicity in CL2006. The most significantly protective compound was phenylbutyric acid, now in clinical trials for AD. Among the most protective drugs were phenothiazines, which are orally active and cross the blood-brain barrier, desirable properties of drugs to treat AD. 80 phenothiazines congeners were further assessed; 60% were protective in CL2006 worms. 9/20 tested phenothiazines increased lifespan in N2 worms and 2/3 phenothiazines tested promoted significantly higher pharyngeal pumping rates compared with control till day 10 of adulthood in N2 worms. 2 of the drugs were protective in the *C. elegans* neuronal model of AD.

Conclusion:

This phenotypic screening approach led to the discovery of potential drugs to treat AD. These phenothiazines protect against Abeta toxicity, and assessment of efficacy to protect against other forms of proteotoxicity are ongoing. These studies suggest the utility of *C. elegans* to discover drugs to treat human diseases. Future studies will assess molecular mechanisms mediating the protective effects of these compounds

B117

Anti-Diabetic Effects of the Senolytic Agent Dasatinib

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Background: Cellular senescence has been suggested as a cause and consequence of many age-related diseases including type 2 diabetes mellitus (T2DM). In pre-clinical animal models, reducing senescent cell burden *via* treatment with so-called senolytic drugs, such as the combination of dasatinib and quercetin, improves glucose tolerance and enhances insulin sensitivity.

Methods: Using Mayo Clinic enterprise-wide data, this retrospective cohort study of patients with malignancies evaluated the anti-diabetic effect after one year of a strongly senolytic tyrosine kinase inhibitor (TKI), dasatinib (n=16), as compared to a weakly senolytic TKI, imatinib (n=32).

Results: Relative to the imatinib group (n=26), patients treated with dasatinib (n=12) had a mean 43.7 mg/dL (p=0.005) reduction in serum glucose, requiring 28.8 less total daily insulin units (p=0.077) in the setting of a 4.8 kg relative weight loss (5.3% of total body weight; p = 0.045). Compared to the imatinib-treated (n=22) group, hemoglobin A1c was reduced by 0.80 absolute percentage points (p=0.053) in the dasatinib-treated group (n=13), requiring 18.2 less total daily insulin units (p=0.160) in the setting of a 5.9 kg relative weight loss (6.3% of total body weight; p=0.061). Linear regression analysis suggests that the relative difference in weight accounts for only 8.4 mg/dL of the 43.7 mg/dL blood glucose value decrease, or 19.2%.

Conclusions: These results suggest that dasatinib may have anti-diabetic effects comparable to contemporary diabetic treatments and may be considered for use as a novel diabetic therapy. Future studies are needed to determine if these results are translatable to patients with T2DM without underlying malignancies and to determine whether the anti-diabetic effects of dasatinib are due to its senolytic properties.

B118 Encore Presentation

Improving prognostic assignment in older age groups of multiple myeloma

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Background: Multiple myeloma (MM) is a disease of the elderly, including 34.8% diagnosed after 75. The contribution of genetic abnormalities to the outcome of MM changes with age and provides opportunities for risk stratification, but so far, approaches have failed in the elderly population.

Methods: Using the CoMMpass data, we analyzed 980 MM patients including 422 patients aged ≥65 with whole genome sequencing samples. Using paired samples, we determined mutations, copy number, translocations, complex rearrangements such as chromothrypsis (CT), chromoplexy (CP) and telomere length. Examining the germline data, we looked for clonal haematopoiesis (CH) and quantified telomere length using the same approach.

Results: The contribution of genetic features of MM to mortality decrease with age. The complex structural variant CT by contrast, increases with age (χ^2=8.2, p=0.04) and is negatively associated with outcome.

We determined telomere attrition in tumor cells (TTL). The median TTL was 5.8kB (1.3-53) and had a negative correlation with age. Short TTL was associated with the presence of the complex structural event CP (χ^2=4.1, p=0.04). This association may reflect the multiple deletion events involved in the generation of CT, which may also impact telomere length

We performed a multivariate analysis with age, CT, TTL (<4.1 kB), ISSII-III, and performance status overall and in the age group ≥ 65. This showed that all factors except performance status retained their independent significance. Importantly these features are additive for risk

Conclusion: TTL, a composite factor, takes into account DNA instability, loss of copy number and age groups, was negatively associated with outcome and provided a novel prognostic marker that remains independent in a multivariate analysis with CT, ISS, performance status, and age

B119

Impact of a Virtual Education Program Upon Self-Efficacy, Confidence, and Burden among Caregivers of People with Dementia

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Background: As the COVID-19 pandemic curtailed live education options, this study was designed to evaluate the impact of a synchronous virtual caregiver education program on confidence, self-efficacy, and burden among caregivers of people with dementia. **Methods:** Pre-post comparison design at baseline, following a 5-week virtually-facilitated synchronous caregiver education program, and 3 months thereafter with control group. Participants included 77 family caregivers and 36 controls from predominantly rural area. Study subjects received a 5-week caregiver education program designed and delivered virtually by a geriatrician and caregiver support specialist. The course covered changes in cognition, behavior, function, caregiver-care recipient roles, communication, and caregiver self-care plus skills and resources to address these changes. Measurements included: Piggott Caregiver Confidence, Steffen caregiver self-efficacy, Zarit-12 caregiver burden scale, and self-reported program impact. Paired t-tests and GEE models were used to compare treatment and control groups over time. **Results**: Participants had significant sustained positive changes in caregiver confidence and self-efficacy compared with controls ($p<0.01$ for treatment by time in GEE models); see Table. **Conclusion:** Caregivers with greater confidence and self-efficacy have been shown to have better health outcomes, decreased caregiver strain and depressive symptoms. This study supports using virtual caregiver education programs to enhance caregiver skills and self-care in rural settings, during public health crises, and in standard practice as an alternative to live programs.

Group	Baseline Mean (SD)	5-week follow up (end of course) Mean (SD)	3-month follow-up [a] Mean (SD)	Difference: Baseline to 5-week Mean (SD)	p-value for difference between treatment and control [b]	Difference: Baseline to 3-month Mean (SD)	p-value for difference between treatment and control [b]
Caregiver Confidence							
Participants (n=77)	13.9 (4.9)	16.5 (4.5)	17.7 (4.0)	2.6 (4.0)	0.0325	3.1 (3.9)	0.008
Controls (n=36)	16.5 (4.3)	17.4 (4.3)	17.4 (4.3) [a]	0.9 (3.7)		0.9 (3.7) [a]	
Caregiver Self-Efficacy							
Participants (n=77)	71.4 (21.6)	75.8 (16.1)	79.4 (17.7)	4.4 (14.8)	0.0268	5.5 (12.4)	0.003
Controls (n=36)	80.1 (18.3)	78.3 (18.9)	78.3 (18.9) [a]	-1.9 (11.4)		-1.9 (11.4) [a]	
Caregiver Burden							
Participants (n=77)	18.6 (9.2)	19.5 (9.0)	19.3 (7.7)	0.8 (5.0)	0.68	0.3 (5.1)	0.92
Controls (n=36)	13.7 (8.9)	14.1 (10.2)	14.1 (10.2) [a]	0.4 (6.0)		0.4 (6.0) [a]	

Higher scores indicate higher confidence (range: 5-25), self-efficacy (range: 0-100), and burden (range: 0-48).
[a] p-values based on paired t-tests. [b] Scores for controls were carried forward from 5 weeks to 3 months.

B120

Effectiveness of a Virtual Team Simulation Exercise for Interprofessional Students at the University of Hawaii

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Background: The University of Hawaii Health Sciences Schools have conducted the Hawaii InterProfessional Team Collaboration Simulation (HIPTCS) exercise since 2014. The scenario is discharge planning for a complex geriatric patient. Due to the COVID-19 pandemic, it was converted to a virtual format, and we compared efficacy to the original format.

Methods: In 2020, half the students participated in person in February (pre-COVID), and half via video conferencing in April (during COVID). This included medical, nursing, pharmacy, social work and dietetics students. In the online version, teams of students and facilitators were managed with breakout rooms. The exercise began with a virtual icebreaker team puzzle, with debriefing by interprofessional (IP) faculty. Students then developed a discharge plan and participated in a simulated family meeting with an actor. After the exercise, IP faculty again provided structured co-debriefing to highlight principles of effective teamwork. Students self-rated IP collaborative practice core competencies using a retrospective pre-post ICCAS survey with 20 items (5-point Likert scale).

Results: Participants included 122 students in-person, and 113 virtually. Paired T-tests showed significant improvements in ICCAS scores in all IPE categories for both cohorts (all $p<0.0001$), with no significant differences comparing in-person to virtual. Students also evaluated the activity (Likert Scale 1-5, 5=best). They were very satisfied with ability to work through the simulation (mean 4.15±0.71) and improved in IP collaboration (mean 4.28±0.67), with no significant differences whether in-person or virtual. For both cohorts, students described the most helpful aspect of the simulation was "Collaborating with other health professions" with the second being "Working with Actors."

Conclusions: We were able to convert a geriatrics simulation to a completely virtual format during the COVID-19 pandemic. Students still achieved significant improvements in all IPE core competencies for both in-person and virtual cohorts, with high levels of satisfaction for both.

B121 Student Presentation

GeriKit: A Geriatric Assessment App

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Background: Given the growth of the aging population in the United States, there is a greater need for training tools to teach medical students, residents, and clinicians the components of comprehensive geriatric assessment. Our goal was to develop a mobile phone application (app) to assist in performing this assessment.

Methods: We performed a market survey of 45 different apps from the Apple App Store and Google Play Store that were related to geriatrics and health screening tools. We evaluated each app regarding its usability, target audience, and which tools were used. Deficiencies in existing apps included: (1) focusing on only a single domain (e.g. cognition); (2) being time-intensive to use; and (3) having components behind a paywall. Based on this survey, we then designed an app that overcame these deficiencies. We included instruments that were well-validated in the literature, available at no cost, and brief in length. The app was coded using XCode and SwiftUI.

Results: GeriKit includes seven domains: cognition (Mini Cog, AD8), depression (PHQ-2, PHQ-9), activity (ADL, IADL), frailty (chair stands, MNA), medication (polypharmacy screen), falls (fall history), and advance care planning. The included instruments each take less than 5 minutes on average to complete. After data are entered for each instrument, the user is able to access educational source materials (e.g. original manuscript, professional society guidelines) for further reading (Figure). GeriKit was launched in Apple's App Store on 12/2020 and an Android version is under development. There were over 400 downloads in the first week.

Conclusions: GeriKit was developed to make the elements of comprehensive geriatric assessment easily accessible and free to a wide clinical audience through a mobile heath app. We are collecting input on user experience through an embedded survey that we will use for continuous app improvement.

B122

"What Matters": A Multisite Interprofessional Patient Priorities Care Training for Geriatric Medicine Fellows

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Background: To optimize care of older adults, the John A. Hartford Foundation and The Institute for Healthcare Improvement created the Age Friendly Health System initiative, aiming to disseminate evidence-based principles in the 4Ms –What Matters, Medications, Mentation, Mobility. It is critical for geriatric medicine fellows to train in the 4Ms, specifically the keystone M, "What Matters." Patient Priorities Care (PPC) is an approach to translate "What Matters" into actionable decision-making resulting in decreased overall treatment burden and unwanted care (e.g. medications) and increased wanted care (e.g. support services). This study details outcomes following an interprofessional PPC training.

Methods: A 2 hour virtual session was delivered to geriatric medicine and psychiatry fellows; internal medicine residents; geriatric pharmacy students and practicing clinicians at three sites (Yale School of Medicine, Baylor College of Medicine, Mountain Area Health Education Center). A pre-post survey evaluated satisfaction, confidence and planned practice change.

Results: Twenty participants attended; 12 completed a post session survey. Mean satisfaction on a 1-5 Likert scale was 4.71 (SD 0.75). Significant changes in confidence were observed (Table). Most (11/12) identified a need for practice change (e.g. Eliciting What Matters, developing SMART (specific, measurable, achievable, relevant, time bound) goals and aligning care with patient priorities).

Conclusions: A virtual, interprofessional, multisite PPC training was well received and associated with significantly increased confidence. Most participants identified need for practice change. Future work includes dissemination of PPC to health professional trainees nationally, beginning with geriatric medicine fellows.

	Pre*	Post*	P value
Elicit patient values	3.00 (0.60)	3.67 (0.78)	0.003
Elicit patient care preferences	2.83 (0.72)	3.58 (0.79)	0.032
Develop SMART goals considering patient values	2.67 (0.89)	3.50 (0.67)	0.017
Assess how patients	2.75 (0.75)	3.42 (0.67)	0.005
Communicate available treatment options based on patients	2.58 (1.08)	3.33 (0.65)	0.021
Collaborate on shared goals for care	2.75 (1.06)	3.58 (0.79)	0.044
Make treatment recommendations to accomplish shared goals	2.75 (1.06)	3.50 (0.80)	0.032

***Mean (Standard Deviation); Paired T-Test**

B123

A national needs assessment for an interprofessional house calls educational toolkit

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Background: Home care medicine (HCM) is a critical means of providing care to the nearly 2 million Americans considered homebound. This care model is ideal for learning about interprofessional care and aging concepts in a patient-centered environment. We sought to determine the existing state of training in HCM nationally, including types of learners, content, evaluations, and training needs, with the goal of creating an online HCM educational toolkit.

Methods: This cross-sectional study surveyed providers for HCM programs, recruited through society lists and the American Academy of Home Care Medicine's annual meeting. The primary outcome was to identify educational needs; the secondary outcome was to identify providers interested in collaborating on an educational toolkit. Approval was received from Wake Forest's IRB.

Results: 93 providers responded, representing 67 unique practices. Practices were community-based (55%), academic (27%) and VA (13%). 93% were urban or suburban.

82% of programs host at least one learner yearly; 39% host 11 or more learners yearly. Practices most often hosted nurse practitioner students (65%), medical students (50%), medical residents (50%), and fellows (48%), but also hosted nursing, physician assistant, social work, and pharmacy trainees. Learner experiences included observing/participating in home visits, lectures, and written materials. Less common were longitudinal care and online modules. Only 22% use evaluation tools. Educational challenges included: limited time (84%), lack of materials (51%), and provider interest/training (30%). Most practices (73%) adapted to continue hosting learners during the pandemic via telehealth/other innovations.

98% of respondents indicated "yes" or "maybe" to using an accessible online toolkit, and 57% would like to help build, consolidate, and test educational resources.

Conclusions: These findings highlight widespread interest in shared, accessible HCM educational resources. The results will inform toolkit development of clinical topics, systems-based practice (care transitions, community resources), interprofessional learner milestones and evaluation tools, and faculty development. Ultimately, an HCM educational toolkit will create a standard for providing interprofessional training in essentials of HCM and geriatric principles.

B124

Inequities in the care of older adults: identifying gaps in the education of Geriatric Medicine fellows

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Background:

The events of 2020 amplified inequities in the care of older adults. In Geriatric Medicine our patients are dying at exponentially higher rates, particularly those that are Black and Latinx and those in congregate care settings. Milestones focused on social determinants of health (SDOH) and health inequity are lacking within Geriatric Medicine fellowship training. A virtual learning collaborative GERIAtrics Fellows Learning Online And Together (GERI-A-FLOAT) was developed by program directors from across the country to support trainees during the COVID-19 pandemic. To address gaps in Geriatric education around SDOH, a fellow-lead educational thread was added.

Methods:

To inform our SDOH educational thread, we developed a voluntary, anonymous needs assessment of fellows and program directors through GERI-A-FLOAT. We sought to understand prior curricula trainees had been exposed to focused on the impact of specific SDOH on older adults. Trainees then prioritized topic areas for building the curricular thread.

Results:

A total of 52 participants completed the survey. More than 50% of participants indicated no older adult specific training on sexism, homelessness, immigration, racism or LGBTQ+ health, with more than 70% having no training in the care of formerly incarcerated older adults. The most commonly taught concepts were ableism, ageism and poverty, yet still more than 40% of participants had no formal teaching in these areas. Trainees chose the following 6 priority topics: racism, ageism, ableism, LGBTQ+ health, post-incarceration and poverty/homelessness.

Conclusions:

Geriatric Medicine fellowships lack consistent SDOH curricula. This needs assessment will guide our curricular thread and our unique online collaborative will allow for wide dissemination. We are planning a monthly six-session series led by fellows paired with

content experts. We will evaluate longitudinally to assess for knowledge change. We are hopeful this will also inform larger curricular milestones around SDOH for fellowship programs. The time is now to improve the way in which we prepare the next generation of Geriatricians to serve as system leaders and agents of change.

B125 Resident Presentation

Using Telemedicine During Covid-19 to Deliver Geriatric Medicine and Nursing Home Care Educational Curriculum

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Background:

The Covid-19 pandemic has caused nationwide nursing home lockdowns[1], which has impacted the education of family medicine (FM) trainees where geriatric and nursing home care training are core educational requirements[2]. While curriculum is traditionally taught with in-person encounters, Covid-19 has compelled educators to deliver more curriculum virtually to reduce viral spread and conserve resources. Given the limitations of virtual learning, we present a telemedicine-delivered geriatric nursing home curriculum that is well received by resident trainees.

Methods:

Our project delivered a one-month geriatric nursing home curriculum for FM residents at a community-based teaching program in Los Angeles, CA. The study included trainees who completed their geriatrics rotation from Nov 2019 to Jan 2021. After completing their geriatric rotation, trainees completed surveys, utilizing a Likert scale from 1 to 5. Survey responses were compared between trainees who experienced the curriculum pre-Covid-19 with in-person encounters vs during the pandemic where patient care and education was primarily via telemedicine.

Results:

A total of 19 surveys were completed (100% participation), including 7 from the in-person and 12 from the telemedicine trainee cohorts. Overall, residents in both in-person vs telemedicine cohorts rated the geriatric rotation similarly and favorably with scores of 4.85 vs 4.91 (P=0.72) in curriculum quality perception, 4.85 vs 4.91 (P=0.72) in enhancement in geriatric knowledge, 4.71 vs 4.91(P=0.34) in the impact the curriculum had on how they treat geriatric patients, 4.71 vs 4.83 (P=0.59) in confidence in managing geriatric syndromes, and 4.85 vs 4.5 (P=0.15) in their interest to further their geriatric training, respectively. Among the telemedicine cohort, residents did not feel their education was compromised with an average rating score of 1.7. Compared to other clinical rotations, both groups found the curriculum more effective, but the in-person cohort had slightly more favorable ratings compared to telemedicine of 5 vs 4.08 (P=0.004), respectively.

Conclusions:

Our study demonstrates that in light of the Covid-19 pandemic that has disrupted normal education practices, a telemedicine-delivered geriatric nursing home curriculum is positively received compared to traditional face-to-face training.

B126 Student Presentation

Creation of a Curriculum on Older Adult Opioid and Pain Management for Primary Care Providers Using Project ECHO

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Background

Opioid use and opioid use disorder (OUD) prevalence are rising sharply for older adults (OAs), many of whom have multiple chronic conditions including chronic pain. These trends increase the risk for adverse events and complicate chronic pain management. Education of primary care providers (PCPs) about opioid and non-opioid pain management strategies is a promising way to improve care for OA populations. Project ECHO is a proven model to deliver subspecialized medical knowledge to community PCPs using videoconferencing technology for didactic education and case-based group problem solving. We created a novel Project ECHO-based curriculum for PCPs on pain management, opioid prescribing, and OUD in OAs.

Methods

Kern's six-step model for curriculum design provided the framework for curriculum development: (i) *problem identification and general needs assessment* (see background); (ii) *targeted needs assessment*- we interviewed a panel of stakeholders comprised of PCPs, patients, and academic experts in pain, OUD, and behavioral health, (iii) *goals and objectives* were developed collaboratively by geriatricians and internists and centered around chronic pain, opioid use, and OUD treatment in OAs; (iv) *educational strategies*- Project ECHO provides expert teams with a platform to conduct didactic education and case-based learning; (v) *implementation*- we plan to have champion PCPs from 25 clinics in an urban FQHC network and academic medical center participate; and (vi) *evaluation and feedback*- pre/post participant surveys of knowledge, self-efficacy, and practice behaviors and data from patient case presentations will be collected.

Results

Our 8-person stakeholder advisory panel met individually or in small groups with project team members to give feedback on Project ECHO curricular elements. Feedback was both topic-related (e.g. mood and sleep issues, deprescribing, cannabinoids) and teaching-related (adult learning theory). The final curriculum contains the following topics: pain assessment, shared decision-making, non-pharmacologic and pharmacologic treatments, opioid prescribing, special considerations in older adults, behavioral health, and OUD diagnosis and treatment.

Conclusions

Given the complexity of pain management, opioid use, and OUD in OAs, a curriculum for PCPs utilizing Project ECHO has the potential to impact care for a large number of OAs.

B127

Online COVID-19 Education in English, Spanish and Vietnamese for In-Home Supportive Service Caregivers Caring for Low-Income Older Adults

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Background: The COVID-19 pandemic has disrupted university education, and due to California's stay-at-home order, University of California Irvine (UCI), School of Nursing students and faculty could not hold clinical rotations in the community or hospital setting.

Purpose: The transition of in-person clinical rotations to virtual public health nursing activities required restructuring our Community Health course. The students were tasked with developing an online education series covering COVID-19 information and safety in multiple languages for In-Home Supportive Service (IHSS) caregivers through the California Public Health Authority (CPHA).

Methods: Under a nursing faculty supervision through live on-line sessions, nursing students developed and practiced COVID-19 safety training before recording health education videos for distribution in the community. An anonymous survey was conducted to identify students' learning experiences.

Results: Nursing students with geriatrics interest developed educational videos and materials in English, Spanish, and Vietnamese covering COVID-19 information, safety tips, and resources. The videos were distributed by CPHA to IHSS caregivers. In addition, videos and materials were shared with other non-profit organizations serving diverse underserved communities in Orange County, California, reaching more than 250 caregivers. Students reported 'learned teamwork', 'liked to provide health education to vulnerable

population groups', and 'learned a lot about COVID-19.' The mean student satisfaction of the education experience was 4.4 out of 5 (SD=0.61).

Conclusion/Implications: Alternative education methods via online platforms were effective in providing Community Health Nursing clinical rotations during the COVID-19 pandemic. Partnerships and collaborations between our academic university and our Geriatric Workforce Enhancement Program community organizations proved essential to enhancing students' educational experiences and fulfilling the communities' unmet needs during the pandemic.

B128

Pairing the 4Ms with Geriatric Fast Facts: a Structured Approach to Older Adult Primary Care Visits

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Background:

Primary care clinicians' (PCCs) visits with geriatric patients are time-limited independent of patient complexity. To prioritize the clinical visit focus of geriatrics patients, PCCs need a simple, evidence-based framework to optimize patients' care needs and visit time. An interactive workshop prepared PCCs to apply the 4Ms with fast, fact based on-line resources to focus patient visits.

Methods:

Geriatric Fast Facts (GFFs) are free, brief, easily accessible evidence-based online educational tools developed by the authors for use on all electronic devices. Authors reviewed and classified > 90 GFF's by their primary focus using the "4Ms" framework: What Matters Most, Medications, Mobility and Mentation. A 50-minute interactive session was presented at an established upper Midwest regional PCC continuing education course. The workshop began with an overview of the 4M's purpose and framework. Next, brief (2-3 minute) trigger videos of initial portions of geriatric patient visits with a PCC were shown. After each video trigger, participants identified the primary and secondary visit priority "M"s and selected corresponding GFFs using either their mobile device or the workshop handout. An optional evaluation was distributed/collected at the end of the session.

Results: 86% (30/35) of attendees completed the evaluation: 14 physicians (13 FM, 1 geriatrician), 8APPs (6 NPs and 2 PAs) and 8 unknown. Overall, 90% of respondents rated the session as excellent/very good with 87% rating it as a valuable activity relative to time expended. The evaluation's retrospective pre-post item response format showed overall mean change of all items with strong positive change on a 5-point scale (1=Strongly Agree – 5=Strongly Disagree). Respondents reported increased comfort/competence to [measured by mean positive change]: Utilize the 4Ms [2.1]; Identify GFFs to address the 4Ms [1.9]; Identify the 4Ms present [1.3] and; Prioritize which 4M needs to be addressed first [1.1].

Conclusion: Knowledge of the 4Ms construct prior to session was limited amongst PCCs. A brief 50 minute session orienting PCCs to the 4Ms and associated GFFs increases PCC self-reported comfort and competence in caring for geriatric clinic patients.

B129

Decentralizing quality age-friendly care: an interprofessional age-friendly behavioral health telementoring curriculum for rural primary care providers

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Background: Rural older Oregonians have few geriatric behavioral health resources, leading to significant access inequity. Oregon's rural providers have little training in, or access to, geriatric specialty care. To address this gap, we used the Project ECHO model to create the state's first geriatric behavioral health telementoring curriculum for rural primary care providers. The purpose was to increase rural providers' geriatric behavioral health knowledge and encourage age-friendly health system innovation.

Methods: Our interprofessional multi-institution geriatric specialist team created a 12-session virtual-platform-based biweekly curriculum on geriatric behavioral health (e.g., depression, insomnia) anchored in the age-friendly health system "4Ms". Project ECHO format included brief teaching talks and participant-driven case consultation/discussion. Participants started practice-based age-friendly system-improvement projects; they completed Likert-scale and qualitative pre/post course evaluations. Data analyses included descriptive statistics and thematic open coding.

Results: Thirty-five participants (71% rural and/or underserved) enrolled. Seventeen participants completed pre- and post-course evaluations. Comfort levels improved in diagnosing and treating conditions, such as dementia (41% pre- vs 81% post-course indicating "comfortable"). Participants cited highest benefits from peer-case discussions, particularly around managing medications. Qualitative themes showed participants planned to incorporate de-prescribing and age-appropriate assessments into practice. Most (65%) participants shared course knowledge within their practice. Practice improvement projects were diverse and included sharing an insomnia electronic health record tool.

Conclusions: We demonstrated an approach to "decentralized" geriatric behavioral health knowledge. Strengths included our faculty team who represented 5 professions and 3 healthcare systems and provided broad experiential teaching, as well as our systems-focused approach that encouraged individual and practice-level changes. Limitations included a lack of formal systems-improvement science training for participants, limited statewide representation of practices, and modest post-course evaluation completion A telementoring approach to expanding age-friendly care is feasible with an interprofessional team and virtual platform technology.

B130

Teaching with Toons: A Blended-Learning Curriculum Featuring Animation to Improve Knowledge and Attitudes About Cognition and Dementia

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Background

There is a shortage of trainees pursuing roles in caring for older adults, especially those with dementia due to misperceptions, ageism, and stigma. Thus, innovative educational strategies are needed to address learning objectives pertaining not only to knowledge, but also attitudes about caring for this population. Kern's six-steps of curriculum development were used to design a blended-learning curriculum featuring character animation to improve education about cognition and dementia.

Methods

Learning objectives were developed based on a needs assessment among nursing students that included evaluation of existing curricula, discussions with stakeholders, and a focus group. Two video modules featuring original 2D animation were created on cognition and dementia based on these objectives. The modules were integrated as interactive assignments with embedded quizzes, corresponding with their in-class curriculum. Attitudes about dementia care and learning modalities, were surveyed and knowledge quizzes were administered at baseline, then during the video.

Results

The focus group identified that there were misperceptions and stigma regarding individuals with dementia. When learning these topics, learners preferred use of educational multimedia as a tool to enhance their learning. In actual use of the animated video, there

were 72% "true interactions," which gauged engagement in the video. Feedback also indicated that they felt the material of the video was clear, complexity was just right, and was relevant to their education. There was improvement in knowledge on cognition and dementia after the video, which was statistically significant ($p < 0.01$). Post-video attitudes, knowledge, and interest in caring for individuals with dementia significantly increased compared to the pre-video assessment.

Conclusions

The use of animations in an interactive platform as part of a flipped classroom approach was an effective way to impact students' foundational knowledge and attitudes about dementia. Incorporating innovative, multi-modal teaching approaches may be an important tool in enhancing interest and comfort level in caring for these patients in the future.

B131

Geriatrics Morbidity and Mortality Conference for Enhancing Knowledge on Organ Donation Coordination

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Background: Organ donation is an extremely difficult decision for grieving families to make, given its complex considerations. Timely referral and seamless communication are essential to support families of eligible patients near the end of life. To prevent delay and loss of opportunity, clinicians must be aware of eligibility and referral criteria. Geriatricians often consider organ donation for younger patients only, but older age does not exclude organ donation in brain death.

Method: Authors shared a case of missed opportunity for organ donation at the Geriatrics Morbidity and Mortality (M&M) Conference. The patient was critically ill with refractory bleeding varices from cirrhosis. He was an eligible donor with assent for donation by his healthcare agent. Referral was delayed, however, due to miscommunication. The M&M conference was presented via zoom for COVID precautions. A Fishbone diagram illustrated root-cause analysis of the poor outcome, followed by lecture on guidelines for organ donation referral, with interactive question and answer session. Pre- and post- surveys completed during the conference assessed for knowledge and experience in organ donation referral.

Result: The 26 M&M participants were physicians, nurse practitioners, and social workers in the Geriatrics and Palliative Medicine department. Response rates for pre- and post- surveys were 73.1% and 69.2%. 31.6% had an experience with organ donation referral. Pre- lecture, 89.5% knew that there is no age cut-off for organ donation referral for brain death, but only 57.9% were aware that organ procurement organizations are HIPPA-compliant healthcare partners. 21.1% knew the referral criteria for organ donation. After the lecture, 94.4% answered age cut-off question correctly, and all (100%) understood organ procurement organizations are HIPPA-compliant, and knew the referral criteria.

Conclusion: Timely referral and effective communication are crucial for successful organ donation; an important end-of-life option for all patients, including older adults. The virtual M&M conference is an effective educational opportunity to enhance knowledge in organ donation referral and coordination.

B132

"If you remember only one thing": Highlights from resident commitment to change statements following a 5-day acute care geriatrics rotation

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Background: Many post-graduate level geriatrics curricula target a limited set of broad-based, age-related syndromes; often in ambulatory patients. Yet competencies in geriatric medicine such as managing delirium, mobility, and transitions of care may be uniquely appreciated in the acute care environment. The objective of this study is to evaluate how a focused educational experience in inpatient geriatrics impacts commitment to change among residents, specifically as it relates to national and institution-level priorities in geriatric care.

Methods: As part of a single academic center's geriatric medicine rotation, internal medicine (IM) residents (PGY2) rotated for five consecutive days on an acute care geriatrics hospital service where defined topics in geriatrics were emphasized using a flipped classroom model. At the conclusion of the week, residents submitted free-text Commitment to Change (CTC) statements identifying practice changes they intended to make (as well as perceived motivation and difficulty levels in doing so) as a direct result of their experience. Investigators performed systematic content analysis of evaluations submitted between July 2018 and September 2020 and categorized statements within the framework of the 4Ms of Age-Friendly Health Systems and four pre-selected core curriculum foci (geriatric assessment, delirium, function/mobility, and transitions of care).

Results: A total of 453 CTC statements were submitted by 103 residents (response rate 96%). After just 5 days on the inpatient rotation, residents self-identified core curricular (institution-level) and 4Ms Framework (national-level) priorities as the focus of nearly 60% of CTC statements (267/453 or 58.9%and 266/453 or 58.7%, respectively). Each of the 4M's were relatively evenly represented (4Ms: Matters: 10.8%, Mobility: 13.7%, Mentation: 19.0%, Meds: 15.2%). Average motivation for change was high (8.7/10) and anticipated difficulty relatively low (4.0/10).

Conclusions: Among IM residents at a single center, comparatively minimal exposure to organized acute care geriatrics (relative to other IM subspecialties, e.g. cardiology) resulted in demonstrable self-identified investment in applying core geriatrics principles to future practice. Follow up assessment of resident commitments at the conclusion of their residency and/or after a period of unsupervised practice would provide insight into change durability over time.

B133

Examining the Effectiveness of Telehealth Delivery Modality on Caregiving Self-Competency

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Background: Prior to the COVID-19 pandemic, we demonstrated that in-person caregiver training (I-CareD bootcamp) improved knowledge, increased self-efficacy and achieved high satisfaction in dementia caregivers. Given restrictions imposed by the pandemic, we adapted and implemented a virtual delivery model of the I-CareD bootcamp. We targeted Spanish-speaking caregivers given the known difficulty in accessing caregiver training in this underserved population. **Methods:** We invited Spanish-speaking caregivers of persons with dementia to attend in-person or virtual caregiver training through partnerships with community-based organizations in Los Angeles County. For both in-person and virtual (Zoom) formats, we compared caregivers' self-reported levels of caregiving competence before and after attendance bootcamps to explore differences in outcomes between the two delivery modalities. **Results:** Sixty Spanish-speaking dementia caregivers attended a total of four dementia caregiver bootcamps. The majority of attendees are female (87%), middle-aged (50%), and were family caregivers (45%). 31caregivers attended the in-person bootcamps, and 29 attended virtually. We administered the Caregiving Competence Scale (CCS; Skaff, 1992), measuring self-perceived adequacy of a caregiver's performance to attendees of all bootcamps. The CCS consists of four items on a 4-point Likert-type scale ranging from "very much" to "not at all." 54 caregivers completed

the caregiving competence scale (range: 0-16) pre- and post-training sessions. Pre-bootcamp self-competence levels showed no significant difference between in-person (M = 11.92, SD = 3.16) and virtual (M =13.000, SD = 2.94) modalities ($t(52)$ = -1.46, p >.05). Post-bootcamp group comparison also showed no significant differences (in-person: M=13.06, SD=2.19; virtual: M=14.31, SD=1.46; $t(45)$ = -1.30, p >.05) between the two delivery modalities. **Conclusions:** Spanish-speaking caregivers' self-reported self-competency pre- and post-training revealed comparable improvements in both in-person and virtual delivery modalities. Our preliminary results suggest the potential efficacy of virtual caregiver training delivery modality for caregivers in the era of COVID-19.

B134

You can't be what you can't see: A systematic review of geriatrics visibility on 191 US medical school websites

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Background: How "visible" is geriatrics as a specialty in medical schools across the US? Public-facing medical school websites can provide a window into areas of emphasis in medical school curricula. Higher visibility of geriatrics in medical school may encourage students to embrace geriatrics principles in their future patient care or even to enter the field, whereas limited exposure may diminish the importance of geriatrics to students.

Methods: Public-facing websites of all accredited US osteopathic and allopathic medical schools (n=191) were reviewed for 18 geriatrics elements, including optional and required offerings. A standardized protocol was created, informed by literature review, discussion with subject experts, and an iterative website search process. Each website was analyzed by 2 reviewers, and areas of discrepancy were reconciled by consensus. Preliminary descriptive statistics are presented. Latent class analysis was used to categorize schools into High, Medium, and Low Geriatrics Visibility clusters based on the 18 reviewed elements.

Results: Geriatrics visibility categories and 2 major content areas are presented (Table).

Conclusions: Geriatrics education is critical for all medical students, but only 44% of school websites report required geriatrics clinical activities. More school websites (76%) describe optional geriatrics clinical activities, though the number of students participating in these electives is unknown. While schools may offer more geriatrics education than their websites suggest, a lack of geriatrics visibility in public-facing materials may point to a lower emphasis on geriatrics in the overall curriculum. Further investigation into the current landscape of medical student geriatrics education is urgently needed to avoid exacerbating geriatrics workforce shortages and to ensure all medical students graduate with foundational skills in caring for older adults.

TABLE: As per review of public-facing websites of accredited US medical schools	All accredited US medical schools	High Geriatrics Visibility Schools	Medium Geriatrics Visibility Schools	Low Geriatrics Visibility Schools
Total counts % of all schools (n)	100% (191)	37% (70)	27% (51)	37% (70)
Optional Geriatrics Clinical Activity % of total count (n)	76% (145)	85% (60)	90% (46)	56% (39)
Required Geriatrics Clinical Activity % of total count (n)	44% (84)	70% (49)	29% (15)	28% (20)

B135

Because I CARE: Utilizing an e-learning video to enhance learner competency of quality palliative care in older adults

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Background: Due to the unprecedented times of the global pandemic, Undergraduate Medical Education (UME) has been forced to swiftly adapt current curriculum to a distance learning or virtual model. Given the growing aging population, the pandemic's impact on the need for advance care planning, clarification of goals of care, and the demand for providers capable of delivering quality end of life care, UME must adapt to this growing need. Thus, an e-learning video was developed to teach learner's the principles of quality palliative care (PC).

Methods: As part of the UME Complex Communication Course at *UT Health Science Center San Antonio*, learners were shown a 28-minute case-based video incorporating various PC domains (PCD). A post-training survey consisting of 5 open ended questions were utilized to assess knowledge gained regarding these PCD. Responses were analyzed for accuracy and quantified into 1 of 8 PCD to gauge learner understanding.

Results: Of 201 survey responses, 95% could define the domains addressed by the PC team with most responses focusing on the physical as well as ethical and legal aspects of PC. Over 96% demonstrated ability to identify caregiver concerns, specifically focusing on the physical and social aspects of care. 97% gained new knowledge after completing the e-learning session with most increases in the structures and processes of PCD, physical aspects of PCD, and care of the imminently dying domain. However, only 32% of learners could accurately identify at least 2 different members of the PC team and their roles. While the majority of correct responses identified the PC physician and social worker, many struggled to differentiate the primary team nurse from the PC nurse; suggesting e-learning videos need to further emphasize the roles and uniqueness of each team member.

Conclusions: A case-based PC e-learning video can effectively adapt to new UME distance learning needs while ensuring learners acquire the skills necessary to provide competent and quality PC to older adults. Further studies should examine the utilization of e-learning videos to enhance geriatric teaching in Graduate Medical Education.

B136

Medication Profiles in the LTC setting: Addressing Polypharmacy, Anticholinergic load and QT prolonging medications.

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Background:

Nursing home residents are particularly susceptible to polypharmacy and harm from drug side effects, drug-drug interactions, and this includes medications with QT prolonging and anticholinergic properties. For the residents at one rural nursing home, our interdisciplinary quality improvement team identified the polypharmacy issue as a priority for investigation. The need for medication education and awareness of these issues, reducing the medication administration burden of the nurses, and understanding of specific medication side effect profiles, were impetuses for this study. By quantifying medication lists and defining medications with anticholinergic (AC) or QT prolonging (QTP) in this first comparative phase of this study, a baseline is established for future interventions at strategic reduction to improve care.

Methods: Observational study/comparative chart reviews over 5 months. Tools utilized: 2019 AGS Beers Criteria for Older Adults; CredibleMeds QTDrugs List; Anticholinergic Cognitive Burden Scale List. Medications lists were tabulated and categorized for analysis.

Results:

Setting: 58 bed rural nursing home.

Dates reviewed: Aug 2020, Jan 2021

Number of residents: N=54, N=49

Age: range 53-101; avg 83.3

Race: 94.5% Caucasian, 5.5% Hispanic

Gender: 72.5% F, 27.5%M

Comparing the 2 groups, there was a 350 total number of medication increase, scheduled med use increased by 44% and PRN use decreased by 44%.

The anticholinergic load increased by 7% (68.5%, 75.5% respectively), with average of 1.78 AC drugs/resident in August, 2.2 in January.

The QTP load decreased by 2.4% (96.3%, 93.9% respectively), with average of 2.5 QTP drugs/resident in August, 2.5 in January.

Conclusions:

Our study shows a high burden of QT prolonging medications (95%); even higher than anticholinergic medications (72%). The potential for improvement in this pattern of prescribing is great. There was likely an increase of scheduled meds due to prophylaxis during Covid. Individual patient-centered care requires that each resident has attention to their medication profile in concert with their diagnoses, best standards of care and their goals of care. Our study continues with goals to optimize medication profiles by focusing on reduction of these two classes of medications.

B137

An OSCE without Boundaries: Rapid Development of a Geriatrics Virtual Objective Structured Clinical Exam

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Background: Objective Structured Clinical Examinations (OSCEs) play an important role in medical education, providing an opportunity to assess learners across multiple domains and offer real-time feedback. For 7 years, the University of Wisconsin School of Medicine and Public Health (UWSMPH) has conducted a monthly Geriatrics OSCE for Internal Medicine & Neurology residents, fellows in Geriatric Medicine & Psychiatry, pharmacy residents, and VA Geriatric Scholars from multiple disciplines. When the COVID-19 pandemic necessitated both social distancing and rapid adoption of telemedicine for patient care, an opportunity arose to adapt the existing OSCE exercise to a virtual format that concurrently assessed telemedicine competencies. To date, no published data exists regarding the feasibility and utility of virtual OSCE experiences in Geriatrics.

Methods: The interdisciplinary team (IDT) of educators collaborated with the UWMSPH Clinical Training and Assessment Center (CTAC) to identify a virtual OSCE (vOSCE) platform, adapt the cases for a virtual encounter, and include assessments of telemedicine skills. The IDT collected data about participant demographics and station completion. The team also compared mean performance of the vOSCE trainees in each station with that of participants in the previous live OSCE exercises.

Results: As of January 2021, 30 learners have participated in the Geriatrics vOSCE. Trainees encompassed four disciplines and spanned levels of training from residents to practicing providers. Learners have participated remotely from four different US states, and no technical difficulties prevented completion of any stations. Data regarding mean scores on the vOSCE versus the OSCE scores and telemedicine competencies will be presented.

Conclusions: Conversion of a live OSCE in Geriatrics to a virtual format is feasible and provides an opportunity to evaluate learners safely and effectively while practicing social distancing. Given that learners can participate from anywhere with a reliable internet connection and a device with audio and video capabilities, the Geriatrics vOSCE could provide opportunities to enhance geriatrics & telemedicine skills and knowledge for learners from across the country, including in areas where access to geriatrics-trained providers is limited.

B138

A Virtual Education Experience Providing Modeling and Practice for Fall Risk Assessments and Interprofessional Team Fall Prevention Care Planning

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Background: One in four adults over the age of 65 falls every year, making falls one of the most pervasive threats to health and quality of life. Fall risk assessment and fall prevention efforts are optimized using an interprofessional (IP) team approach. We designed a successful in-person fall prevention simulation training which was modified to an online format necessitated by the COVID-19 pandemic.

Methods: In the in-person model, students prepared for the simulation by completing online didactics. They then attended a poster session to reinforce online learning and practice fall risk assessment skills, followed by profession-specific huddles to introduce a simulated case. Next, they broke into IP teams to discuss the case in small groups and to practice the IP team care planning process. Then, students used their new assessment and team care planning skills, under supervision, on an actual person at high fall risk. COVID-19 necessitated a virtual training model so the education was modified such that students still completed didactics online, but on simulation day they viewed a pre-recorded virtual fall risk assessment performed by experts. Students were then sent into breakout rooms of IP teams (n=10-12) to assess and care plan virtually, under supervision, with a real person a high fall risk. Results: 312 students participated in the training. Students represented nursing, social work, medicine, pharmacy, counseling, occupational and physical therapy. Qualitative comments indicate a high degree of satisfaction with the ability to practice a real assessment with a real person using the skills acquired in this educational model. Technical problems with this virtual training were minimal and addressed in real time. Discussion: An IP team approach is recommended to optimize fall prevention. Education efforts that teach the ability to assess patients and team virtually are needed. This education model demonstrates an effective way to train students to practice in virtual IP teams.

B139 Student Presentation

Early Outcomes following Implementation of a Hospital-Wide Geriatric Surgery Pathway

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Background: Geriatric-focused care for surgical patients has been shown to improve outcomes. In 2018, we implemented the American College of Surgeons Committee for Geriatric Surgery Verification-recommended 30 standards. We evaluated outcomes of older adults undergoing inpatient surgery in the pre-post periods.

Methods: Older adults (>64 years) undergoing inpatient procedures from 2016-17 (pre) were compared with geriatric surgery pathway (GSP) patients from 2019-20 (post) for length of hospital stay (LOS), 30-d complications and readmissions, and loss of independence (LOI). EMR data were merged with the ACS NSQIP registry. GSP patients were identified by completion of a preoperative high-risk screen. Frailty was calculated with the mFI, risk stratification performed using the Adjusted Clinical Group methodology and Operative procedures stratified using operative severity scores (OSS, 1–5, most stressful). Complications were graded using the Clavien-Dindo classification (CD, major=2-4). LOI was defined as an increase in support outside the home after discharge.

Results: 313 (218 pre, 95 post) patients were included. On multivariable analysis, GSP patients had a significant decrease in 30–d complications (OR 0.94, 95%CI 0.92-0.97, P<0.001) and 30-d readmissions (OR 0.89, 95%CI 0.82-0.97, P=0.01), however there was little effect on LOS and an increase in LOI (Table 1).

Conclusions: Early analysis of outcomes during an extraordinary time (2019-2020) suggests that implementation of a GSP results in lower complications and readmissions. Future studies that include ACS-standard compliance rates may provide insight on how to further improve postoperative outcomes in this high-risk population.

Table 1. Patient Characteristics and Outcomes

Characteristics (Univariate)	Total (n = 313)	Pre (2016/17) (n = 218)	Post (2019/20) (n= 95)	P Value	Outcome (Multivariable)		
Age, median (IQR)	72.0 (69.0, 77.0)	73.0 (69.0, 77.0)	72.0 (69.0, 76.0)	0.76			
Sex, male, n (%)	180 (57.5%)	128 (58.7%)	52 (54.7%)	0.54			
White, n (%)	266 (85.0%)	184 (84.4%)	82 (86.3%)				
Black, n (%)	36 (11.5%)	28 (12.8%)	8 (8.4%)	0.32			
Other race, n (%)	11 (3.5%)	6 (2.8%)	5 (5.3%)				
mFI ≥2, n (%)	84 (26.8%)	60 (27.5%)	24 (25.3%)	0.78			
ACG-RUB ≥4, n (%)	240 (76.7%)	151 (69.3%)	89 (93.7%)	<0.001			
OSS ≥3, n (%)	234 (74.8%)	156 (71.6%)	78 (82.1%)	0.05			P value
LOS days, median (IQR)	2.0 (1.0, 4.0)	2.0 (1.0, 4.0)	3.0 (2.0, 4.0)	0.14	IRR (95% CI)	1.10 (1.02, 1.18)	0.01
CD score ≥2, n (%)	56 (17.9%)	37 (17.0%)	19 (20.0%)	0.52	OR (95% CI)	0.94 (0.92, 0.97)	<0.001
Readmission, n (%)	20 (6.4%)	14 (6.4%)	6 (6.3%)	1.00	OR (95% CI)	0.89 (0.82, 0.97)	0.01
LOI, n (%)	88 (28.1%)	51 (23.4%)	37 (38.9%)	0.01	OR (95% CI)	2.05 (2.01, 2.09)	<0.001

B140 Student Presentation

Older Age is Associated with Decreased Substance Use Testing after Traumatic Injury

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Background: Alcohol and substance use in trauma patients impact treatment and recovery. Outcomes in older adults, who comprise 20% of all trauma patients, may be more impacted by substance use because they metabolize substances more slowly. Because 62% of older adults consume alcohol and 17% have alcohol or substance use disorders, we aimed to determine the prevalence of Blood Alcohol Concentration (BAC) and Urine Toxicology (Utox) testing and the association between BAC/Utox testing and age in older adult trauma patients.

Methods: We performed a retrospective cross-sectional study of trauma patients ≥65 years old, admitted to a single Level-1 trauma center from 2012-2019. Descriptive statistics and multivariate logistic regression analysis with adjustment were performed.

Results: Our cohort had 4,932 patients with an average age of 79.5 years (IQR:71-87). The cohort was composed of 48% male patients, and 43% White, 36% Asian, 13% Latinx, 6% Black, and 2% Native/Unknown race/ethnicity. Overall, 69% of traumatic injuries were due to short level falls, 28.7% of patients received a Utox test, and 50.2% received a BAC test. The prevalence of Utox testing increased from 11.5% in 2012 to 46% in 2019. The prevalence of BAC testing increased from 28.9% in 2012 to 63.7% in 2019. Multivariable logistic regression showed decreasing odds of receiving a BAC or Utox test with increasing age (Table 1).

Conclusions: The prevalence of substance use testing in elderly patients increased over the study period. Testing among this population remains low and decreases with age. Misconceptions of substance use prevalence and ageism may influence provider testing. Disproportionate testing may negatively impact care and substance use treatment referral in older adults presenting after traumatic injury.

Table 1. Multivariate Associations of Age with Substance Use Testing Among Elderly Patients

	Blood Alcohol Concentration Testing		Urine Toxicology Testing	
Age (% of cohort)	OR_A (95% CI)	P value	OR_A (95% CI)	P Value
65-74 (34%)	Ref	Ref	Ref	Ref
75-84 (32%)	0.65 (0.55-0.75)	P<0.001	0.61 (0.52-0.71)	P<0.001
85-94 (29%)	0.48 (0.41-0.57)	P<0.001	0.44 (0.37-0.53)	P<0.001
≥95 (5%)	0.33 (0.24-0.46)	P<0.001	0.44 (0.30-0.63)	P<0.001

B141

Continuity of care and prescribing safety in the treatment of dementia

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Background: Older people with dementia are at higher risk of potentially inappropriate prescribing (PIP), leading to increased mortality and hospitalisation. Fragmented care in the presence of comorbidities can contribute to poorer prescribing, including instances of PIP. We studied how continuity of care in primary care (CoC, ie. coordinated care across health services), affected PIP and incidence of adverse health outcomes (AHO) in dementia patients.

Method: Retrospective cohort using primary care health records from dementia patients from England, aged 65 and over on 01 January 2016, and age and sex matched controls (1:4 proportion), and followed for 1 year. CoC measures include Usual Provider of Care (UPC), Bice-Boxerman (BB) and sequential continuity (SC). Regression analyses tested associations at baseline and survival analyses with incident AHO.

Results: We analysed data from 9,395 dementia patients and 38,561 controls. Dementia patients had lower levels of CoC compared to patients of similar age and gender. In dementia patients, higher CoC was associated with a lower risk of incident delirium (UPC HR 0.92 (CI 0.88:0.96), p<0.01; BB 0.94 (CI 0.9:0.97), p <0.01; SC HR 0.94 (CI 0.91:0.98), p<0.01), incontinence (UPC HR 0.84 (CI 0.80:0.89) p<0.01; BB HR 0.86 (CI 0.82:0.91), p<0.01; SC HR 0.87 (CI 0.83:0.91), p<0.01) and emergency hospitalisations (UPC HR 0.98 (CI 0.96:0.99), p0.02). A 10% increase in CoC in all three indexes was also associated with fewer prescribed medications (UPC μ -0.2, p<0.01; BB μ -0.14, p<0.01; SC μ -0.13, p<0.01), and fewer PIP (UPC μ -0.03, p<0.01; BB μ -0.02, p<0.01; SC μ -0.02, p<0.01), specifically reducing the use of loop diuretics in individuals with a history of incontinence, constipating medications and benzodiazepines in individuals with higher falls risk.

Conclusion: Patients with dementia receive on average lower primary care continuity compared to patients of similar age and gender without dementia. Higher primary care continuity resulted in safer prescribing, with fewer PIP and reduced medication burden, and in a lower risk of delirium, incontinence hospitalisation. These results highlight that improved CoC may contribute to safer prescribing and clinical care of dementia patients.

B142 Student Presentation, Encore Presentation
The Canadian Study on Health and Aging's Frailty Scale is a Predictor of Hospital Readmission after Percutaneous Coronary Intervention

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Background: The Canadian Study on Health and Aging (CSHA) Frailty Scale was included in the National Cardiovascular Data Registry's (NCDR) CathPCI registry beginning April 2018. The value of this frailty assessment as an independent predictor of hospital readmission is unknown.

Methods: A retrospective analysis was performed of patients who underwent PCI within the University of North Carolina Medical System between 04/2018 and 06/2019. Outcome data was obtained from our electronic medical record data repository and procedural data from the institutional CathPCI registry. The primary outcome was repeat hospital admission within 1 year of PCI. Significant covariates ($p<0.05$) in the univariate analyses were considered for inclusion in the multivariate model. The cohort was divided into three subgroups; Not Frail, Moderately Frail, and Very Frail, based on the CSHA Frailty Scale. Multivariate logistic regression was then performed to determine if CSHA Frailty Scale was an independent predictor of hospital readmission.

Results: 3,225 subjects were identified with 794 readmission events. Patients in the readmission cohort were older, more likely to be in the Moderately Frail or Very Frail groups and had more comorbidities. Covariates that were significant independent predictors of readmission included Age (LRChisq=26.864, Pr>Chisq = 2.183x10-7); Chronic Lung Disease (LRChisq=10.449, Pr>Chisq =1.227x10-3); CSHA Frailty Scale (LRChisq=17.223, Pr>Chisq = 1.82x10-4); Cerebrovascular Disease (LRChisq=15.652, Pr>Chisq = 7.614x10-5); Dialysis (LRChisq=15.250, Pr>Chisq = 9.419x10-5); Hypertension (LRChisq=4.903, Pr>Chisq = 2.681x10-2); and Congestive Heart Failure (LRChisq=56.024, Pr>Chisq = 7.160x10-14).

Conclusions: CSHA Frailty Scale is an independent predictor of 1-year all-cause readmission after PCI even after adjusting for other comorbidities like CHF and dialysis. Patients in the Moderately Frail and Very Frail groups had higher odds of readmission vs. the Not Frail group. CSHA Frailty Scale provides added value alongside traditional comorbidities in predicting readmission post-PCI.

B143
Geriatric Assessment for Older Patients with Frailty in the Emergency Department: A Randomized Controlled Trial

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Background

Physician-led comprehensive geriatric assessment (CGA) in frail patients admitted to hospital has been shown to reduce mortality and add likelihood of living at home later. CGA may be effective for reducing hospital stay-days and hospital admissions when provided in emergency departments (ED), but this has not yet been proven in randomized trials.

Design

We performed a randomized controlled trial (NCT03751319) in an academic ED. Patients of age ≥75 years with, or at risk of frailty defined by the Clinical Frailty Scale (CFS) were included. Control group (C) was treated with standard care only. Intervention group (I) was provided also with CGA in the ED.

The pre-defined outcomes are shown in Table.

Results

A total of 432 patients, 63% female, were included. Median age was 85 years and median CFS was 6. The primary outcome hospital-stay during one-year follow-up was 12 days for I and 11 days for C (P=0.65). 133 (62%) patients were admitted from the index visit in I vs 153 (70%) in C (P=0.103) (Table).

Conclusion

CGA for frail patients in the ED did not reduce hospital-stay during one-year follow-up. In accordance with previous studies, more patients were discharged from the ED, but no statistically significant difference was found for any secondary outcomes. CGA in the ED may reduce unnecessary hospital admissions, but more coordinated, continuous interventions should be tested for potential benefits in long-term outcomes.

Results

Primary outcome	Intervention n=213	Control n=219	p value
Cumulated hospital stay 365d (days)	12 (3-41)	11 (4-35)	0.653
Secondary outcomes			
Admission from ED index visit	133 (62.4)	153 (69.9)	0.103
Hospital admissions 365d (n)	1 (1-3)	2 (1-3)	0.500
ED readmissions 365d (n)	1 (0-3)	1 (0-3)	0.616
Living-at-home 365d	116 (54.5)	111 (50.7)	0.432
Other outcomes			
ED LOS (hh:mm)	7:23 (5:22-15:23)	9:25 (6:00-18:40)	0.052
Hospital LOS of index-visit (days)	7 (3-16)	5 (3-12)	0.182
Death 365d	53 (24.9)	59 (26.9)	0.626

Values are given as median (interquartile range) or n (%), as appropriate. ED, emergency department; LOS, length-of-stay.

B144 Encore Presentation
Implementation of a Community Paramedic-Delivered Care Transitions Intervention for Older Adults Following ED Discharge

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Background: The Care Transitions Intervention (CTI) has shown effectiveness at improving hospital-to-home transitions for older adults (e.g., reduced readmissions, increased follow-up). We adapted the CTI for use with community-dwelling older adults following ED discharge. Our objective is to demonstrate successful implementation of the adapted CTI as delivered by trained community paramedic coaches.

Methods: We conducted a randomized controlled trial with ED patients age≥60 discharged home from one of three EDs. Intervention participants received a home visit 24-72 hours post-discharge and 1-3 follow-up calls during the 30-day study period. Coaches captured visit logistics, content, and performance using CTI-specific evaluation tools. We assessed reach, feasibility, fidelity, adoption, and acceptability using descriptive statistics, content analysis, and mixed-effects regression models.

Results: Of 863 participants scheduled to receive the CTI (53% female, 93% white) 84% completed the home visit. Those who cancelled differed from those receiving the home visit on several characteristics (e.g., dementia, comorbidities). Median visit length was 52 minutes (IQR: 39-63) plus 66 minutes for preparation, travel, and documentation (IQR: 51-97). 93% of scheduled follow-up calls were completed, averaging 10 minutes and 1.6 attempts each. CTI was delivered with 95-99% fidelity across content areas during home visits and 87-98% during follow-up calls. Adoption of targeted behaviors significantly increased following the home visit (within-subjects) and again after each follow-up call. Participants expressed overall willingness to attempt behaviors, even if efforts were not successful.

Common barriers included exacerbated health issues and scheduling conflicts. 75% reported they would choose an ED offering the program, given the choice.

Conclusions: Community paramedics delivered the adapted CTI with high fidelity, demonstrating the feasibility of this intervention with older adults following ED discharge. Participant acceptance of the program and adoption of behaviors demonstrates the potential for extending paramedic-delivered transition programs to other settings.

B145

Association of Vulnerability, Frailty and Preserving Independence in Older Acute Care Cardiovascular Patients

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Background

Older adults hospitalized for acute coronary syndrome (ACS) and acute decompensated heart failure (ADHF) often succumb to adverse outcomes following discharge that effect quality of life including prolonged skilled nursing facility (SNF) stay, readmission and long-term care. Frailty and vulnerability have been identified as risk factors for adverse outcomes. Previously studied outcome parameters have focused on readmissions and mortality and rarely include patient-centered priorities. In this study, we seek to understand the non-cardiac contributors to reduced quality of life as measured by independent days at home post-discharge.

Methods

Patients enrolled in Vanderbilt Inpatient cohort study (VICS), a prospective longitudinal study comprised of 3000 cardiovascular patients hospitalized at Vanderbilt University Medical Center from 2011 to 2014, that were over the age of 65 with a diagnosis of ACS and ADHF were selected for the study analysis. Patients completed a series of validated measurements at baseline including functional health status as measured by the Vulnerable Elders Survey (VES-13) with a sub-set assessed for frailty (grip strength, weight loss, and exhaustion). Total days spent readmitted to hospital, SNF stay, long-term care, 90-day readmission and 1-year mortality were measured following discharge.

Results

Among 1098 patients the mean age was 73 (IQR 68-77), and 42% were female. The median VES-13 score was 3 (IQR 1-6), 25% of individuals reported unintentional weight loss and 30% of individuals reported exhaustion. Mean grip strength was 26.3Kg. Increasing vulnerability was associated with a higher risk of readmission at 30 days, 90 days and higher mortality at 1 year. Grip strength was independently associated with an increased risk of readmission and mortality. Analysis of association of non-cardiac factors and patient-centered days independent at home are pending and will be discussed.

Conclusion

Vulnerability and frailty is associated with increased risk of readmission and mortality following hospitalization. Maintaining independence at home is critical to preserving quality of life. Understanding these non-cardiac factors will help inform interventions to improve hospital outcomes following discharge in vulnerable and frail older patients with cardiovascular conditions that focus on patient-centered priorities.

B146 Student Presentation

An Educational Intervention to Increase Advance Care Planning Activities among Emergency Medicine Providers during the COVID-19 Pandemic

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Background: Coronavirus Disease 2019 (COVID-19) has heightened the importance of emergency department (ED) providers in initiating advance care planning (ACP) conversations. Clarifying ACP helps ensure care is aligned with patients' wishes and can avoid unnecessary suffering. The objective was to determine the effect of a training for emergency providers on ACP conversations in the ED during the COVID-19 pandemic. We hypothesized that the intervention would increase the documentation of advance care planning in the emergency department.

Methods: This was an observational pre-/post-interventional study at a southeastern academic emergency department. Palliative care physicians carried out a three-fold educational intervention for emergency medicine providers on April 1, 2020 including: (1) an evidence-based guide to COVID-19 risk stratification, (2) education on language to initiate ACP conversations, and (3) instructions on how to document ACP preferences in the electronic health record. A medical student was trained on manual chart review of COVID-infected patients. Data was then abstracted on patient demographics, placement of code status orders, documentation of a healthcare decision maker (HCDM), and documentation of ACP.

Results: In total, 143 charts of confirmed COVID-19 patients were reviewed between March 26, 2020 and May 25, 2020. There were 28 patients in the pre-intervention period and 115 post-intervention. There was a roughly ~25% increase in ACP-related activities among emergency providers in the post-intervention period (25.0% v 49.6% ACP activities noted in the pre- and post-intervention subjects, respectively ; $p < 0.03$). After adjustment for patient demographics, a non-significant trend towards increased ACP activity was observed (OR = 2.54, $p = 0.08$).

Conclusion: We present preliminary evidence that a simple physician-facing educational intervention can improve ED-based goals of care conversation and documentation for patients infected with COVID-19.

B147

Higher Risk of Death in Elderly Rural Trauma Patients

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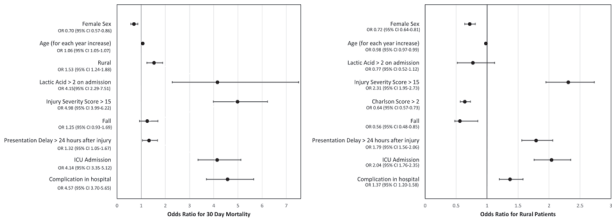
Background It is estimated that by 2040, 20% of the population will be 65 or older. This increase in elderly population is even more pronounced in rural areas. Both elderly and rural populations have reported higher mortality following injury. Identifying modifiable risk factors in these groups may help to improve outcomes.

Methods A retrospective review identified all patients ≥65 years of age admitted with an injury to a single trauma center from January 2010-December 2019. Patient demographics were abstracted from chart review and analyzed for association with 30-day mortality.

Results 4,697 patients were identified, with mean age 79.3 years, 56.1% female, 98.6% Caucasian, and 40.5% rural. Falls were the most common mechanism of injury (84%). 32.5% of patients had ≥2

comorbidities diagnosed prior to admission. The 30-day mortality rate was 8.4%. Male sex, older age, increased injury severity score (ISS), delayed presentation from injury >24 hours, admission lactic acid >2mg/dL, ICU admission and complications were all significantly associated with 30-day mortality. Rural elderly patients had a higher 30-day mortality rate when compared to non-rural elderly patients (10.4% versus 7.1%; p<0.001). Rural patients were more likely to be younger, admitted with a severe injury as measured by ISS, have complications, and require ICU admission. Rural patients were less likely to be admitted for falls, more likely to present >24 hours after the injury, and less likely to have 2 or more diagnosed comorbidities prior to admission.

Conclusion Injured rural elderly patients had a higher risk of dying within 30 days of admission. Possible reasons for this increased mortality rate were higher injury severity and delays in presentation after injury. In addition, the lower rate of diagnosed comorbidities but higher rate of complications raises the potential that rural patients may have higher rates of undiagnosed comorbidities. Injury prevention and patient outreach efforts in rural areas may lead to improved outcomes.



B148

Factors Associated with Mortality in Hospitalized Older Adults with COVID-19: A Large Retrospective Cohort Study

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Background: Age has been implicated as the main risk factor for COVID-19-related mortality. Yet, critical factors relevant to older patients, such as baseline function and life-sustaining treatment preferences, have not been considered. Our objective was to determine patient factors associated with mortality in hospitalized older adults with COVID-19.

Methods: Retrospective cohort study of adults age 65+ (N=4,949) hospitalized with COVID-19 in the greater New York metropolitan area between 3/1/20-4/20/20. Data included patient demographics and clinical presentation. Multivariate logistic regression was used to evaluate associations between demographics, comorbidities, history of dementia, arrival to the hospital from a facility, early do-not-resuscitate order (DNR; within 24 hours of admission), severity of acute illness and hospital mortality.

Results: Average age 77.3 (SD=8.4), 56.0% male, 46.8% White, 20.8% African American, 15.1% Hispanic. Common comorbidities included hypertension (61.1%) and diabetes (36.8%); average number of comorbidities was 3.4 (SD=2.8) and 13.0% had dementia. 20.8% arrived from a facility and 5.7% had early DNR orders. On hospital arrival, average Modified Early Warning Score (MEWS) was 4.2 (SD=1.7), only 26.7% were febrile, and 79.6% required oxygen therapy. 35.3% of patients expired. In a multivariate analysis, male gender (OR=1.47), higher comorbidity index (OR=1.10), admission from a facility (lower baseline function; OR=1.71), early DNR (declining life-sustaining treatments, OR=2.45), and higher illness severity (higher MEWS, OR=6.26, and higher oxygen requirements, OR=15.00) were associated with mortality, while age was not (p = 0.22).

Conclusion: Our findings highlight the need to look beyond age in hospitalized older adults with COVID-19 when considering prognosis and treatment decisions.

B149

Exercise Capacity, Mortality and Cognition in Older ICU Survivors

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Background: In non-critically ill older adults, greater exercise capacity is associated with lower mortality and better cognition, but these associations after critical illness are unclear. We hypothesized that greater pre-ICU exercise capacity is associated with lower mortality and better cognitive function.

Methods: We enrolled critically ill patients ≥ 18 years of age. We assessed pre-ICU exercise capacity using the proxy form of the Duke Activity Status Index (DASI). We determined vital status at 90 days. At 3 months after ICU discharge, we measured global cognition and executive function using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) and Trail Making Test Part B (Trails B), respectively. We determined associations between DASI scores and mortality with Cox-proportional hazard regression, adjusted for age, comorbidities, severity of illness, and days of delirium. We determined associations between DASI scores with RBANS and Trails B scores via multivariable linear regression, adjusted for age, sex, comorbidities, and pre-ICU cognition.

Results: We enrolled 83 participants with a median [IQR] age of 63 [47-71] years and a median DASI score of 19.0 [11.7 to 38.2], 37 (45%) of whom were female and 72 (87%) of whom were mechanically ventilated. After adjusting for covariates, DASI scores at the 75th percentile were associated with a lower risk of death compared with scores at the 25th percentile (HR: 0.32, 95% CI: 0.12 to 0.87, p=0.03). Higher DASI scores were associated with a non-significant trend toward higher RBANS scores, suggesting better global cognition (Point Estimate: 12.3, 95% CI [-1.1 to 25.6], p=0.07). DASI scores were not associated with Trails B scores (Point Estimate: -0.3, 95% CI [-10.0 to 9.5], p=0.96).

Conclusions: Greater exercise capacity before critical illness was associated with lower mortality and a trend toward better global cognition. Future studies should determine the feasibility of modifying exercise capacity to improve outcomes in older ICU survivors.

B150

COVID-19 is not over and age is not enough: using frailty for prognostication in hospitalized patients

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Background: The Clinical Frailty Scale (CFS) has been proposed to guide the allocation of resources in acute care during the pandemic, but the association between frailty and COVID-19 prognosis is still unclear. We investigated the effect of frailty on mortality in hospitalized patients with COVID-19.

Methods: Cohort study comprising 1,830 patients aged ≥ 50 years with COVID-19 admitted to a large academic medical center in Brazil. We screened baseline frailty using the CFS (1-9) and

classified patients as fit to managing well (1-3), vulnerable (4), mildly (5), moderately (6), or severely frail to terminally ill (7-9). We also assessed the Frailty Index (0-1; frail > 0.25), a well-validated frailty measure. We used Cox proportional hazards models to estimate the association between frailty and time-to-death within 30 and 100 days of admission. We also examined whether frailty identified different mortality risk levels within strata of similar age and acute morbidity–measured by the Sequential Organ Failure Assessment (SOFA) score.

Results: Patients had a median age of 66 years (range = 50-100 years), 58% were male, and 27% were frail according to the CFS. Compared with fit to managing well patients, those with greater CFS scores presented a higher risk of mortality (Table 1). The CFS also predicted different mortality risk levels within strata of similar age and SOFA scores and worked as an effect modifier on the association between acute morbidity and 100-day mortality (P-value for interaction = 0.01). Of note, the CFS achieved outstanding accuracy to identify frailty according to Frailty Index (area under the ROC curve = 0.94; 95% CI = 0.93-0.95).

Conclusions: Our results encourage the use of the CFS, alongside measures of acute morbidity, to guide clinicians in prognostication and resource allocation in hospitalized patients with COVID-19.

Table 1. Association between frailty and mortality in hospitalized adults with COVID-19

	30-day mortality		100-day mortality	
Clinical Frailty Scale (1-9)	N died / N total (%)	Hazard ratio (95% CI)*	N died / N total (%)	Hazard ratio (95% CI)*
Fit to managing well (1-3)	297/1042 (28)	(reference)	367/1042 (35)	(reference)
Vulnerable (4)	114/294 (39)	1.4 (1.1-1.7)	139/294 (47)	1.4 (1.1-1.7)
Mildly frail (5)	98/207 (47)	1.5 (1.1-1.9)	115/207 (56)	1.5 (1.1-1.8)
Moderately frail (6)	77/148 (52)	1.8 (1.4-2.3)	88/148 (60)	1.8 (1.4-2.3)
Severely frail to terminally ill (7-9)	80/139 (58)	2.1 (1.6-2.7)	97/139 (70)	2.2 (1.7-2.7)

***Adjusted for age, sex, race, education, Charlson Comorbidity Index, smoking status, duration of COVID-19 symptoms, C-reactive protein, and SOFA score.**

B151

Can the 5-item Modified Frailty Index Predict Outcomes in Geriatric Trauma? A National Database Study

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Background

Frailty is a part of the aging process that results in decreased physiologic reserve and increased vulnerability to adverse outcomes following trauma. We sought to investigate the association between the 5-item modified frailty index (mFI-5) and short-term outcomes in geriatric trauma patients. The primary outcome measure was mortality. In-hospital complications were included as secondary outcomes of interest.

Methods

The Trauma Quality Improvement Program database was used to study outcomes in geriatric (≥65 years old) patients from 2011 – 2016. The mFI-5 was measured and categorized into no frailty (mFI-5= 0), moderate frailty (mFI-5= 0.2), and severe frailty (mFI-5 ≥0.4). A multivariate analysis was performed to identify independent factors of mortality and complications.

Results

In the current study, 26,963 cases met the inclusion criteria. The distribution of frailty among the study population was: no frailty: 25.5%, moderate frailty: 38%, severe frailty: 36.6%. Mean age was 76 ± 7 years, 61.5% were male, and 97.8% sustained blunt injuries. Median Injury Severity Score (ISS) was 17 (IQR=10-26), and median Glasgow Coma Scale was 15 (IQR=12-15). Overall, the observed overall mortality rate was 30.6%.

Factors independently associated with mortality were age (OR=1.07, 95%CI 1.06 – 1.07), blunt trauma (OR=1.44, 95% CI 1.19 – 1.75), ISS (OR=1.04, 95%CI 1.03 – 1.04), and severe frailty (OR=1.23, 95%CI 1.15 – 1.32). Interestingly, male gender and GCS appeared to be protective factors with OR of 0.88 (95%CI 0.83 – 0.93) and 0.89 (95%CI 0.88 – 0.9), respectively. The results also showed that moderate frailty (OR=1.27, 95%CI 1.19 – 1.25) and severe frailty (OR=1.49, 95%CI 1.4 – 1.59) were significantly associated with in-hospital complications.

Conclusions

The current study demonstrated that moderate frailty and severe frailty were significant predictors of complications. However, only severe frailty was associated with short-term mortality. Our results suggest that the 5-item modified frailty index can be used as an objective measure to stratify risks in geriatric trauma patients.

B152

Effects of Comprehensive Rehabilitation on Geriatric Patients with Stroke to improve their Cognitive Function and Activities of Daily Living in Assisted Living Facilities

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Abstract:

Cognitive impairment is a frequent consequence of stroke. Cognitive impairment and the memory dysfunction following stroke will significantly affect the survivor's quality of life. Patients with stroke have high chances of developing dementia, usually within the first year of stroke onset.

Aim: To measure the effects of comprehensive rehabilitation in geriatric patients with stroke on their cognitive function and activities of daily living.

Method: Quantitative - A pre experimental, non – randomized, pre and post-test design for one group was implemented. Non probability purposive sampling technique was utilized to select the 120 geriatric patients staying in assisted living facilities.

Six tools were utilized, **Tool 1**: Sociodemographic data with stroke related signs and symptoms **Tool II**: Mini-Mental State Examination **Tool III**: Digit Span **Tool IV**: Logical memory **Tool V**: Geriatric Depression Scale. **Tool VI**: Barthel Index scale.

The Comprehensive rehabilitation program comprises of three practical and theoretical sessions. Practical sessions focusing on attention and concentration, spatial memory and visual attention. Theoretical sessions focusing on health education on fall prevention, Personal hygiene and prevention of recurrent stroke.

Result: A significant improvement was found among the 120 participants, out of which 74% of the residents (89) progressed in their cognitive function (P Less than 0.001) compared between the pre and post-test of Comprehensive rehabilitation programme.

Conclusion: Application of comprehensive rehabilitation programme have significant therapeutic effect on cognitive function and on activities of daily living in elders with stroke

B153

Longitudinal Associations Between Physical Frailty and Lower Urinary Tract Symptoms among Older Men Without Urinary Symptoms at Baseline

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Background: Lower urinary tract symptoms (LUTS), such as urgency and incomplete voiding, are associated with incident falls and prevalent frailty and functional impairment. However, the longitudinal relationship between frailty and LUTS among older men remains unknown. We hypothesized that progression in frailty status would be associated with an increase in LUTS severity.

Methods: Prospective cohort with 3235 community-dwelling men age >65 years from the multicenter Osteoporotic Fractures in Men (MrOS) Study. Data were collected at 4 study visits over 9 years. Physical frailty was defined at each visit using an adapted Fried criterion (low lean mass, low grip strength, poor energy, slowness, and low physical activity) and categorized as robust (0 criteria), pre-frail (1-2), or frail (3-5) for descriptive purposes. LUTS severity was defined using the American Urologic Association Symptom Index (AUASI; range 0-35) and within-individual change was calculated at each visit as the absolute difference in AUASI score compared to baseline. We restricted the analytic sample to men with no/mild LUTS (AUASI<8) at baseline. We estimated the association between change in frailty and change in LUTS severity as the within-individual regression coefficient from a linear mixed effect model adjusted for demographics, health behaviors, comorbidities, and baseline AUASI score.

Results: Among older men with no/mild LUTS at baseline, 48% were robust, 45% were pre-frail, and 7% were frail. For each additional frailty criterion met during follow-up, there was an increase in AUASI of 0.58 points (95% CI 0.46, 0.70; P<0.001). Results were similar after further adjusting for possible mediators, including LUTS medication, psychological distress, self-reported health status, or multimorbidity.

Conclusions: Physical frailty and LUTS severity increase concurrently among individual older men without clinically meaningful LUTS at baseline. Observed associations were modest in magnitude but independent of age and comorbidities, suggesting a shared underlying mechanism that is not yet defined nor targeted by existing LUTS and frailty interventions.

B154

Frailty and risk of heart failure among adults with diabetes – Findings from the Look AHEAD trial

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Background: Frailty, a syndrome characterized by an accumulation of deficits and reduced physiologic reserve, is common among older adults with diabetes. The association of baseline and changes in frailty with the risk of HF and its subtypes, HF with preserved ejection fraction (HFpEF) and HF with reduced EF (HFrEF) is not well-known.

Method: Participants (ages 45-76 y) of the Look AHEAD trial (behavioral weight loss vs control) without prevalent HF were included. Frailty was defined by the Frailty index (FI) and calculated using a 38-variable deficit model. The association of baseline and longitudinal changes (4-y f/u) in FI with the risk of overall HF, HFpEF (EF ≥50%), HFEF (EF <50%) was assessed using separate Cox models adjusted for age, sex, race, treatment arm, baseline fitness, and 4-y change in fitness (only for the FI change model).

Results: The study included 5,101 participants, of which 257 (4.43 event/1000 person-years) developed incident HF (129 with HFpEF, 104 with HFrEF). Participants with high FI were more commonly women, had lower fitness, higher A1c, and a higher burden of CV risk factors. In adjusted analysis, higher baseline FI and was significantly associated with greater risk of overall HF [HR (95% CI): 1.65 (1.46, 1.85)], HFpEF [HR (95% CI): 1.71 (1.45, 2.03)], and HFrEF [HR (95% CI): 1.62 (1.34, 1.95)]. Among participants with repeat measures of FI at 4-y f/u, an increase in FI was associated with a greater decline in fitness, less decrease in BP levels, and a greater increase in A1c. In adjusted analysis, an increase in FI at 4-y follow-up was associated with a higher risk of HFpEF [HR (95% CI): 1.67 (1.31, 2.14)] but not HFrEF [HR (95% CI): 1.16 (0.89, 1.51)].

Conclusion: In individuals with T2DM, higher baseline frailty was independently associated with a higher risk of HF and its subtypes. Furthermore, an increase in frailty over time was more strongly associated with the risk of HFpEF but not HFrEF.

B155 Student Presentation

The Association between Potentially Inappropriate Medication Use and Quality of Life among Community-Dwelling Individuals with Dementia

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Background:

According to the Beer's list, medications of concern for older adults with dementia include anticholinergics, benzodiazepines, opioids and antipsychotics. Nonetheless, many of these drugs are often prescribed in the elderly population. Although the side effect profile of these medications is well known, few studies have examined how they affect quality of life (QOL). This study aims to evaluate the effect of potentially inappropriate medication (PIM) use, polypharmacy, and excessive polypharmacy, on QOL in elderly patients with dementia living at home.

Methods:

This was a cross-sectional study using data from the MIND at Home Intervention, a community-based care coordination trial for 533 patients with dementia living at home between 2015 and 2019. The exposures of the study were PIM from Beer's list, polypharmacy (≥ 5 medications), and excessive polypharmacy (≥10 medications). The main outcome was QOL measured by QOL-AD survey completed at baseline. Our data analysis included 1) a descriptive analysis of population baseline characteristics, 2) three bivariate analysis to determine the association between baseline characteristics and each exposure, and 3) three multivariate linear regressions to determine the association between the three exposures and QOL.

Results:

Our final sample included 533 individuals. Before adjusting for confounders, individuals who took one or more PIMs, compared to those who do not, had an average 2.19-point decrease in their total QOL score (95% CI -3.34 to -1.04, p value < 0.001). There was no significant difference between QOL scores in patients exhibiting and not exhibiting polypharmacy, but QOL scores were lower in individuals with excessive polypharmacy compared to those without it (-1.44, 95% CI -2.60 to -0.29, p=0.017). After adjustment for confounders, PIM use and QOL scores continued to show a statistically significant association (beta -1.5, 95% CI -2.78 to -0.22, p=0.022), but the association between excessive polypharmacy and QOL was no longer significant (beta -0.127, 95% CI -1.47 to 1 .21, p=0.85).

Conclusions:

Our study found that PIM is independently associated with poorer QOL scores. Further research and larger studies should be conducted to assess how potentially inappropriate medications affect QOL of those living with dementia or the elderly in general.

B156 Student Presentation

Frailty is Associated with Reduction in Masseter Muscle Size and Handgrip Strength in the Adult Trauma Population

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Background: Frailty, reduced reserve in response to stressors, and sarcopenia, loss of muscle mass and function, originate from similar mechanisms. Both frailty and sarcopenia predict poor outcomes in patients, irrespective of the clinical setting. For example, reduced masseter muscle cross-sectional area (CSA) measured by computed tomography (CT) is associated with increased mortality in injured older adults. The goal of this study is to investigate the association of a validated, rapid pictorial frailty scale with measures of sarcopenia in adults who are hospitalized after minor injuries.

Methods: Adult trauma patients who underwent cranial CT as part of admission studies were recruited and evaluated within 24 hours of hospital admission. The Clinical Frailty Scale, a pictorial measure of accumulated deficits, was used to identify clinical frailty. Masseter muscle CSA on CT was recorded as a measure of muscle mass and isometric handgrip strength was recorded as a measure of muscle function. Demographic data including length of stay was collected.

Masseter CSA distribution was characterized by descriptive statistics and stratified by age and gender. Independent samples t-tests were performed to identify differences between groups.

Results: Ninety-seven patients were recruited (age 60.3±18.8y, 36% female). Patients with frailty (24.2%), as measured by a CFS score ≥5, had smaller CT masseter CSA corrected for stature (1.44 vs 1.52cm^2/m^2, p=0.026) and weaker isometric handgrip strength (18.1 vs 5.8kg, p=0.008). While sarcopenic handgrip strength (female <20kg, male <30kg) was not associated with length of stay >3 days (female p=0.85, male p=0.22), patients who required a length of stay >3 days had significantly lower isometric handgrip strength on admission (1.5 vs 26.7kg, p=0.038).

Conclusion: In adults hospitalized after injury, frailty was associated with reduced masseter CSA on CT and decreased handgrip strength. Notably, patients with prolonged hospitalization had reduced handgrip strength on admission. These results suggest that in patients classified as frail via a pictorial frailty scale of accumulated deficits, opportunistic head CT and handgrip testing can specifically identify sarcopenia.

B157 Student Presentation

The Mind-Body Connection: Exploring the Defining Characteristics of Two Aging Phenotypes

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Background

Built on the theory of mind-body connection, there has been a growing interest in phenotypes combining physical frailty and cognitive decline. Two examples are motoric cognitive risk syndrome (MCR) and cognitive frailty (CF). MCR, defined by co-presentation of slow gait and subjective cognitive complaint without dementia or mobility disability, is considered a "pre-dementia syndrome." CF, defined as having both physical frailty and cognitive impairment in the absence of dementia, is posited to be caused by physical frailty. Although both MCR and CF have been associated with dementia risk, the relationship between the two is unknown. We aimed to (1) assess the concordance between the two, and (2) describe the characteristics of those with MCR or CF or both. By doing so, we hope to move beyond risk prediction towards a better understanding of heterogeneity in cognitive decline.

Methods

The analysis uses baseline data (year 2011) from the National Health and Aging Trend Study. Frailty was measured by the physical frailty phenotype. Cognitive impairment was based on self/proxy report of dementia and cognitive performance tests. We first estimated the prevalence of 3 groups: having MCR only, having CF only and having both MCR and CF. Next, we examined the associations between group membership and demographic/health characteristics using multinomial logistic regression.

Results

Of the 6,212 eligible subjects, 304 had MCR only, 410 were CF only, and 115 had both. While 21.9% of those with CF had MCR, 27.5% of those with MCR had CF. Those who had both were more likely to be Blacks and Hispanics, in a lower socioeconomic status. The CF only group had a stronger association with comorbidity burden than MCR only. Health characteristics were more similar between the CF only group and the both group. The differences between the MCR only and the CF only group were mostly due to the exclusion of mobility disability in the case of MCR.

Conclusion

There are noteworthy areas of discordance between MCR and CF. The exact etiology of their differences remains undetermined and it is unclear if these syndromes are measuring the same underlying process at different stages of advancement or entirely different pathological processes of cognitive decline.

B158

Risk Factors for Disenrollment from Hospice in Persons with Dementia: A National Cohort Study

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Background: Hospice recipients with dementia are up to four times more likely to be disenrolled before death ("live discharge") than patients without dementia. Disenrollment from hospice is increasingly perceived as a red flag indicating poor hospice care quality, yet little is known about patient, hospice, and regional risk factors for disenrollment in PWD at the national-level.

Methods: Retrospective cohort study using a 100% sample of Medicare claims and beneficiary data linked to data from the Hospice Provider of Service files, Hospice Compare, Dartmouth Atlas, and the Area Deprivation Index. Participants included Medicare beneficiaries admitted to hospice between July 1st, 2013 and December 31st, 2016 who had a hospice principal diagnosis of Alzheimer's Disease or Related Dementia based on ICD-9 and ICD-10 codes. We assessed disposition at 1-year following initial admission to hospice (died/disenrolled/still enrolled) and identified patient, hospice, and regional characteristics associated with disenrollment/still enrolled using multinomial logistic regression.

Results: There were 889,787 PWD who met inclusion criteria (mean age 85.6, 66% female). By the end of 1-year following initial admission to hospice, 15% (130,215) were disenrolled and 9% (105,102) were still a patient. Patient-level factors associated with disenrollment included identifying as Black (OR 1.63; 95% CI 1.56,1.70) or Hispanic (1.61; 95% CI 1.58, 1.64). Hospice-level

factors associated with disenrollment included smaller size (OR 1.48; 95% CI 1.46, 1.51) and for-profit ownership (OR 1.26; 95% CI 1.24-1.27). There was wide regional variation in rates of disenrollment (10% to 30% across hospital referral regions) with the highest rates occurring in the East South Central and Pacific regions.

Conclusion and Relevance: Our findings should raise concerns about potentially lower quality hospice care for PWD from racial minorities, who receive care from for-profit hospices, and who live in the southeast and western regions of the U.S.

B159

Healthcare Costs of Older Adults After the Death of a Spouse, A Qualitative and Quantitative Analysis

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Background: Studies suggests that death of a spouse is associated with increased mortality and morbidity for the surviving partner; however, there is little research analyzing the types of healthcare cost changes, and the conditions associated with them. Understanding patterns of healthcare utilization can inform the development of interventions that could reduce the untoward consequences of spousal death. The objective of this study was to better understand the healthcare costs of individuals in the 12 months immediately before and after the death of a spouse, examine demographics and comorbidities that may influence those changes, and identify potential areas for intervention.

Methods: The study population was drawn from all patients over age 65 in the Medicare ACO of a large academic health system during the years 2017-2019. Spousal pairs were identified using a combination of exact address matching, age difference assessment, and chart review and were included if one member of the pair died in calendar year 2018. Medicare claims data and ICD-10 diagnosis codes were linked. Total and average per member per month (PMPM) Medicare costs (aggregate, inpatient, outpatient, and other) were analyzed in each of the 12 months before and after spousal death using visualization, t-tests, and regression models.

Results: The final data set included 179 individuals, for which there was ICD-10 diagnosis data and Medicare claims data for each of the 12 months before and after spousal death. Spousal death was associated with a statistically significant increase of $356.56 in PMPM costs driven mostly by a significant increase of $281.94 in PMPM inpatient costs (with outpatient and other costs not changing significantly). Temporal visualization revealed consistently increased PMPM costs in the 12 months after spousal death as compared to before. Initial regression analysis did not demonstrate sex, race, or Charlson comorbidity score to be predictive factors in changes in PMPM costs pre to post spousal death.

Conclusion: This study shows that spousal death is associated with an increase in Medicare costs in the year following the spouse's death. Much of the increase in cost comes from an increase in inpatient costs; more granular analyses could be an important first step in identifying areas for interventions to curb the impact of spousal death.

B160

Predicted life expectancy in older adults attending colonoscopy

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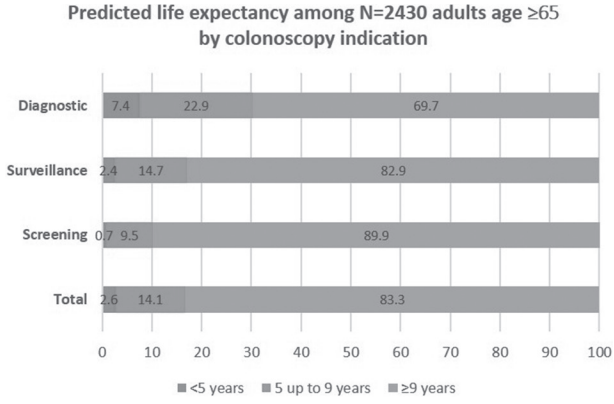
Background: The USPSTF recommends individualizing colorectal cancer screening for ages 76-85 based on life expectancy (LE). There are no specific guidelines on stopping colonoscopy in those with polyps ("surveillance"). Our aim was to evaluate predicted LE among older adults coming for colonoscopy as a potential measure of appropriateness.

Methods: We performed a cross-sectional analysis of the New Hampshire Colonoscopy Registry, which collects colonoscopy data throughout New Hampshire. We estimated 9-year LE using the Schonberg Index, compared the distribution of LE by colonoscopy indication, and evaluated exam findings.

Results: In 9/2018-9/2019, there were 2430 patients age ≥65 who presented for surveillance (49%), screening (36%), and diagnostic (16%) colonoscopies. Median age was 70 [IQR 67-74; range 65-91], 48% were female, 98% Caucasian. Most reported excellent (60%) or good (33%) health, 19% had diabetes, 17% difficulty walking a ¼ mile, and 13% were hospitalized in the last year. Overall, 17% had LE <9 years; this varied by colonoscopy indication (p<0.0001; **Figure**). Finding cancer (0.46%) was rare and did not vary by LE. Advanced polyps were found in 16% of patients with LE <9 years vs. 10% with LE ≥9 years (p=0.0009).

Conclusions: Colonoscopy is performed in older adults with limited LE. Advanced polyps were more common among patients with limited LE, but likely to be clinically insignificant in this group, reinforcing that screening and surveillance colonoscopy in older adults with limited LE is low yield. Development of best practices around colonoscopy in older adults is needed.



B161

Health Services Use and Outcomes in Assisted Living Communities

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Background

Assisted Living (AL) communities in the US care for an increasingly frail and older population with complex co-morbidities and personal care needs, yet patterns of healthcare use and resident outcomes, as well as the influence of AL characteristics, have remained largely unexamined. This study uses national Medicare data to describes national rates of healthcare use and outcomes among AL residents and estimates the association between outcomes and key AL characteristics.

Methods

We identified AL residents in Medicare claims using 9-digit ZIP codes and a national inventory of AL communities. Several Medicare datasets were used to construct the following outcomes at the AL-level: 1) rate of inpatient admission, 2) rate of emergency department (ED) visits, 3) 30-day readmission rates, 4) rate of fall-related injuries (FRI), and 5) rate of long-term (>90 days) nursing home placement. Linear regression models with state fixed-effects were used to examine the degree to which outcome variation across facilities within the same state is explained by AL characteristics including resident case-mix.

Results

Medicare beneficiaries within 11,268 study-eligible ALs experienced an average of 49.0 inpatient admissions, 97.3 ED visits, 12.8 FRIs, and 11.6 nursing home placements per 100 resident-years, and a 30-day readmission rate of 38.8%. We observed considerable variation in outcomes across and within states. In adjusted analyses, AL resident case-mix was an important predictor of several outcomes. A one unit increase in the average chronic condition count of residents was associated with an additional 5.7 ED visits/100 resident-years ($P<0.001$) and 0.6 FRIs/100 resident-years ($P<0.001$), as well as a 0.6 percentage point increase in readmission rates ($P<0.05$).

Conclusion

This study provides novel evidence that AL communities vary meaningfully in their use of health services. This variation is driven, in part, by differences in the case-mix of AL residents. Further research is needed to understand the ability of AL communities to safely care for sicker and more disabled residents.

B162

Can markers of disease severity improve the predictive power of claims-based multimorbidity indices?

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Background: Identifying methods to measure multimorbidity are critical for research and health policy. Current claims-based indices, which evaluate the presence or absence of a defined list of diseases, are limited in their ability to predict future outcomes. Clinically, we know that disease severity, rather than just the presence or absence of disease, has important prognostic implications. However, there is limited research on whether claims-based markers of disease severity can improve assessments of multimorbid burden.

Methods: Medicare claims linked with Health and Retirement Study data were used to create multimorbidity indices to predict ADL decline and death. Using inpatient and outpatient Medicare claims data, we developed 7 dichotomous markers of disease severity which could be applied to a range of conditions, with "severe" disease defined as: (1) ED visit for condition in the past year, (2) hospitalization for condition in the past year, (3) ≥ 4 outpatient visits for condition in the past year, (4) outpatient visit for condition in the past 6 months, (5) outpatient visit to a specialist for condition in the past 6 months, (6) ICD9 code directly designating disease severity, and (7) severe disease on any of the above. Using regression models, we evaluated the extent to which each of the disease severity markers would improve predictive power (as assessed through c-statistics) compared to models that only included the presence or absence of diseases.

Results: Of 5,012 subjects, the median age was 76 and 58% were female. For a majority of 62 diseases tested, adding each of the 7 markers of disease severity yielded minimal increase in c-statistic (≤ 0.002) compared to models that considered only the presence vs absence of that disease. Gains in predictive power were more potent for a small number of specific diseases with a maximal gain in c statistics of 0.008 for ADL decline and 0.021 for death. Of the 7 markers tested, marker 3 had the best balance of characteristics. Addition of this severity marker to existing multimorbidity indices and use in developing new models yielded minimal gains in c-statistics (0.0002-0.0066) compared to indices without these markers.

Conclusion: Claims-based markers of disease severity did not contribute meaningfully to the ability of multimorbidity indices to predict ADL decline, mortality, and other important outcomes.

B163 Student Presentation

COVID-19 Vaccine Reluctance in Older Black and Hispanic Adults: Cultural Sensitivity and Institutional Trust

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BACKGROUND:

The COVID-19 pandemic has had a disproportionate impact on people of color, particularly Blacks and Hispanics. Recent studies also demonstrate these groups are often less willing to receive the COVID-19 vaccine when it is available. We analyzed health information perceptions among older Blacks and Hispanics for insight on how to overcome this vaccine reluctance.

METHOD:

We analyzed survey data collected by The COVID Collaborative, a non-profit assemblage of researchers developed to address the COVID-19 pandemic. Data were collected in August 2020 through an online US survey of Hispanic and Black respondents. N= 364 Black respondents and N=54 Hispanic respondents were 60+ years old and were included in the analysis.

RESULTS:

Among the older (60+) Black and Hispanic respondents, just 25% and 35% were willing to receive a COVID-19 vaccine. 30% of older Blacks and 29% of older Hispanics reported complete trust in their doctor/healthcare team. This lack of trust may be due to perceived cultural insensitivity. Only 30% of older Blacks and 33% of older Hispanics felt their healthcare providers understood their cultural/ethnic background. Less than half of older Blacks and Hispanics (45% and 48%) felt their healthcare providers explained things coherently. 87% of older Blacks and 85% of older Hispanics thought the vaccine would make them sick.

CONCLUSIONS:

Although older Blacks and Hispanics are at risk of contracting COVID-19, many are unwilling to receive the vaccine. This may be due to distrust in the healthcare system, exacerbated by perceptions of healthcare providers' lack of cultural sensitivity towards older Black and Hispanic patients. Improved communication about the vaccine is needed, as both groups believed the vaccine would get them sick and less than half felt their healthcare teams communicate clearly. Our findings have implications for improved cultural sensitivity and health communication.

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B164 Student Presentation

Clinical manifestations and treatment of COVID-19 in long-term care (LTC) residents

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Background: Long-term care (LTC) residents are at high risk for severe illness and mortality from COVID-19. Hospitalization may be avoided in an adequately staffed LTC facility by offering goal-concordant treatments within the facility. Our objective was to describe clinical manifestations, acute treatments, and outcomes in LTC residents with COVID-19 and a do-not-hospitalize (DNH) directive.

Methods: Our population included residents from two LTC facilities who tested positive for COVID-19 and had a DNH directive (4/2/20-5/21/20). Retrospective chart review was conducted from

the day of diagnosis until 6 weeks or death. Clinical manifestations (e.g., delirium, sepsis) were ascertained using standardized definitions. Acute treatments (e.g., intravenous fluids (IVF), antibiotics), mortality, and hospitalizations were documented as any versus none, over the same period.

Results: Among 151 LTC residents, the mean age was 86 (±9) yrs, 129 (85%) were white, 87 (58%) were female, and 63 (42%) had moderate-severe cognitive impairment. Table 1 shows the prevalence of clinical manifestations and acute treatments. Delirium, pneumonia, and sepsis were the most prevalent clinical manifestations, while oxygen and IVF were the most common treatments. 67 residents (44%) died and 3 were hospitalized for reasons unrelated to COVID-19.

Conclusions: Among COVID-19+ LTC residents with a DNH directive, most experienced severe illness and required medical treatment within the facility. Providing intensive medical treatment, such as IVF, to numerous residents may prove challenging for understaffed, resource-constrained facilities. This highlights the critical need for federal support of LTC staffing, in addition to PPE and testing, to combat COVID-19 in this setting.

Table 1

Clinical Manifestations	All COVID-19+ residents with DNH directives (n=151)
Delirium	106 (70%)
Sepsis	63 (42%)
Pneumonia	64 (42%)
Acute kidney injury	37 (25%)
Hypernatremia	34 (23%)
Fall	32 (21%)
Hyponatremia	14 (9%)
Treatments	
Oxygen therapy	77 (51%)
Intravenous fluids	38 (25%)
Antibiotic	32 (21%)
New anticoagulant	14 (9%)

B165
Discharge Practices in Skilled Nursing Facilities affected by COVID-19

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Background: Many patients require post-acute care at skilled nursing facilities (SNF) after hospital discharge. While returning from SNF to home is often the goal, a safe discharge from SNF often requires additional support during this transition. However, the COVID-19 pandemic affected all aspects of the healthcare industry. To understand how post-acute SNF throughput was affected by the COVID-19 pandemic, we studied discharge processes of patients with COVID-19 at a SNF.

Methods: This was a retrospective study of residents at our facility with a positive COVID-19 PCR test from 3/1/20-6/1/20. We defined post-acute patients as those who were admitted to the nursing home 100 days or less before the positive test. We reviewed all medical, nursing, social work and other notes from our electronic medical record to identify discharge planning processes. Specifically, we identified if discharge planning was initiated, whether the patient was successfully discharged, and whether there was evidence that the discharge was complicated by COVID-19 related challenges.

Results: Of 350 residents with a positive COVID-19 PCR, 121 were post-acute patients who were admitted within 30 days of positive PCR or symptom onset. Median age was 79 (interquartile range [IQR], 69-86) and 59 (49%) were female. Over a mean follow-up time of 185 days, 98 (81%) post-acute patients had discharge planning initiated, of which 81 were discharged to the community. Median length of stay for those discharged was 38 days (IQR 23-98). Discharge sites included home (66 [81%]), assisted living facilities (9 [7%]), and hotels (2 [2%]). Discharge planning was affected by COVID-19 for 49 (41%) patients. Reasons included symptom development that precluded discharge; logistical issues related to establishing home oxygen; unwillingness for assisted living facilities, home care services, or families to receive COVID-19 positive patients; challenges establishing home care services due to staffing shortages; and family members sick with COVID-19 themselves.

Conclusions: The COVID-19 pandemic had a multi-layered effect on the ability of nursing home residents to be discharged safely home. Delayed discharge from SNF may impact their ability to accept new patients, which may have further upsteam effects on other aspects of the healthcare continuum.

B166
End-of-life Health Care Use Among Socially Isolated Older Adults with Cognitive Impairment

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Background: At the end of life, older adults may rely on others to access health care, particularly if they have impaired cognition. We determine if socially isolated older adults with and without cognitive impairment have different patterns of end-of-life health care use.

Methods: We used nationally-representative 2006-2016 Health and Retirement Study (HRS) data linked to Medicare claims to examine adults age >50 interviewed once in the last four years of life (N=2,073). We measured three self-report subscales of social relationships: 1) household contacts, 2) frequency of socializing with children, family, and friends, and 3) frequency of community engagement. The three subscales were combined to create an overall social isolation measure. End-of-life health outcomes included 2+ ED visits in the last month of life, hospitalizations or ICU stays in the last 6 months of life, and any hospice use. Cognitive impairment (CI) included CIND or Dementia using a validated methodology (Langa-Weir). We used logistic regression to test the association of each social subscale and social isolation with each end-of-life outcome, adjusting for age, gender, race, and education, and tested for significant interactions with CI ($p<0.1$).

Results: Our sample had a mean age of 82 (52% female, 9% Black, 5% Hispanic, 47% had CI). There was a significant interaction between overall social isolation and CI for hospice use; social isolation was associated with lower hospice use for individuals with CI (aOR=0.61, 95% CI: 0.4-1, p=0.05), but not for those with no CI (aOR=1.1, p=0.8). There were significant interactions between the socializing subscale and CI for ED use, ICU use, and hospitalizations. Among those with CI, low socializing was associated with lower ED use (aOR=0.55, 0.3-95, p=0.03), ICU use (aOR=0.62, 0.4-0.99, p=0.05), and hospitalizations (aOR=0.63, 0.4-0.98, p=0.04), whereas there was no association for those with no CI (ED: aOR=1.1; ICU: aOR=1.0; hospitalizations: aOR=1.1).

Conclusion: Cognitively impaired older adults who were socially isolated or socialized infrequently had fewer ED visits, hospitalizations, ICU stays, and less hospice use at the end of life, whereas social isolation was not associated with health care use for those without CI. Further research is needed to understand if low rates of acute care and hospice are concordant with their wishes, or are due to a lack of support in accessing health services.

B167
More Practices, More Complex Patients: Growth of Home Medical Care 2014 to 2018

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Background: Home Care Medicine (HCM), using a mobile interdisciplinary team, is an effective approach to care for frail, complex elders, improving quality while lowering costs. In 2014, we

identified 1251 practices caring for 390,709 frail patients, evenly split between elders at home and those in congregate housing (e.g., assisted living). We examined whether recognition of HCM's effectiveness in caring for complex patients has altered the practice landscape.

Methods: We used 100% Medicare A&B claims to identify fee for service beneficiaries who received 1 or more housecalls in 2018. We mapped the provider NPIs to practice TINs, identifying practices within a TIN using PECOS. We then used CMS plurality attribution rules to attribute patients to practices. We defined those practices with 100 or more attributed HCM patients as housecall programs, characterizing their medical complexity (concurrent V24 HCC scores) and frailty (JEN frailty index).

Results: Total programs (100+ patients) grew from 1251 to 1413. Attributed patients grew from 390,709 to 458,733. Home programs grew from 331 to 611. Home patients grew from 146,596 to 184,228, while congregate patients grew from 244,113 to 274,005. Despite modest 26% growth, complexity significantly increased, with Independence at Home qualified patients increasing from 45% to 53% among Home patients, and 43% to 51% among ALF patients. JFI 8+ (equivalent to 4+ ADL deficits) rose in both settings by 17%. Concurrent V24 HCC scores rose 15%, to 3.09 among Home patients, and 2.53 among ALF patients (80th centile HCC 2.98 among ALF patients). The Home field is characterized by a few large practices, and a number of smaller practices (gini coefficient .51), although the patient distribution is less unequal (gini .18). Only 1.4% of practices meet the current Year 3 minimum for High Needs Direct Contracting (>1800), caring for 13% of patients. 33% of patients are in the 65% of practices below the Y1 minimum for HNDC (<250).

Conclusions: HCM has seen modest growth in patients, a substantial growth in residential housecall practices, with a significant increase in patient complexity. Current value-based programs have a poor match to the size of practices providing care to home-limited frail elders.

B168

The Impact of Staff Size on COVID-19 Outbreaks and Deaths in U.S. Nursing Homes

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Background

Uncertainty remains about the factors that contribute to nursing homes' ability to prevent COVID outbreaks. Infection risk is a function of the number of exposures one has to potentially infected individuals. Because of visitor restrictions, the volume of unique staff members who enter facilities may be an important determinant of outbreak risk. This study estimates the impact of staff size (i.e., count of unique employees) on nursing homes' COVID outcomes.

Methods

Individual-level Payroll-Based Journal staffing data was used to measure the average number of unique employees (including non-clinical staff) that worked in a facility in the 4th quarter of 2019. Data were linked with CMS Nursing Home COVID-19 data to obtain cumulative resident COVID case and death rates between June-October for 7,260 facilities that had not had a COVID case by the start of June. Linear regression was used to estimate the relationship between staff size, categorized into quartiles within the full sample of nursing homes, and COVID outcomes. Models adjusted for a number of facility characteristics, including hours of direct care per resident day, the share of direct care hours provided by nurses, bed size, profit status, and overall quality score, and county fixed effects.

Results

After adjustment, there were large and significant differences between facilities with low vs. high staff sizes. Nursing homes with the lowest staff size had 45% fewer resident cases (P<0.001) and 54% fewer resident deaths (P=0.003) per 100 beds by the end of the study period. Other staffing-related measures were not significantly associated with outcomes.

Conclusions

The number of unique employees in a facility on a given day prior to the pandemic was an important predictor of COVID outbreaks and resident deaths suggesting that staff-related traffic was an important vector for virus entry into facilities. Policy efforts to reduce the number of different staff in nursing homes, such as reducing part time employees and staff turnover, could be effective infection control strategies. Results higlight the importance of vaccinating all nursing home staff, including those not involved in resident care.

B169

Profile of polypharmacy among adults with dementia from a cross-sectional nationally representative sample

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Background: Polypharmacy has not been well characterized among community-dwelling older persons with dementia (PWD). While extensive medication use may be appropriate in PWD, it is often unnecessary, discordant with goals of care, and possibly harmful. We aimed to profile medication categories contributing to polypharmacy among PWD attending outpatient visits in the US.

Methods: We analyzed outpatient visits by people age ≥65 years from the National Ambulatory Medical Care Survey (2014-16). Dementia status was ascertained by physician diagnoses or receipt of anti-dementia medication. Visits with PWD and persons without dementia (PWOD) were compared in terms of sociodemographic and practice factors and comorbidities. Linear and logistic regression analyses examined the effect of dementia diagnosis on contributions by clinically relevant medication categories, including highly sedating and anticholinergic medications, to polypharmacy.

Results: The unweighted sample involved 919 visits for PWD and 26,542 visits for PWOD, representing 29.2 and 780 million outpatient visits. PWD had a median age of 81 and on average 2.8 comorbidities other than dementia and were 63% female. The mean number of medications in PWD was 8.7 compared to 5.1 in PWOD (p<0.001). After adjusting for confounders including age, sex, and comorbidity burden, PWD had significantly higher odds of being prescribed ≥5 medications (AOR 3.1; 95% CI: 2.2-4.3), ≥10 medications (AOR 2.9; 95% CI: 2.0-4.2), or at least one highly sedating or anticholinergic medication (AOR 2.5; 95% CI: 1.7-3.7) compared to PWOD. The largest sources of medication use among PWD were cardiovascular and central nervous system medications; however, other medication categories were also generally elevated in PWD compared to PWOD. Results were similar when dementia medication was not used in the ascertainment of dementia and when limiting to primary care visits.

Conclusions: In a nationally representative sample of outpatient visits in the US, polypharmacy was extremely common among PWD and was driven by a wide array of medication categories. Addressing problematic polypharmacy in PWD will require a cross-cutting and multidisciplinary approach.

B170

Factors Associated with Increase in COVID-19 Cases in Nursing Homes: A Study of Nursing Homes in Midwestern States

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Background: The COVID-19 pandemic disproportionately affects older adults, especially, those in nursing homes (NHs) with over 27% of deaths attributed to COVID-19. However, some nursing homes fare better than others. This study examined the following factors: nursing home ratings, quality of care, staff shortage, PPE shortage, and ownership status to understand the association between them and COVID-19 cases.

Methods: Three datasets were combined from Centers for Medicare & Medicaid Services (CMS): 1. Star rating; 2. Provider information and 3. COVID-19 nursing home. The time period examined is from Jan 1 – Oct 25, 2020 for the 12 Midwestern states in the population set. There were 4525 free-standing NHs for the analysis after removing cases with missing values. The measures used were self-reported information on ratings, quality of care, staff shortages, PPE shortage, occupancy rate and ownership. Ordinal logistic regression was used to examine the association between nursing home ratings on health inspections, quality measures, and staffing domains with COVID-19 cases.

Results: Of the 4525 NHs in 12 Midwestern states, high performing NHs were less likely to have more than 30 COVID-19 cases than were low-performing facilities for two of the CMS domain (health inspections, 179 [11.6%] vs 542 [18.2%]; and staffing 175 [9.1%] vs 546 [20%]). There was also statistically significant association between high- vs low-performing NHs in overall rating and COVID-19 cases and a statistically significant association between NH ownership, occupancy rate, RN, LPN and CNA staffing in NHs having ≤10 CV cases vs 11-30 CV cases vs >30 CV cases (all $p \leq 0.01$).

Conclusions: Our findings show a statistically significant association between ownership and COVID-19 cases among residents. Of the NHs that had more than 30 COVID-19 cases, 70.2% were for-profit nursing homes, 5.9% were government owned and 23.9% were non-profit. There was no statistically significant association between PPE shortages and COVID-19 cases. Finally, there was a significant negative association between RN and CNA staffing i.e. more staffing hours of RNs and CNA correlated with fewer number of COVID-19 cases.

B171 Student Presentation

"Ethically, we're bound to go with what the patient needs": Unpacking organizational approaches and ethical dilemmas of full code and intensive treatment preferences in hospice

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Background: Hospice organizations increasingly accommodate patient preferences for remaining full code or pursuing intensive treatments (e.g. transfusions), leading to policy tensions and ethical dilemmas. How hospices accommodate such preferences, as well as their downstream impacts, remains unknown.

Methods: Semi-structured qualitative interviews with 51 employees at four non-profit US hospices. Participants were 61% clinicians (23 nurses, 21 social workers, 7 physicians, 2 chaplains; 2 had multiple disciplines), 25% executive leaders, and 14% administrative staff. An interdisciplinary team coded data in Atlas.ti and used the constant comparative method for analysis, informed by bioethical theory.

Results: Policy differences across hospice organizations, competing financial incentives, and advances in palliative medicine contribute to ethical dilemmas regarding patients who are full code or pursue intensive treatments on hospice. Organizational strategies to accommodate such preferences included policies addressing code status (e.g. hospice clinicians will not perform CPR), relying on affiliated palliative care programs to deescalate care before hospice enrollment, and employing internal structures, such as interdisciplinary team meetings, for complex cases. Participants described that high costs of intensive treatments strain organizational budgets and differences in coverage between Medicare and private insurers affect who receives concurrent treatments. Participants also noted that treatments formerly associated with curative intent (e.g. dialysis) are increasingly understood to have palliative benefit, resulting in difficult case-by-case evaluation in hospice. Impacts of such preferences included clinician moral distress, heightened family tensions, and requests for ethics consults.

Conclusions: Pursuing full code status or intensive treatments while on hospice leads to ethical dilemmas for hospice staff and organizations. Such preferences challenge the viability of payment models that aim to facilitate preference-aligned and evidenced-based care. Further work should explore decision-making in hospice to support patients, families, and staff.

B172

Continuity of Care in the Last Year of Life Among Seriously Ill Older Adults by Dementia Status

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Background. End of life care is notoriously fragmented. Understanding how end-of-life care varies among older adults with serious illness is needed to refine models of care. We sought to compare continuity of care for older adults who were seriously ill due to dementia to older adults who were seriously ill without dementia in the last year of life.

Methods. We used a nationally representative, longitudinal survey of adults ≥65 years, the National Health and Aging Trends Study, linked to 2011-2014 Medicare fee-for-service claims. We used validated methods (Kelley et al, 2018) to identify serious illness using diagnosis codes and self-report of function. We limited our sample to those who died and examined health care services use in the last year of life. We calculated the Bice-Boxerman continuity of care index and created a binary measure for fragmentation of acute care (attending ≥2 different hospitals or Emergency Departments (ED)).

Results. We included 761 community-dwelling older adults who had serious illness and died. Of these, 41% had serious illness due to dementia and 59% had serious illness without dementia. Older adults with dementia were older (mean age 87 vs 83, $p<0.001$) and had less education (45% vs. 32% < high school, $p=0.006$). However, there were no significant differences in terms of sex (56% female), race (73% white), income or marital status. In the last year of life, there was no difference in the number of ED visits by dementia status (mean 2). However, older adults with dementia had fewer hospitalizations (mean 1 vs 2, $p<.0001$) and outpatient visits (mean 11 vs. 14, $p=0.001$) but more home health care (53% vs 46%, $p=0.03$) and hospice (52% vs 49%, $p=0.03$) use. Older adults who were seriously ill due to dementia had better continuity of care (0.3 vs 0.2, $p<0.001$) and were less likely to have fragmented acute care (43% vs 51%, $p=0.003$) than those without dementia. Results of multivariable regression models will be presented.

Conclusions. Older adults with serious illness due to dementia had more continuous care in the last year of life compared to seriously ill older adults without dementia. Near the end of life, older adults who are seriously ill due to dementia may have different care coordination needs than older adults who are seriously ill without dementia.

B173 Student Presentation

A Methodology to Identify Spousal Pairs within a Medicare Claims Dataset

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Background: The Caregiver, Advise, Record, Enable Act incentivizes hospitals to implement programs to support caregivers of older adults. A challenge to implementation is effectively identifying caregivers within a medical record. This process requires spousal information be consistently and accurately recorded in the medical record and can involve extensive manual review or complicated programming. The goal of this validation study was to describe the spousal identification process used in another study of the impact of spousal death on healthcare costs so that the methods can be applied by other investigators for future work.

Methods: The denominator study population was developed from Medicare claims files for a large Medicare ACO, in which two or more ACO members over age 65 were living at the same address. All individuals over age 65 with the same exact address match were considered potential spousal pairs. Potential pairs that did not experience at least one death in 2018 were excluded. Addresses with five or more individuals were searched to exclude residences, such as nursing homes where multiple unrelated ACO members could be living. Manual chart review was used only for individuals in remaining households of three or more and potential pairs with an age gap greater than 16 years.

Results: Out of a data set of 59729 individuals at 29048 unique addresses, we identified 2967 individuals at 1213 addresses who experienced a household death in 2018. Of that group we identified 2016 individuals who comprised 1008 spousal pairs. We manually reviewed 457 charts (15.4% of 2967) and searched 150 addresses (12.4% of 1213). We then validated this process relative to spousal information documented within the medical record and published obituaries for 60 pairs. A specificity analysis of a random sample of 60 pairs within the final set found that 92% of spousal pairs identified by this methodology could be verified. A sensitivity analysis of a random sample of 60 pairs excluded from the final data set found that 96% were in fact not spouses.

Conclusion: This methodology established a sensitive, specific, and reproducible method to identify spousal pairs within a large Medicare dataset. This identification process minimized manual chart review to identify spousal pairs. It could be employed by a wide range of people without additional programming requirements.

B174 Student Presentation

Barriers and Facilitators to Implementation of Evidence-Based, Non-Pharmacologic Programs for Residents with Dementia in VA Skilled Nursing Facilities

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Background:

Implementation of non-pharmacologic programs for people with dementia is often challenging in skilled nursing facilities (SNFs). We previously implemented Preventing Loss of Independence through Exercise (PLIÉ)—an integrative, group movement program for SNF residents with dementia—at the San Francisco VA. This study aimed to identify barriers and facilitators to implementing PLIÉ in VA SNFs nationally.

Methods:

We conducted a formative evaluation using semi-structured interviews with key stakeholder groups (SNF staff, SNF directors, and VA health system leaders). Questions focused on PLIÉ's fit with current dementia programs and VA policies, characteristics of individual SNFs, and training and implementation strategies. We used rapid qualitative analyses to identify key barriers and facilitators to inform implementation activities.

Results:

We interviewed 23 people from geographically diverse VA SNFs and national program offices (SNF staff, n=14; SNF directors, n=3; Health system leaders, n=7). Barriers to implementing PLIÉ included: 1) Staff turnover and limited dementia experience; 2) Space restrictions and limits on group size (e.g. quarantine periods); and 3) technical issues with training staff remotely. Implementation facilitators for PLIÉ included: 1) compatibility with SNF needs and goals (e.g. maintaining function, reducing disruptive behavior); 2) adaptability (e.g., engaging residents with limited mobility, using individual instruction during the COVID-19 pandemic); 3) engaging and training interprofessional staff; and 4) alignment with national VA priorities and programs for dementia care.

Conclusions:

Successful implementation of evidence-based, non-pharmacologic programs such as PLIÉ is facilitated by compatibility, adaptability, interprofessionalism and alignment with VA priorities while barriers are related to staff, space, and technology. PLIÉ's adaptability suggests it is a scalable model for increasing access to non-pharmacologic dementia programs that can serve large numbers of SNF residents. These findings will inform the development of a remote training program for SNF staff to become instructors and facilitate national spread to other VA SNFs.

B175

Lessons Learned about Covid-19 in Assisted Living Facilities

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Background: Early on in the COVID-19 pandemic, AGS recognized the unique risk of COVID-19 in assisted living facilities. In this study we compare recommendations in AGS' *Policy Brief: COVID-19 and Assisted Living Facilities* to on-the-ground experience in San Francisco.

Methods: We conducted focus groups with the San Francisco Department of Public Health teams responsible for prevention, outreach, and outbreak response in assisted livings to identify lessons learned from the COVID pandemic. We used qualitative content analysis to analyze the transcripts and compare our findings to the AGS policy guide and identify additional lessons.

Results: This abstract reflects preliminary findings as focus groups continue. Our analysis revealed challenges for each of the AGS-identified policy issues for facilities: 1) *supply chain*: they did not have access to PPE and it is difficult to find and afford supplies; 2) *COVID testing*: sites first struggled to implement screening due to availability, and later because of lack of clinical staff, 3) *safe transitions*: sites were overwhelmed by public health demands and unwilling to re-admit residents with COVID, 4) *infection control*: they rarely had infection preventionists or prior training, 5) *workforce:* staff were unaware of state protections or disbelieved they would be protected from being fired for sick leave. Additional lessons included: a) limited utility of some policies due to variability among sites in size, staff primary language, digital literacy and resident type, b) sites' poor capacity for internal training, including lack of access to technology; and c) isolation of residents by social distancing and visitor restrictions caused new problems in supporting residents and for which sites requested expert support.

Conclusions: The *AGS Policy Brief: COVID-19 and Assisted Living Facilities* captured most key issues we saw in local facilities. The San Francisco experience suggests the need for policy refinement

by assisted living facility and type, training as a key workforce consideration, and the addition of a sixth key issue: resident wellness. In planning for future crises, assisted living should be prioritized for intensive educational, material and policy support.

B176

Data to Enable Improvements in Eldercare on a County Level

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Background: Older adults living with serious illnesses and disabilities rely substantially on the performance of eldercare in their communities: everything from home food delivery to medical care quality and access vary by area. Our team has worked with community leaders to test whether they could monitor and manage eldercare improvements. Each team could find very little data to motivate and target interventions. This project aimed to address that shortcoming. We generated data on the patterns of care and conditions for users with documented self-care disabilities.

Methods: We merged the Medicare Beneficiary Summary File with Medicare Parts A and B claims, Part D events, and nursing home (MDS) and home care (OASIS) admission assessments—100% of each dataset for 2018. Analyses included only beneficiaries who had continuous enrollment in Parts A and B and at least one assessment. We defined a cohort who showed 2 or more ADL dependencies and aggregated them by county, censoring aggregations of <11 beneficiaries. For that cohort, we tallied distinct persons who filled benzodiazepine or antipsychotic prescriptions, had any severe (Stage III, IV, or unstageable) pressure ulcers, or started a state buy-in to Part B during the year ("spend down" to Medicaid). We measured total costs to Medicare and costs for those in their last days of life.

Results: *See table.*

Conclusions: In every measure, the best performing counties have rates dramatically better than those in the worse performing counties – even the worst half. While some variation is to be expected, and perhaps even explained, the magnitude of these variations demand attention by multiple sectors. A leader in any community would do well to know how their county is performing. When a county has a substantial shortcoming, time trends from these data would enable monitoring changes, and claims data are now available within 2 months of the billed event. We have now posted similar data to start enabling improvement in every county at eldercaredata.org.

County Variation in Eldercare Measures: Median (10th, 90th Percentiles)

Prescribed Benzodiazepine	18.7% (13.0%, 25.1%)
Prescribed Antipsychotic	10.6% (7.5%, 15.1%)
Severe Pressure Ulcers	5.1% (3.3%, 7.7%)
Medicaid Spend Down	10.4% (3.7%, 20.1%)
Medicare Spend (PBPM)	$3,020 ($2,376, $3,815)
Medicare Spend, Last Month of Life	$14,245 ($10,740, $18,679)

B177

Is Willingness to Deprescribe Associated with Health Outcome Priorities among U.S. Older Adults? Results From a National Survey

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Background: Uptake of deprescribing is suboptimal. Linking deprescribing recommendations to patients' overall health outcome priorities could improve uptake. However, it is not known whether older adults' willingness to stop taking medications is associated with their health outcome priorities.

Methods: Cross-sectional survey was conducted from March-April 2020 using probability-based online panel representative of U.S. adults. The survey presented 2 modules: 1) a statin taken for primary prevention; and 2) a sedative-hypnotic, zolpidem. After reading about benefits and harms of these medicines, participants were asked whether they would be willing to stop each medicine if their doctor recommended it. They were then asked to rate their level of agreement with 2 statements about health outcome priorities: "I am willing to accept the risk of future side effects, such as falls or memory problems, to feel better now," and "I would prefer to take fewer medicines, even if it meant that I may not live as long or may have bothersome symptoms sometimes." Logistic regression was used to examine associations between willingness to stop each medicine, baseline characteristics and health outcome priorities.

Results: Of 1193 panel members ≥65 years invited to participate, 835 (70%) completed the survey. Mean (SD) age was 73 (6) years; 496 (59%) had ever taken a statin and 124 (15%) had ever taken a sedative-hypnotic. 507 (61%) were willing to stop a preventive medicine and 419 (50%) were willing to stop a symptom-relief medicine. Respondents who agreed with the statement that prioritized "feeling better now" over risk of side effects had lower odds of being willing to stop a symptom-relief medicine (OR 0.71, 95% CI 0.53-0.94). Willingness to stop a preventive medicine was not associated with agreement with health outcome priority statements, but was associated with statin use (OR 0.63, 95% CI 0.45-0.86).

Conclusions: Most respondents in this national survey were willing to stop taking a preventive or symptom-relief medicine if their doctor recommended it. Incorporating patients' health outcome priorities could facilitate uptake of deprescribing symptom-relief medicines. Future research should determine how best to communicate about deprescribing preventive medicines in situations where harms may outweigh benefits.

B178

Medical and Nursing Care of Residents with COVID-19 in a Large Urban Nursing Home

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Background: COVID-19 is associated with high morbidity and mortality in nursing home (NH) residents. The objective of this study was to describe treatments and complications of NH-managed COVID-19 requiring increased medical and nursing care. **Methods**: We reviewed the records of 320 consecutive symptomatic COVID-19 PCR-confirmed cases at a 514-bed nursing home (NH) in New York City between March and May 2020. During this time, residents were PCR-tested for COVID-19 who had 1) symptoms consistent with COVID-19, 2) nonspecific acute changes in condition, or 3) exposure to another person with COVID-19. Ascertainment of treatments, falls, delirium, and other complications was conducted through review of nursing notes, medical notes, medications, and labs. Follow-up for most measures was 30 days after symptom onset. **Results**: The average age of NH residents with symptomatic COVID-19 infection was 79.7 (SD 12.1) years, and 59% were female. Mean body mass index was 26.2 (SD 7.1). The most common symptoms of infection were fever (79%), cough (59%), loss of appetite (43%), and shortness of breath (28%). The mean 30-day nadir in room-air percent oxygen saturation was 88.6 (SD 9.2). Antimicrobial agents were prescribed to 61% of residents, supplemental oxygen to 54%, intravenous (IV) fluids to 53%, and anticoagulants to 36%. Over the 30-day follow-up period, delirium symptoms occurred in 107 (33%) residents, and 83 (26%) residents had at least 1 fall, with 5 experiencing a fall-related fracture. Fourteen (4%) experienced a thromboembolic adverse event (stroke, deep venous thrombosis, or myocardial infarction). Twenty-nine (9%) were transferred to the hospital, with 14 returning to the nursing home after an average length of stay of 11.2 days (SD

11.3; range 0-45). Mortality within 30 days was 13%; an additional 13 (4%) died between 31 and 90 days after symptom onset. **Conclusion:** In a NH with full-time onsite medical staff and IV and supplemental oxygen capabilities, 91% of COVID-19 cases were managed without need or request for hospital transfer. Treatments and complications of Covid-19 infection such as delirium and falls that require increased levels of nursing and medical care were common.

B179

Comparative Efficacy of Interventions for Reducing Depressive Symptoms in Dementia: A Systematic Review and Network Meta-Analysis

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Background: Depressive symptoms are common in persons with dementia; the comparative efficacy of pharmacologic and nonpharmacologic interventions for reducing depressive symptoms in dementia is unknown.

Methods: We searched MEDLINE, Embase, CENTRAL, CINAHL, PsycINFO, and grey literature between inception and October 15, 2020 for randomized trials (RCTs) of pharmacologic or nonpharmacologic interventions targeting depressive symptoms in persons with dementia (with or without comorbid major depressive disorder). Pairs of reviewers, working independently, conducted study screening, data abstraction, and risk of bias appraisal. We conducted Bayesian random-effects network meta-analyses (NMAs) and pairwise meta-analyses to derive standardized mean differences and back-transformed mean differences (MD; on the Cornell Scale for Depression in Dementia [CSDD]).

Results: After screening 22138 titles and abstracts, we included 256 studies (28483 patients) in our systematic review. The minimum clinically important difference on the CSDD was 2 at 0.4 standard deviations. In our NMA including persons with dementia (without a comorbid major depressive disorder) experiencing depressive symptoms (213 studies, 61 interventions, 25177 patients), cognitive stimulation (MD -2.93, 95% credible interval [CrI] -4.35 to -1.52), cognitive stimulation + cholinesterase inhibitor (-11.39, -18.38 to -3.93), massage therapy (-9.03, -12.28 to -5.88), occupational therapy (-2.59, -4.70 to -0.40), multidisciplinary care (-1.98, -3.80 to -0.16), exercise combined with social interaction and cognitive stimulation (-12.37, -19.01 to -5.36), and reminiscence therapy (-2.30, -3.68 to -0.93) were more efficacious than usual care for reducing depressive symptoms. In pairwise meta-analysis, exercise (MD -2.42, 95% CrI -4.55 to -0.34) was also more efficacious than usual care. Clinical and methodological heterogeneity precluded NMA of studies comparing the efficacy of interventions specifically for reducing depressive symptoms in persons with dementia and a major depressive disorder (22 studies; 1829 patients).

Conclusion: Clinicians should prioritize nonpharmacologic and multidisciplinary care approaches for reducing depressive symptoms in persons with dementia.

B180

Medication Associated Delirium in Hospitalized Older Adults

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Background: Delirium is common in hospitalized older adults and medications are a modifiable trigger. Pharmacists at Houston Methodist (HM) monitor potentially inappropriate medication use in adults > 70 on their units. The primary purpose of this study was validation of an automated report to identify high risk medication usage in older adults and whether they may have played a role in delirium development. The secondary objective was to identify characteristics of positive delirium screens at HM.

Methods: Retrospective review of an automated report of 300 patients age > 70 yrs who screened positive for delirium by nursing using a modified 4AT Screen discharged in August 2020. Convenience sample of 100 charts were reviewed. The report included age, timing of first positive 4AT and time/date/name of high-risk medications given. Medications flagged included: anticholinergics, sedatives and benzodiazepines. The medical record was reviewed for discrepancies. Data extracted also included diurnal variation of 4AT's, and hospital readmission rates.

Results: Of the 100 reviewed patients, 68 had a positive screen < 48 hr after admission (present on admission/ POA) and 32 were considered hospital acquired delirium with initial positive screen after 48hrs. The report accurately depicted timing of medication administration. Eight new formulations/medications were found that should be added to report criteria. In those patients with hospital acquired delirium, 47% were first documented between 6pm and midnight and 12.5 % of patients had a high-risk medication given in the 48hr prior to their positive screen. 53% of patients had a high-risk medication given any time during stay. Length of stay (10 days) was not changed if inappropriate medication given after positive 4AT. The readmission rate was significantly higher 43% in delirium POA vs. 15 % in those with hospital acquired delirium.

Conclusions: In our sample, 12.5% of our hospital acquired delirium cases had a medication that might be implicated in delirium onset, less than anticipated. Many more had medications after delirium onset which might prolong delirium, but did not change length of stay. Reduction of inappropriate medications after delirium onset may be a critical component of lessening the impact of delirium.

B181

Impact of financial distress on perception of preparedness, burden and quality of life in caregivers of persons living with dementia

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Background: There are little data on financial hardship experienced by persons living with dementia (PLWD) and its impact on family caregivers while receiving home-based palliative care (HBPC). These issues are especially relevant now given the economic turmoil related to COVID-19. The purpose of this analysis is to determine if patient financial distress is associated with worse caregiver preparedness, quality of life (QoL) and burden.

Methods: We drew from baseline data collected for a comparative effectiveness trial of two models of HBPC for patients with serious illness and their family caregivers. We contacted caregivers within 14 days of patient admission to HBPC. We assessed financial distress with a validated question with the anchors: 0=no financial distress to 10=worst financial distress. Patients who scored 6 or more were considered to have moderate to severe financial distress. Caregivers completed the Preparedness for Caregiving Scale, PROMIS-10 QoL and Zarit-12 Burden Scale.

Results: Characteristics of the 146 caregivers were: mean age of 62±12, 85% females, 53% White, and >80% providing caregiving for at least a year and receiving help from others. Approximately 42% of caregivers (67% of whom were adult children; 25% spouses) endorsed some level of patient financial distress and 20% (n=29) reported moderate to severe financial distress; the prevalence of financial distress was similarly reported by adult children and spouses. Financial distress was significantly associated with worse caregiver physical and mental QoL and burden ($p<.05$) and marginally with perception of preparedness for caregiving ($p=.08$).

Conclusions: These findings reinforce the importance of assessing for and attending to the social needs of PLWD and their families. More efforts to provide highly personalized, integrated medical and social in-home care for PLWD and caregivers is needed to reduce the burden on financially strained families.

	No to mild financial distress (score of 0-5)	Moderate+ financial distress (score of 6+)	P-value
Caregivers	n=117	n=29	
Preparedness for Caregiving Scale (0-32↑)	23.0±6.4	20.7±6.1	.08
PROMIS-10 Quality of Life, Physical (16-68↑)	48.5±9.3	42.0±10.4	.001
PROMIS-10 Quality of Life, Mental (21-68↑)	47.9±8.8	41.6±10.0	.001
Zarit-12 Burden (↓0-48)	13.2±9.1	21.1±8.4	<.001

↑↓ = direction of positive scores for surveys

B182

Neuropsychiatric symptoms in LATE: the interaction between TDP-43 and hippocampal sclerosis pathology on anxiety

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Background: Hippocampal sclerosis (HS) and TDP-43 pathology can be found concurrently in limbic-predominant age-related TDP-43 encephalopathy (LATE). LATE is a newly coined neuropathological change of the aging brain that can mimic Alzheimer's disease. It is critical to understand how HS and TDP-43 shape symptomatology in LATE. While HS with concurrent TDP-43 is known to portend a worse cognitive phenotype compared to HS alone, the impact of TDP43 on neuropsychiatric symptoms is unclear. Here we examine the impact of TDP43 on anxiety in the background of HS.

Methods: Retrospective clinical data was gathered from autopsy-confirmed cases of HS with or without TDP-43 pathology from the National Alzheimer's Coordinating Center database. At mild cognitive impairment (MCI) and mild dementia stages, we examined the impact on anxiety, as measured via the Neuropsychiatric Inventory Questionnaire (NPI-Q), of TDP43 pathology in 4 key anxiogenic areas: amygdala, hippocampus, entorhinal cortex/inferior temporal cortex, and neocortex. Statistical analysis was performed using Fisher's exact test.

Results: At both MCI and mild dementia stages, the prevalence of anxiety is not significantly modulated by the specific presence of TDP43 in any of these areas. At MCI, anxiety was similar without and with TDP-43 in amygdala (27.5% and 26.9% respectively, p=1.0000), hippocampus (28.6% and 23.3%, p=0.5134), entorhinal cortex/inferior temporal cortex (34.1% and 27.8%, p=0.5340), and neocortex (24.2% and 24.4%, p=1.0000). At the mild dementia stage, anxiety was more prevalent than in MCI but again was not statistically significant without and with TDP43 in amygdala (46.4% and 43.6%, p= 0.8523), hippocampus (43.2% and 47%, p= 0.7453), entorhinal cortex/inferior temporal cortex (47% and 49.1% p=0.8700), or neocortex (42.4% and 41.7% p= 1.0000).

Conclusion:

These results suggest that the pathobiology of neuropsychiatric symptoms may be distinct from that of cognitive symptoms in LATE. Further studies are needed to better understand clinicopathological correlations related to anxiety in LATE.

B183

Cognition and functional disability associations in typical and atypical dementia syndromes

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Background: The relationship between cognition and function in dementia is well-established, yet there are gaps in understanding how individual cognitive domains relate to functional disability. We aimed to study the associations between individual cognitive domains and functional decline in a large sample of older adults with typical and atypical dementia syndromes.

Methods: Participants (n=542) were older adults grouped by clinical syndrome: typical Alzheimer disease, primary progressive aphasia (PPA), and behavioral variant frontotemporal dementia (bvFTD). Cognition was measured by global, memory, executive function, language, and visuospatial composites. Functional disability was measured via the Functional Assessment Questionnaire (FAQ). Separate multiple regression analyses covarying for demographics were performed in each of the clinical phenotype groups.

Results: Participants in the typical Alzheimer disease were older and had longer disease duration compared to other groups, FAQ score was negatively associated with performance on the memory composite. In the PPA group, predictors of the FAQ were executive and language composites. In the bvFTD group, the FAQ was negatively associated with the memory and executive composites, and positively associated with the language composite.

Conclusions: Our results contribute to better understand how objective impairment in distinct cognitive domains contributes to functional disability, and extend the current knowledge to individuals with atypical syndromes. These findings provide important insights into unique patterns of associations between cognitive and functional decline in older adults with typical and atypical dementia, and have important implications for clinical care and clinical trials.

Results

	Typical Alzheimer	Primary progressive aphasia (n = 167)	Behavioral variant frontotemporal dementia (n = 171)
Age	0.050	0.083	-0.035
Education	0.110	0.084	0.300
Female	-2.655*	-0.268	-0.370
White	-1.814	-1.263	-0.320
Years since onset	0.002	0.206	0.357**
Memory w-score	-1.625**	-0.910	-2.606***
Executive w-score	-1.351	-1.685**	-2.231***
Language w-score	-0.750	-0.660*	1.151**
Visuospatial w-score	-0.542	-0.601	-0.530

***p<.05, **p<.01, ***<.001**

B184

Examining the Effect of Perceived Fatigability on Cognitive Function Abilities in Older Adults with MCI

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Background Chronic fatigue with cognitive and daily functioning decline is a major public health concern in older adults. The association between fatigue and neurodegenerative conditions (e.g., multiple sclerosis) has been studied for many years. But, it is not known the relationship between Alzheimer's pathology and perceived fatigability, a phenotype characterized by the relationship between an individual's perceived fatigue and the activity level with which the fatigue is associated. We examined the role of fatigability on the link between cognitive function and cognitive function abilities and the effect of sleep on this indirect link in older adults with mild cognitive impairment (MCI).

Methods Adults age > 55 years who met the ADNI criteria for MCI were included. Depression assessed by the DSM-V criteria and a GDS>5 was exclusionary. We conducted the study with the PROMIS Cognitive Function-Abilities (**CogAb**), Sleep Disturbances (**SD**), Sleep-related Impairment (**SRI**), and the Neuro-QOL Cognitive Function (**CogF**) and Fatigue, including Fatigue symptom score (item1-3&7) and Fatigability score (item4-6&8). Linear regression models were fit to Fatigue and Fatigability included sleep outcomes and their interaction as predictors. Mediation models were fit to assess whether fatigability mediated the effect of CogF on CogAb.

Results Before the COVID pandemic, 36 subjects were recruited, with the mean age= 68.8 ±9.3, 58.3% female, 78% white, and 15.2% Hispanic. The results revealed that CogF predicted CogAb (b= 0.78, t(34)=4.83, p<0.001). Analysis of the indirect effects showed CogF predicted Fatigability (b=-0.29, t(34)=-3.09, p<0.005), Fatigability

predicted CogAb (b= -0.99, t(33)=-4.03, p<0.001), CogF predicted CogAb (b=0.49, t(33)=3.25, p<0.01). The indirect effect of CogF on CogAb mediated through fatigability was significant (95%CI=0.08, 0.44), even after controlling for age and education, and fatigue symptom score. Fatigability was associated with SRI (beta=0.642, t=4.73, p<0.001) but not SD (P>0.05) after controlling for age. SRI had no direct effect on CogAb.

Conclusions Perceived fatigability partially mediated the link between CogF and CogAb and sleep outcomes had no significant impact on this indirect link. The results suggested that fatigability could be a biological construct of Alzheimer's pathology, independent from sleep and depression.

B185

Health outcomes among middle-aged and older adults initiating medical marijuana for chronic pain: A 3-month prospective study incorporating ecological momentary assessment (EMA)

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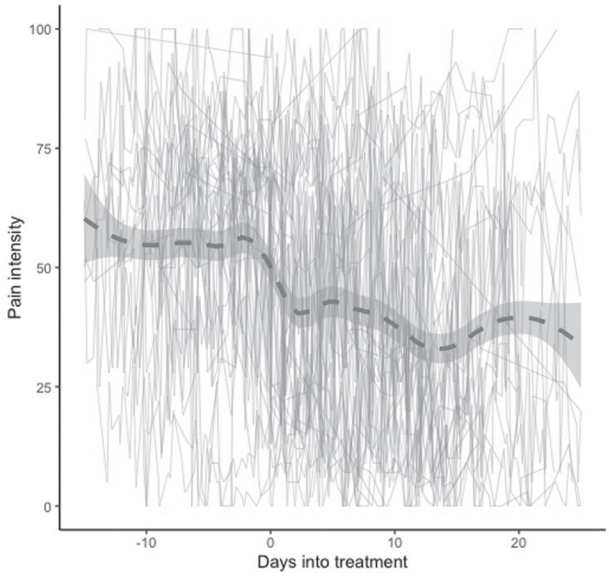
2. University of Florida, Gainesville, FL.

Background: Despite the inconsistent findings on its effectiveness, medical marijuana is increasingly used by middle-aged and older adults for chronic pain. To obtain more rigrous data, we conducted a 3-month prospective study incorporating ecological momentary assessment (EMA) to examine the effects of medical marijuana on pain, opioid use, anxiety/depression, and quality of life.

Methods: Forty-six adults (Mean age=55.7±11.9, 52.2% male) were recruited from medical marijuana clinics before initiating medical marijuana treatment. Participants completed a baseline survey, EMA for approximately 1 week pre- and up to 3 weeks post- medical marijuana treatment, and a 3-month follow up survey.

Results: Multilevel modeling of EMA data (2535 random and 705 daily assessments) indicated significant reductions in momentary pain intensity (b = -16.5, $p < .001$, 16.5 points reduction on 0-100 visual analog) and anxiety (b = -0.89, $p < .05$), and significant increase in sleep duration (b = 0.34, p < .01) and sleep quality (b = 0.32, $p < .001$). At 3 months, proportion of individuals with daily opioid use was reduced from 59.8% at baseline to 26.9%. Participants also reported lower levels of worst pain ($t = -2.38$, $p < .05$), pain interference ($t = -3.82$, $p < .05$), and depression ($t = -3.43$, $p < .01$), as well as increased sleep duration ($t = 3.95$, $p < .001$), sleep quality ($t = -3.04$, $p < .01$), and quality of life ($t = 4.48$, $p < .001$).

Conclusions: In our sample of primarily middle-aged and older adults with chronic pain, medical marijuana is associated with reduced pain intensity and inference, lower anxiety/depression, and improved quality of life. Future research is needed to confirm the current findings.



B186 Student Presentation

Preoperative EEG: A Potential Predictor of Postoperative Delirium in Older Adults

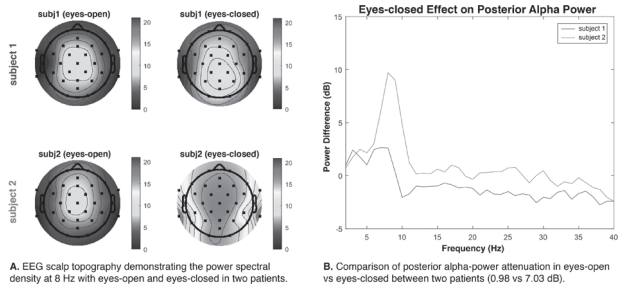
S. Au, K. Roberts, M. Cooter, L. Acker, C. Ha, M. Woldorff, C. Colón-Emeric, H. Whitson, M. Berger. *Duke University School of Medicine, Durham, NC.*

Background: Electroencephalogram (EEG) alpha-band activity (8-12 Hz) has known sensitivity to aging, anesthesia, and cognitive decline. Specific differences in intraoperative EEG have previously correlated with preoperative neurocognitive status in older adults. We hypothesize that resting-state EEG activity might also serve as a marker of neurophysiologic resilience after surgical anesthesia. We focused on the alpha-power attenuation in eyes-open (EO) relative to eyes-closed (EC) states, predominantly observed over posterior brain regions. Our objective is to examine whether preoperative EEG differences in EC/EO conditions predict cognitive outcomes in older adults.

Methods: Patients ≥ 60 years old underwent 32-channel EEG collection for 3 minutes each EC and EO before elective surgery. We measured delirium incidence and symptom severity using the 3D-CAM cognitive battery twice daily during hospitalization and at 6-weeks after surgery. EEG processing was performed by investigators blinded to 3D-CAM measures and patient demographics. We extracted EEG measures for ongoing regression analyses to assess the relationship between preoperative EEG and cognitive outcomes.

Results: Preliminary analyses showed a median (IQR) midline posterior alpha-power difference (EC/EO) of 4.76 (1.97 - 7.21) dB in a group of 101 older adults. Fifteen patients showed minimal posterior alpha-power difference (<1 dB) between EC and EO conditions. Figure 1 illustrates two examples of the power-attenuation variation seen in our sample.

Conclusion: We observed variability in the eyes-closed effect on EEG alpha power among a cohort of older patients facing elective surgery. Our next steps will determine whether these differences are associated with postoperative delirium incidence and symptom severity.



A. EEG scalp topography demonstrating the power spectral density at 8 Hz with eyes-open and eyes-closed in two patients. **B.** Comparison of posterior alpha-power attenuation in eyes-open vs eyes-closed between two patients (0.98 vs 7.03 dB).

Figure 1. Differences in alpha-power attenuation with eyes-open vs eyes-closed EEG between two older adults facing elective surgery.

B187 Student Presentation

Association of H2 blockers or PPIs with Delirium Development in Critically Ill Adults

A. Shiddapur,[1] C. E. Kistler,[2,3] J. Busby-Whitehead,[2] C. Austin.[2,4]
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Background: Histamine-2 receptor antagonists (H2RAs) are commonly administered for stress-ulcer prophylaxis in critically-ill adults and may be associated with delirium development. We aimed to determine differential associations of H2RA or proton pump inhibitor (PPI) administration with delirium development in patients admitted to a U.S. academic tertiary care medical intensive care unit (MICU).

Methods: This was a retrospective observational study using a deidentified database containing data from the UNC Health Care system. Adults admitted to the UNC MICU from January 2015-December 2019 were included. Participants with delirium were identified utilizing an ICD based algorithm. Associations between H2RAs, PPIs, or neither medication (control group) and delirium were identified using relative risks. Multiple logistic regression was used to control for potential confounders including mechanical ventilation and age.

Results: We identified 6645 critically ill patients, of whom 29% (N = 1899) received mechanical ventilation, 45% (N = 3022) were 65 or older, and 22% (N = 1487) died during their MICU encounter. Of the 6645 patients, 31% (N = 2057) received an H2RA and no PPIs, 40% (N = 2648) received a PPI and no H2RAs, and 46% (N=3076) had delirium. The H2RA group had a significantly greater association with delirium than the PPI group compared to controls receiving neither medication, after controlling for mechanical ventilation and age ((RR 1.36 [1.25–1.47]; $p < 0.001$) and (RR 1.15 [1.07-1.24]; $p < 0.001$), respectively).

Conclusions: In our retrospective observational study, H2RAs were more strongly associated with increased delirium than PPIs. Prospective studies are necessary to further elucidate this association and to determine if replacement of H2RAs with PPIs in ICUs decreases the burden of delirium in critically-ill patients.

B188

Characteristics of persons living with dementia and their family caregivers at admission to home-based palliative care

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Background: Data on the characteristics of persons living with dementia (PLWD) who receive home-based palliative care (HBPC) services and their family caregivers are limited. The purpose of this analysis is to compare patient symptom burden and quality of life (QoL) and caregiver preparedness, QoL, and burden between PLWD and those without a diagnosis of dementia.

Methods: Data for this analysis was drawn from baseline data collected as part of a comparative effectiveness trial of two models of HBPC for patients with serious illness and their family caregivers. Research staff contacted participants within 14-days of admission to HBPC. Patients or proxy caregivers completed the Edmonton Symptom Assessment Scale (ESAS), distress thermometer, or PROMIS-10 Quality of Life (QoL); caregivers completed the Preparedness for Caregiving Scale, PROMIS-10 QoL, and Zarit-12 Burden Scale.

Results: PLWD were older (85±8 vs. 76±13), more often female (61% vs. 43%), and had lower comorbidities (7.9±3.2 vs. 8.6±3.4) than those without dementia. Symptom burden (ESAS: 37.7±17.2 vs. 39.2±16.0) and QoL (PROMIS-10 physical: 30.5±6.7 vs. 29.8±6.7) were not significantly different across cohorts but mental well-being was lower for PLWD (35.3±8.2 vs. 39.7±8.4, p<.001). Caregivers were similar in age (62±12 vs. 62±14) with more caregivers of PLWD reporting receiving help from others (82% vs. 69%). There were no differences between caregivers on perception of caregiving preparedness (22.5±6.2 vs. 22.9±6.2) nor QoL (physical: 46.6±9.9 vs. 48.1±8.5; mental: 46.2±9.4 vs. 46.8±8.8, p>.05), but caregivers of PLWD reported significantly higher burden (14.7±9.3 vs. 12.3±8.8, p=.01).

Conclusions: PLWD who receive HBPC services are generally older and female with similar comorbidities as patients without dementia. Except for worse patient mental well-being and caregiver burden in the PLWD cohort, there were no other remarkable differences between the two cohorts at the start of HBPC. Future analyses will examine whether end-of-life care and outcomes differ between the two cohorts as a result of HBPC.

B189 Student Presentation

Association of Clinical and Radiologic Frailty with Outcomes after Stroke Intervention

Y. Yu,[1] U. Kamal,[2] D. Sharma,[2] A. M. Joffe,[2] D. L. Tirschwell,[4] M. Reed,[3] I. Bentov.[2] *1. University of Hawai'i at Manoa John A Burns School of Medicine, Honolulu, HI; 2. Department of Anesthesiology and Pain Medicine, University of Washington, Seattle, WA; 3. Division of Gerontology and Geriatric Medicine, Department of Medicine, University of Washington, Seattle, WA; 4. Department of Neurology, University of Washington, Seattle, WA.*

Background: Frailty is associated with poor outcomes after illness, trauma, and surgery. However, the effects of prior frailty status on outcomes after stroke have not been studied. Our aim was to determine if stroke size or frailty (as determined by clinical assessment and radiological indicators) are associated with functional outcomes after stroke intervention.

Methods: In a retrospective cohort study, 202 ischemic stroke patients (avg. age=69, 52% M, 48% F) who were independent prior to presentation and had undergone a mechanical stroke intervention (mechanical thrombectomy with or without thrombolysis), at Harborview Medical Center, were analyzed for stroke size, frailty, and stroke intervention outcomes. Stroke size was assessed using the

Alberta Stroke Program Early CT Score (ASPECTS). Frailty was assessed clinically using the 5-item modified frailty index (mFI-5) and inferred radiologically by measuring masseter cross sectional area (CSA) and brain atrophy (intercaudate ratio). Primary outcomes were modified Rankin scores (mRs) (a 6 point disability scale at hospital discharge and 3 months post-discharge). Additionally, modified Treatment in Cerebral Infarction (mTICI) scale was used to assess the success of intervention. Student's t-test and Spearman's coefficient were used to identify the relationship between the covariates and outcomes.

Results: The stroke size was not correlated with outcomes after stroke intervention. Pre-stroke conditions, such as age (r^s=0.35), clinical frailty (r^s=0.26), masseter CSA (r^s=-0.26), and brain atrophy (r^s=0.18) were associated with disability at discharge and at 3 months post-discharge (p<0.01 for all). Age, clinical frailty, and masseter CSA were not associated with mTICI scale scores (p>0.7 for all).

Conclusions: Clinical and radiologic measures of frailty, but not stroke size, are associated with poor functional outcomes after mechanical intervention for ischemic stroke. Frailty assessment in stroke patients undergoing mechanical thrombectomy can potentially provide a prognostic tool.

POSTER SESSION D (STUDENTS & RESIDENTS)

Friday, May 14
2:45 pm – 3:45 pm

D1 Student Presentation

Suspected SARS-CoV-2 in geriatric patient experiencing homelessness: A case report and review of limited protective housing options.

M. G. Korte,[1] J. Walker.[2] *1. University of Chicago Pritzker School of Medicine, Chicago, IL; 2. Section of Geriatrics, The University of Chicago Medicine, Chicago, IL.*

Introduction

Individuals experiencing homelessness, especially those living in homeless shelters, are at an increased risk of acquiring SARS-CoV-2.[1] The CDC recommends protective housing for homeless individuals at increased risk for severe COVID-19 infection, including older adults.[2] Geriatric patients experiencing homelessness have limited options for protective housing and post-acute care during the COVID-19 pandemic.

Case Presentation

A 71-year-old man with a history of hypertension, depression, chronic obstructive pulmonary disease, and type 2 diabetes mellitus presented to the hospital for syncope preceded by four days of weakness, appetite loss, fatigue, and shortness of breath. His symptoms and chest x-ray were highly suggestive of a viral pneumonia. Two nasal PCR swabs and one rapid antigen screen for SARS-CoV-2 were negative. A full respiratory viral panel was also negative. A presumptive diagnosis of pneumonia due to COVID-19 was made based on high community prevalence at the time of presentation. The patient received supportive care for viral pneumonia and antibiotics for possible concurrent community-acquired pneumonia. He could not return to the shelter where he lived until he completed a 10-day quarantine. After quarantining at a nursing home, he was unable to return to the shelter as it had reached capacity.

Discussion

Nursing home residents are at an increased risk for contracting SARS-CoV-2 and experience high mortality rates, accounting for 42% of all US deaths due to COVID-19.[3] Limited shelter beds and strict infection control measures coupled with a lack of alternative isolation sites necessitated this patient's discharge to a nursing home, presenting risks both to the patient and the nursing home. Protective housing could mitigate these risks and must be prioritized to prevent the spread of COVID-19 and improve health outcomes for homeless older adults.

References:

1. Ghinai, I., *et al*. Risk Factors for Severe Acute Respiratory Syndrome Coronavirus 2 Infection in Homeless Shelters in Chicago, Illinois-March-May, 2020. *Open forum infectious diseases* (2020).

2. CDC, U.S. Department of Health and Human Services. Interim Guidance for Homeless Service Providers (2020).

3. Abrams, H. R., et al. Characteristics of U.S. Nursing Homes with COVID-19 Cases. *Journal of the American Geriatrics Society* (2020*)*.

D2 Student Presentation

Role of Social Networks in Prognostic Understanding of Older Adults with Advanced Cancer

V. Yu, S. Yilmaz, J. Freitag, K. Loh, L. A. Kehoe, G. DiGiovanni, J. Bauer, C. Sanapala, R. M. Epstein, R. Yousefi-Nooraie, S. Mohile. *University of Rochester, Rochester, NY.*

Background: Up to 60% of older adults with incurable cancer and their caregivers differ with their oncologists when reporting chances that the cancer is curable. These patients often rely on social networks for information, support and advice regarding their cancer. However, little is known about how patients' social networks influence prognostic understanding.

Methods: In a pilot study of adults 65+ with incurable cancer who were considering treatment options, patients were asked to complete surveys, social network maps and semi-structured interviews exploring with whom they prefer to communicate about their illness; and to invite network members to participate in interviews exploring similar themes. Transcribed interviews were analyzed using open-coding by 2 coders, and discrepancies were identified and resolved with help of a third. Codes were categorized into emergent themes. To explore associations between network structure and communication patterns, network maps were reviewed and 3 case examples with diverse network characteristics were selected to juxtapose with communication patterns. Because gender influences communication, same-gender patients were chosen. Using a joint display, themes were integrated with quantitative structure scores developed using social network analysis of the maps.

Results: The case examples were males, 65+ with incurable cancer. Inadequate communication was prominent in each social network; however, network structures dictated differences in communication dynamics and influenced prognostic understanding. Patient A expressed prognostic understanding but tended to withhold information about his illness, selectively sharing with one core member of his star-shaped network. Patient B's cohesive network collaborated to bear the weight of prognostic information, supporting the patient's preference to disengage from the topic. Minimal information sharing between segregated clusters of Patient C's network impeded prognostic understanding.

Conclusions: All case examples illustrated opportunities for improved communication within social networks, and how interventions to foster prognostic understanding might be optimally tailored to different patient network structures.

A: 72 year old with esophageal cancer; active treatment STAR NETWORK (unconnected network members radiating from ego): "I haven't told many people. I just don't think at this stage I need to tell the fringe friends about the situation." Density: 0.54; Ego's clustering coefficient: 0.38; Overall clustering coefficient: 0.54; Percent kin: 43%; Ego's constraint: 0.46; Ego's hierarchy: 0.19	Themes: Acceptance and Selective Sharing Patient: "I call myself a realist. Sometimes that's why I don't want to bring it up with people." Patient: "I don't like to start the conversation (about cancer and prognosis), even with my friends and family members. If they ask me, I'll answer, but I don't initiate the conversation."
B: 66 year old with pancreatic cancer; on treatment break COHESIVE NETWORK (tight knit family) "I talk to my wife primarily; […] I talk to all [family members] with quite a large degree of honesty." Density: 0.58; Ego's clustering coefficient: 0.48; Overall clustering coefficient: 0.86; Percent kin: 60%; Ego's constraint: 0.29; Ego's hierarchy: 0.05	Themes: Avoidance and Reliance on Core Members Daughter: "[Patient] left the room for that (prognostic discussion with provider). It was just my mom, my sister and I. He knows it's not good but he didn't want to know." Spouse: "[Patient] is not medical so there's a lot that he doesn't know and doesn't want to know. It's not that he doesn't understand … the severity of his diagnosis, but he doesn't want to talk about it."
C: 78 year old with liver cancer (incurable); active treatment SEGREGATED NETWORK (different connections within clusters): "So my discussions with my family have been minimal. […] They know what's going on. But the idea of me to actually say it? No." Density: 0.34; Ego's clustering coefficient: 0.26; Overall clustering coefficient: 0.69; Percent kin: 33%; Ego's constraint: 0.18; Ego's hierarchy: 0.02	Themes: Lack of Information and Barriers to Communication Patient: "We (patient and provider) haven't gotten into a discussion as to how far I go. What the time frame is? I don't know." Patient: "My wife […] has been going through a lot with the back operation. […] I don't want to disrupt things. So I keep her at a minimum." Patient: "[Friends and family] are probably waiting for me to […] have a little kumbaya moment together and start talking about things which I'm going to have to have. That's why I need a little more information and then I probably will."
Network Characteristics Density: number of existing ties over all possible ties (max=1) Ego's clustering coefficient: % of contacts connected to each other Overall clustering coefficient: the average of all clustering coefficients. A measure of overall connectivity. Percent kin: % of contacts who are family members Ego's constraint: Ego's investment in others who are connected to one another Ego's hierarchy: Extent to which constraint on ego concentrates in a single contact.	

D3 Student Presentation

Cultural Background Influence on the Diagnosis of Dementia

P. CHan,[2] N. Quillatupa.[1] *1. Internal Medicine, Kern Medical Center, Bakersfield, CA; 2. Adtalem Global Education Inc, Downers Grove, IL.*

Background: As the diversity of ethnicities in the United States grows every day, providers must adapt to patients with different cultural backgrounds, education levels, socioeconomic status, and health literacy. The Mini-Mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA) are the most widely used test to screen for cognitive impairment. Although widely used, they are known to be difficult for patients with low education level and in those who do not speak English as a first language. Thus, providers must explore other screening tools to assess for cognitive impairment such as the Rowland Universal Dementia Assessment Scale (RUDAS).

Method: Retrospective case study

Results: This case report follows an 80-year-old Hispanic female with hypertension, diabetes, osteoarthritis and hypothyroidism who was evaluated as a second opinion due to possible Alzheimer's disease. Patient was brought into the office by her daughter. Patient endorses that her memory is "good" and that she has "good and bad days". She admits that she gets upset due to not being completely independent, mainly due to severe osteoarthritis. Per her daughter, the patient's memory has been progressively declining for the past few months. Patient is having problems with direction to home, daughter's and grandchildren's names, and becoming more oppositional at home. She was seen by Neurologist who diagnosed Alzheimer's Dementia based on history, MMSE or MoCA were not performed due to patient's frustration with the test. Taking into account her low literacy and cultural background, RUDAS was chosen to assess for cognitive impairment. Patient score a 24/30 with any score of 22 or less considered as possible cognitive impairment.

Conclusion: Providers must adapt to the need of their patient population. The RUDAS is a short cognitive impairment screening tool that was designed to minimize the effect of cultural learning and language diversity when assessing for baseline cognitive performance. The RUDAS has been known to perform similarly to the MMSE and MoCA. The advantages that the RUDAS gives over MMSE and MoCA is that it is a shorter test and it may be less affected by education and language.

D4 Student Presentation

Superficial Vein Thrombosis and Subsequent Diagnosis of Malignancy

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Superficial Vein Thromboses (SVT) are generally associated with endothelial damage and hypercoagulable states. An 83-year old woman with a past medical history of a healed ulcer secondary to venous stasis edema presented to the clinic with a one-week history of unilateral right medial thigh pain and erythema. The patient denied precipitating factors for SVT, including a personal or family history of venous thromboembolism, recent major surgery, known cancer diagnoses, prolonged immobilization, intravenous insertion into the site, trauma, prior venous grafts, or varicose veins. The patient denied unintentional weight loss, fatigue, or night sweats, and a recent CBC and CMP were within normal limits. Upon examination, the right medial thigh was notable for a macular, erythematous, superficial rash with induration. Duplex ultrasonography of the area showed complete occlusion of the great saphenous vein. As SVT may co-occur with deep venous thrombosis and increase the risk for embolic events, treatment was initiated with a 45-day course of rivaroxaban 45 mg daily. One month later, routine mammography was conducted and revealed a 15 mm mass in the left breast. An ultrasound-guided biopsy revealed infiltrating ductal carcinoma, estrogen-receptor positive, HER2 negative. She underwent wide local excision and adjuvant endocrine therapy with letrozole. Three months later, she is tolerating letrozole therapy and has not experienced any recurrent venothromboembolic phenomena. This case illustrates the importance of conducting a thorough history and physical examination in geriatric patients with a high likelihood of SVT. Furthermore, in patients diagnosed with SVT, continuation of routine screening for malignancy is prudent, even in situations where the thrombosis initially appears to be unprovoked.

D5 Student Presentation

"Making" a diagnosis of GCA

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Background: Musculoskeletal pain is common in older adults. Cognitive impairment can complicate diagnosis.

Methods: We describe a frail 87 y/o woman with moderate cognitive impairment, living alone, osteoporosis came to clinic with two days of acute fluctuating neck stiffness and back pain.

Results: Exam showed limited range of motion in neck and left cervical/high thoracic paraspinal pain. No shoulder pain or stiffness. X rays showed multilevel degenerative changes without fracture. ESR 61 mm/h; CRP 28.9 mg/L. Physical therapy, acetaminophen and tramadol were begun. After two days, the family reported severe distress with bilateral mid and upper back pain, and the patient was taken to ER.

No history of witnessed fall. To us, she denied shoulder or hip pain, and morning worsening. To others, however, she reported shoulder pain and morning stiffness. Family members, very attentive to patient's pain behaviors, tended to ask the patient closed-ended questions and report their assumptions and opinions rather than primary data.

In ER, diagnostic and therapeutic dose of 15 mg prednisone tablet was given for presumptive diagnosis of PMR. Family reported remarkable improvement in shoulder range of motion and neck pain within 1.5h. However, the patient continued to complain of moderate neck and back. On a single occasion she endorsed jaw pain during lunch and was noted to have a prominent and tender left temporal artery. Although her temporal artery tenderness resolved spontaneously, 40 mg prednisone was begun for suspected giant cell arteritis (GCA). Gradual improvement continued. Left temporal artery

biopsy was negative for GCA. An abbreviated steroid taper was initiated and she was discharged to rehab. Slow improvement continued. After 2 weeks she was discharged to family and soon moved to an ALF.

Conclusions: PMR/GCA can be difficult to diagnose. Treatment can be morbid and failure to treat can be catastrophic. This patient's cognitive impairment seemed to allow anchoring bias in both family and clinicians. The initially unilateral pain, single mention and spontaneous resolution of jaw claudication, fleeting temporal artery tenderness, rapid (less than 90 min) dramatic response to oral prednisone, and possibility of unreported falls as an alternate explanation created uncertainty in diagnosis and management. Recognizing, tolerating and responding to diagnostic uncertainty are core skills in geriatrics.

D6 Student Presentation

Polypharmacy Management in Geriatric Patients: A case report

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Background: With the aging population of the United States (US), there has been an increase in the use of polypharmacy. Polypharmacy is commonly known as the use of more than five medication in a single patient. The US has one of the highest medication use rates per capita in the world. Even though medications are used to treat different chronic conditions, it can also cause harm especially in older adults by worsening geriatric syndromes and adverse drug events. To help with the management of polypharmacy, providers should use existing tools such as the American Geriatrics Society (AGS) Beers Criteria and Screening Tool of Older People's Prescriptions (STOPP), nonpharmacological therapies, and patient education.

Method: Retrospective case study

Results: An 80-year-old Hispanic female with hypertension, diabetes, cardiovascular disease, osteoarthritis, peripheral vascular disease and hypothyroidism was evaluated for possible Alzheimer's disease due to increase issues with her memory. Patient was accompanied by her daughter who brought in her medication list, which consisted of 20 medications, prescribed by different specialists for her chronic conditions. During this visit, her medication list was reviewed and consolidated. Medications were adjusted and discontinued, based on whether multiple drugs were prescribed by different providers and were in the same drug class, or if any had adverse drug events. In addition, certain medications were titrated based on the patient's comorbid conditions. Over multiple clinic visits, patient's medication list was consolidated to 13 medications, with the appropriate dose recommended for management of her chronic conditions. Both the patient and daughter were educated on every medication and its adverse drug events

Conclusion: Polypharmacy is a significant part of the lives of many geriatric patients with chronic conditions so the management of these patient is a growing challenge for health care providers. In this particular population, polypharmacy is associated with adverse drug events such as falls. Providers must take the time to review and consolidate medications using guidelines available in order to improve the care and quality life of geriatric patients.

D7 Student Presentation

Pulmonary nocardiosis in the setting of high-grade urothelial carcinoma

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Nocardiosis is an uncommon etiology of pulmonary disease but, when overlooked or undertreated, the diagnosis carries a high mortality rate. Nocardiosis is rarely seen in immunocompetent individuals but is associated with specific risk factors that providers can use to increase their suspicion for nocardiosis in some patient populations. We present a case report of a patient with multiple risk factors including active solid organ malignancy, immunosuppression, and systemic corticosteroids who presented with fever, dysuria, and non-productive cough who was later found to have pulmonary nocardiosis. We conclude by presenting three nuances of nocardiosis that can help providers recognize and appropriately treat patients with risk factors.

D8 Resident Presentation

Altered mental status: not all is as it seems

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A 78 year old male with schizophrenia, generalized anxiety disorder and diabetes was evaluated in the hospital for altered mental status after being found down at home. He was admitted to the ICU for management of urosepsis, rhabdomyolysis, acute kidney injury and encephalopathy. After transferring out of the ICU, he was found to have lack of verbal response, rigidity, resistance to passive movement and repetitive exaggerated movements of back-arching with exhalation.

Collateral history revealed the patient had recently been more withdrawn with a sharp functional decline. He could not follow through with tasks of having his refrigerator or hot-water heater repaired and was not regularly eating. He had discontinued use of olanzapine six months prior to presentation. His anxiety was managed with clonazepam for years, but he had recently run out of the medication. The patient was diagnosed with catatonia as he had cardinal features including mutism, immobility, negativism, waxy flexibility, stereotyped behaviors and automatic obedience. He responded to a benzodiazepine challenge and became conversive, less rigid, mobile and had improved oral intake. He was medically stabilized and transferred to inpatient geriatric psychiatry unit for residual symptoms of catatonia.

The association between catatonia and psychiatric conditions is well established. There have been reports of catatonia as a symptom of withdrawal from benzodiazepine in long term users. Our patient developed catatonia from both sudden cessation of benzodiazepines and untreated schizophrenia and his infectious and metabolic illnesses likely exacerbated the syndrome. Clinical suspicion of catatonia should prompt thorough medication review. Although there is significant data about harm from benzodiazepine use in the geriatric population, one must be thoughtful in stopping benzodiazepines in patients with underlying psychiatric illnesses as this could precipitate catatonia.

Diagnosing catatonia is important as the mortality and morbidity associated with untreated catatonia is high. However, the diagnosis is difficult given overlapped symptoms with delirium such as altered mentation and hypokinesis. Falls and delirium are common in the geriatric population but catatonia should be suspected in atypical presentations when there are features of mutism, immobility, stupor and functional decline.

D9 Resident Presentation

Pelvic Fracture Masquerading as Delirium

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Introduction

Delirium is a common presenting symptom for hospitalized older adults. It has been a challenge for non-geriatric experts to evaluate delirium in older adults suffering with dementia. Our case demonstrates how comprehensive geriatric assessment can help to demystify delirium.

Case

An 81-year-old man with a history of dementia and recurrent cerebrovascular accidents (CVA) was admitted with agitation, requiring both chemical and physical restraints. He had suffered a recent CVA, hence his presentation was concerning for a new stroke.

Initial workup including CT head and lab tests were unremarkable. Neurology was consulted and raised concern for a new CVA and requested MRI Brain. However, patient was too restless to undergo the MRI scan.

Geriatric consult service was requested to assist with patient's hyperactive delirium. He was not able to engage in conversation. A detailed collateral history revealed that the patient had sustained multiple recent falls and careful examination revealed facial grimacing upon palpation and movement of his right hip. Geriatric consult service recommended right hip imaging and pain control with scheduled acetaminophen. The imaging revealed comminuted right acetabular fracture. Orthopedic Surgery recommended conservative non-operative treatment. With adequate pain control and non-pharmacological interventions for delirium, the patient's mental status improved. Patient did not require further restraints and his family reported that he was almost back to his baseline. We were able to initiate serious illness conversation with his health care agents and completed advance directive according to patient's previously expressed wishes that he would not want heroic interventions. Family goal was for the patient to undergo another trial of rehabilitation.

Conclusion

Our case illustrates the importance of comprehensive geriatric assessment, a core clinical skill that can be performed by non-geriatric experts. For older adults with dementia or delirium, it is important to obtain collateral history and perform detailed examination. In our patient, prompt diagnosis of pelvic fracture could have prevented unnecessary restraints, tests and debility for a frail older adult. In summary, all clinicians should develop competency in comprehensive geriatric assessment to care for our ageing population.

D10 Resident Presentation
Shedding "lyte" on recurrent seizures

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Case: An 84-year-old female with advanced dementia, CVA and recent diagnosis of seizures presented with recurrent seizures. One month prior, she had experienced her first known seizure in the setting of UTI, recent stroke, and hypocalcemia (7.9). Keppra was started but she was unable to tolerate it due to drowsiness. At this presentation, she was again noted to be hypocalcemic (6.7) with normal PTH and Vitamin D levels, and the etiology of her refractory hypocalcemia remained unclear. Her second seizure was attributed to the absence of antiepileptic therapy and refractory hypocalcemia. She was initiated on Vimpat and discharged. Unfortunately, she presented again 2 months later with drowsiness and possible post-ictal state. Workup was notable for severe hypomagnesemia to 0.5. No prior magnesium levels had been checked during her recent admissions.

Discussion: Hypomagnesemia is common--estimated to occur in 12% of hospitalized patients with higher incidence among ICU patients. Symptomatic manifestations of hypomagnesemia are difficult to ascertain given high prevalence of concurrent hypocalcemia and hypokalemia; however, typical symptoms include neuromuscular hyperexcitability, seizures, weakness, nausea, vomiting and arrhythmia. Hypomagnesemia develops quickly since body stores cannot be rapidly accessed following losses. Geriatric patients are particularly vulnerable to hypomagnesemia for several reasons. Polypharmacy often contributes to development of hypomagnesemia--our patient had been on omeprazole for years for unclear reasons and was also on alendronate for osteoporosis. In addition to bisphosphonates and omeprazole, loop and thiazide diuretics and aminoglycosides have also been implicated. Advanced dementia and poor PO intake are additional risk factors seen in our patient. While poor nutritional status alone rarely causes hypomagnesemia, it certainly may have placed our patient at increased risk. Finally, uncontrolled diabetes can cause hypomagnesemia due to increased urinary magnesium excretion, although our patient had well-controlled diabetes with HgbA1c 8.0.

Conclusion: This patient was given IV magnesium repletion and her home omeprazole and alendronate were discontinued. She recovered well and was discharged on magnesium supplementation. This case demonstrates the importance of including a magnesium level as a part of any work up for hypocalcemia or refractory seizures.

D11 Resident Presentation
Trust Your Gut: A Case of Delirium

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An 80-year-old man with a history of mild cognitive impairment presented from an assisted living facility with mild chest and flank pain and confusion. He was afebrile and had mild tachycardia. His abdomen was soft, non-tender and had no guarding or rebound. Initial labs showed no leukocytosis but demonstrated a left shift and neutrophilic predominance. EKG was unremarkable and troponin was negative. Chest and abdominal x-rays were normal. He continued to have intermittent pain and persistent delirium, prompting a CT of the abdomen and pelvis, which revealed perforated appendicitis with an adjacent gas containing fluid collection. He was given antibiotics and underwent percutaneous drain placement, and eventual laparoscopic appendectomy.

Acute appendicitis is the most prevalent abdominal surgical emergency, and typically presents with fever, leukocytosis, and periumbilical abdominal pain that migrates to the right lower quadrant. While it is most common in younger patients, one in every 2,000 adults over the age of 65 will develop appendicitis annually. Infections in older adults can present atypically due to a diminished inflammatory response. Patients may present without fever, leukocytosis, and they may lack classic localizing symptoms for particular diseases. Instead, other non-specific symptoms may be present such as delirium, diminished oral intake, behavioral or functional changes. Common medications like acetaminophen and beta blockers may mask typical infectious signs like fever and tachycardia. Cognitive impairment in older patients can also impact a patient's ability to communicate symptoms. As a result, infections in the elderly may go unrecognized by family members and medical providers alike. Delays in identification and treatment may lead to increased illness severity and complications, such as the appendiceal perforation here. Though signs of infection in the elderly can be subtle, the consequences of delay in diagnosis can be severe and clinicians should not exclude infection from the differential based on the absence of common signs and symptoms.

This case highlights that in older patients, vital sign abnormalities and typical exam findings may be absent. Clinicians should be attentive to subtle symptoms, particularly delirium, and have a low threshold for dedicated imaging. This is particularly important in the evaluation of abdominal pain in an older patient, as a delayed diagnosis can be catastrophic.

D12 Resident Presentation
Eosinophilia in a geriatric patient

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Introduction:

Eosinophils are granulocytes that are active in antigen presentation, helminth and parasite clearance, and immune response to neoplasms, as well as the pathologic development of allergy and autoimmunity. Eosinophilia is defined as an absolute eosinophil count (AEC) equal to or greater than 500/μl. Generally, eosinophilia indicates a secondary response related to the underlying functions of the eosinophil, although in rare cases can signal a primary hematologic malignancy.

Case:

A healthy 88-year-old female presented with several weeks of generalized weakness, falls, and pain in both legs. Her only new medication was a non-steroidal antiinflammatory drug (NSAID) for the

leg pain. She had normal vital signs and a leukocytosis of 25,700/mm^3 with an AEC of 3,400/µl. Examination revealed an American dog tick embedded in the right thigh and several tender, erythematous abrasions on the anterior legs. The tick was removed, and cefepime, vancomycin, and doxycycline were started. After several days on the antibiotics, the AEC increased to 6,600/µl. Blood cultures, cytogenetics, and BCR/ABL1 studies were negative. A CT scan identified findings concerning for primary lung malignancy with osseous metastases. The patient decided against further evaluation and discharged to a hospice facility with the support of her daughter.

Conclusions:

In this case, the differential diagnosis of eosinophilia included an NSAID drug reaction and malignancy. The eosinophilia was less likely secondary to a cellulitis or American dog tick-borne bacterial illness such as Rocky Mountain Spotted Fever since the AEC did not improve with antibiotics and eosinopenia, not eosinophilia, is generally observed in bacterial infections. The evaluation ultimately revealed a metastatic lung neoplasm which likely caused a reactive eosinophilia.

Altogether, this case serves as a reminder of the importance of identifying and assessing eosinophilia. If a source of eosinophilia is not identified in a geriatric patient, evaluation for hematologic and solid malignancies should be strongly considered.

D13 Resident Presentation

Insulinoma presenting as a rare case of recurrent hypoglycemia in a geriatric patient.

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A geriatric male was admitted with persistent renal insufficiency and hypoglycemia. He was found to have an insulinoma on imaging. Though exceedingly rare in older adults, physicians must consider insulinomas in patients with recurrent hypoglycemia in the absence of a history of diabetes mellitus, positive sulfonylurea screen, and exogenous insulin use.

A 96-year-old male with history significant for neurogenic bladder, dementia, and chronic kidney disease presented with altered mental status and recurrent hypoglycemia present for weeks. CT of the abdomen/pelvis noted multiple hepatic lesions, probable bladder wall mass, and left hydronephrosis and hydroureter. Endocrine was consulted for hypoglycemia. Insulin level, C-peptide, and proinsulin levels were elevated, sulfonylurea screen was negative, and PM cortisol was elevated. Treatment with octreotide and diazoxide was initiated due to concern for insulinoma. The patient was discharged the next day on Diazoxide 100 mg three times daily, with plans to follow-up with Endocrine clinic. Approximately two weeks after discharge, the patient's daughter requested a transition to hospice care, and the patient expired shortly thereafter.

Diagnosis of insulinoma is made by demonstrating inappropriately high serum insulin concentrations after an induced or spontaneous hypoglycemic episode. Obtaining C-peptide and proinsulin levels at the end of a fast are essential. In a Mayo Clinic case series of 237 patients with insulinoma, the median age at time of surgery was 50, and 57% were female. Definitive treatment is surgical removal; smaller tumors are removed via enucleation, while larger tumors require more traditional debulking. Insulinomas should be localized pre-operatively, otherwise intra-operative localization is necessary. Ultrasound-guided fine needle injection of ethanol can be considered for patients deemed high risk for surgery. Medical therapy to control hypoglycemia should be considered for non-operative candidates and commonly includes Diazoxide (lowers insulin secretion) and Octreotide (inhibits insulin when given in large doses). This case highlights the rare finding of insulinoma in a geriatric male who was admitted for altered mental status with recurrent hypoglycemia, and the decision to treat palliatively versus surgically, given the patient's advanced age and medical multimorbidity.

D14 Resident Presentation

Surprise Parotitis: Importance of Hydration and Oral Care in an Older Hospitalized Adult

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Introduction:

Oral hygiene is critical in older adults who are unable to do so independently. A dearth of such care predisposes this population to dental infections, including parotitis. This case examines the consequences of poor oral hygiene in a geriatric patient who refused denture removal and routine mouth care resulting in severe, preventable acute bacterial parotitis.

Case Presentation:

We present a case of an 87-year-old female with a history of stroke with residual dysarthria and dysphagia, and depression who presented with delirium following a suicide attempt. She underwent a prolonged hospitalization complicated by a urinary tract infection, pneumonia, and cellulitis. Throughout her admission, she refused denture removal and oral care. On day 36, she developed right-sided facial swelling, tachycardia, and a significant leukocytosis. Maxillofacial/head CT showed findings consistent with right-sided parotitis and she was started on vancomycin and Zosyn. Purulent material from Stenson's Duct grew MRSA and vancomycin was continued. Unfortunately, her condition deteriorated with worsening oral intake, she transitioned to comfort measures and ultimately passed.

Discussion:

Older age significantly increases the prevalence of xerostomia and affects approximately 30% of older adults, predisposing them to oral infections, including parotitis. Other risk factors for parotitis include poor oral hygiene, sialectasis, immunosuppression, medications: including diuretics; anticholinergics; antihistamines; advanced age, hospitalization, and residence in a nursing home. Our patient's risk factors were multifactorial, including dehydration, poor oral hygiene, hospitalization, and nursing home residence, predisposing her to the development of parotitis. Had the patient not adamantly refused oral care, this would have been preventable.

Conclusion:

Though MRSA parotitis has several risk factors, those are modifiable and can be managed with routine oral hygiene. Our case highlights an extreme case of the potential consequences when such measures cannot be achieved. Endeavoring to mitigate such risks will likely decrease morbidity and mortality in hospitalized older adults.

D15 Resident Presentation

Atypical presentation of Skull Base Osteomyelitis with Herpes Zoster Ophthalmicus

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A 76-year-old gentleman had initially presented to hospital with headache, blurred vision, left facial droop and left forehead vesicular rashes. His significant history included diabetes mellitus and ischemic cardiomyopathy. Otoscopy was normal, and he was diagnosed with herpes zoster ophthalmicus and Bell's Palsy after his vesicle fluid tested positive for varicella zoster virus (VZV). He was treated with acyclovir after which his vesicles healed, although his facial palsy persisted. Three weeks after discharge, he developed fever and progressive dysphagia. Examination revealed persisting left sided facial droop, anisocoria, left maxillary region hyperesthesia, hearing impairment and dysphagia. Magnetic resonance imaging of the brain revealed heterogenous enhancement of the left cavernous sinus extending to the left petrous apex, central skull base and left sphenoid sinus suggestive of skull base osteomyelitis. Sphenoidectomy and biopsy confirmed growth of Candida orthopsilosis, Aspergillus

fumigatus and Methicillin-resistant Staphylococcus aureus. He was treated with voriconazole and intravenous vancomycin. Unfortunately, his inpatient stay was complicated by toxicity to antimicrobial treatment with transaminitis and renal failure. He continued to decline functionally and passed away soon after. This gentleman's initial presentation could be attributed to either skull base osteomyelitis or herpes zoster reactivation. His second presentation prompted further re-evaluation as he had completed acyclovir treatment with resolution of forehead vesicles, and zoster reactivation involving cranial nerves IX and X is rare[1]. It is possible that the osteomyelitis may had been a rare complication of herpes zoster infection, however the polymicrobial nature and extensive involvement suggests a longer duration of osteomyelitis likely preceding his diagnosis. More likely, zoster reactivation was a harbinger of underlying skull base osteomyelitis. This case describes Hickam's Dictum and emphasizes the importance of pursuing a broad range of differential diagnoses with evolution of symptomology, especially as the elderly often present atypically.

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D16 Resident Presentation

Immunosuppression Targets in Older Adult Kidney Transplant Recipients

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Introduction: Age-related changes in the immune system, such as immunosenescence, result in higher rates of infection in older adults who undergo kidney transplantation.

Case: Our patient is a 74-year-old male patient with a past medical history of hyperlipidemia and kidney transplant due to hypertension-related ESRD. Patient had been transplanted 10 months prior to presentation. His maintenance immunosuppression regimen consisted of tacrolimus, mycophenolate, and prednisone. He presented to the emergency department due to a 3-day history of light-headedness, right-sided weakness, and a fall. Physical exam findings were remarkable for slightly sluggish pupillary reflex. Visual fields were full to confrontation. Right nasolabial flattening was noted, as well as decreased sensation to light touch on right lower extremity. MRI showed a left inferior frontal lobe ring-enhancing lesion concerning for abscess. Nasal endoscopy was performed by ENT, which grew 1 colony of Aspergillus fumigatus. Patient underwent bi-coronal craniotomy for abscess drainage and biopsy. Operative fluid and brain tissue showed hyphae elements. Morphology was consistent with aspergillus species. Patient was treated with course of amphotericin and voriconazole. Tacrolimus was held for 3 days peri-operatively as Transplant Nephrology team discussed benefits and drawbacks of immunosuppression and the effect of voriconazole on tacrolimus levels. Patient was eventually resumed on his prior immunosuppression regimen with no change in target immunosuppressant levels. His graft did not show signs of rejection during hospitalization. He underwent several months of intensive inpatient rehabilitation, with significant improvement in function.

Discussion: While the competing interests of graft survival and avoiding invasive infections disproportionately affect older adult patients, no universal guidelines have been established for how immunosuppression should be adjusted to account for age. In clinical practice, these patients are maintained at the same target concentrations of their immunosuppressive regimens and treated with the same regimens as younger adult patients despite rates of acute rejection and infectious complications differing between the groups. Age-adapted immunosuppression targets could be a potential solution. Further study must be done as older patients have been largely excluded from clinical immunosuppressive trials.

D17 Resident Presentation

Delirium Evaluation: What is Missing?

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Background:

Delirium affects up to one third of all elderly hospitalized patients and is often undetected (1). Delirium is associated with many adverse outcomes, including increased length of stay and mortality (1).

Case Presentation:

77-year-old male with recent subacute stroke resulting in residual L sided hemiparesis and dysphasia was admitted from SAR due to altered mental status. Comprehensive history taking from SAR care giving staff, family, and physical therapists revealed that the patient was AAOX4 and participating in therapy prior to an acute decline at SAR, where he received IV antibiotics for presumed UTI. Admission labs were significant for hypernatremia, uremia, and leukocytosis with neutrophilic predominance. CT Head was negative for new findings. Patient was empirically treated with broad spectrum antibiotics covering for occult infections. Despite antibiotics, he remained febrile and minimally responsive. Additional differential diagnoses were considered and work up conducted per AGS GEM tool on delirium. CSF was negative for infection and EEG excluded seizures. MRI brain showed increased extent of prior brain infarct, consistent with acute on subacute infarct. Infectious Disease was consulted and determined fever to be central in origin and antibiotics were discontinued. Given discovery of acute on subacute stroke and persistent clinical status of minimal responsiveness, dysphagia, aphasia, and functional quadriplegia, multiple goals of care discussions were held with family. Poor prognosis was communicated. Due to low health literacy and multiple decision makers involved, patient was to remain full code and PEG was planned to allow more time for family discussion. Patient coded prior to the planned procedure and passed away.

Discussion:

Delirium is a disturbance in attention and cognition. Careful history taking, physical exam, and prudent diagnostic testing are crucial for diagnosis, management, and prognostication. Causes of delirium are often multi-factorial; infection, medication side effects, and metabolic derangements are common (1). Cardiovascular culprits are harder to detect given limited data gathering from delirious patients. A methodical evaluation is warranted to detect can't-miss diagnoses which can be treatable and/or carry important prognostic value for goals of care discussions.

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D18 Resident Presentation

The mysterious expanding abdominal mass

E. Roh, M. Okazaki, L. Diamond, J. Cheung. *Family Medicine, Pomona Valley Hospital Medical Center, Pomona, CA.*

Introduction: Older adults can develop acute urinary retention due to multiple causes. One of the important factors to consider are medications with anticholinergic side effects. We describe a case of how amitriptyline led to urinary retention with significant bladder distention to the point of an abdominal appearing mass and acute kidney injury.

Case: A 91yo female with a history of frequent urinary tract infections and mild cognitive impairment presented to the hospital with abdominal discomfort and a lower abdominal mass. The patient

and her daughter first noted the abdominal mass about 10 days prior and were concerned due to its quickly growing size. The mass was associated with non-radiating abdominal discomfort. The patient did not remember the last time she urinated or had a bowel movement. She started taking amitriptyline over 1 month ago for neuropathy and likely interstitial cystitis. Her daughter also noted that the patient might have taken multiple amitriptyline tablets rather than one daily as prescribed as she had more difficulty with management of medications. The patient's work up was significant for leukocytosis, AKI, and CT abdomen/pelvis w/o contrast showing extraluminal gas in the space of Retzius, markedly distended bladder with gas in the bladder lumen, and bilateral hydronephrosis and hydroureters. After insertion of a foley catheter and output of > 1000mL of clear urine, the abdominal discomfort and distention resolved. The urine culture was positive for E. coli. The patient was discharged with the foley catheter and plan for an outpatient trial of void. In addition, she was given a course of antibiotics for the acute UTI, and Premarin and Hiprex for UTI prevention.

Discussion: This patient had several risk factors for acute urinary retention. With her history of frequent UTIs and importantly her recent use of amitriptyline, she developed an acute urinary retention that led to a significantly distended bladder appearing as an abdominal mass up to the level of the umbilicus. The air in the lumen of the bladder and space of Retizus on CT imaging was determined to be consistent with the E.coli UTI and urinary retention. Medications are one of the avoidable causes of urinary retention in the elderly. Thus, it is important for providers to have close monitoring of medications, especially those with anticholinergic side effects such as amitriptyline that can cause harm in the older adult population.

D19 Resident Presentation

Substance use in the elderly: A case report highlighting implicit bias amongst medical providers

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Background: Implicit bias continues to challenge healthcare providers and the system at large including inequities in pain management. While providers are improving at examining their bias when treating minority patients, the same attention must be paid when a patient holds traditionally advantaged status. This case presentation examines the role of biases in pain management with special focus on biases around age, race, and persons with mental health disorders.

Methods: This is a case of a 76-year-old Caucasian woman with multiple medical co-morbidities including osteoarthritis, gallbladder cancer with recurrence, alcohol use disorder and depression who presented to the hospital with memory loss, moderate to severe headaches, and generalized body tremors for the previous 6 weeks. She self-identified as an "addict," and her medication list contained multiple pain medications including two opioids which had been prescribed to her by various providers throughout the past 20 years. The geriatrics consult team raised concerns about the safety about the patient's pain regimen while she was in the hospital. Despite the patient acknowledging her addiction, the geriatrics team's efforts to reduce polypharmacy and deprescribe her narcotics given her age and co-morbid alcohol use were met with resistance from the patient's son and other medical providers. The geriatrics team wondered about the role of the patient's old age and Caucasian race played in the tensions over deprescribing narcotics given that these medications played a clear role in the patient's physical and medical decline.

Conclusions: This case presentation demonstrates the need for a thorough social history regarding substance use in the elderly. It also advocates for a more thoughtful approach, which keeps implicit bias in mind, when treating pain in patients of various ages with differing minority statuses and mental health disorders.

D20 Resident Presentation

Who Are You Calling "Senile"? Cardiac Amyloidosis as a Cause for Heart Failure in the Elderly

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Background

Amyloid is formed from the breakdown of normal or abnormal proteins. Deposits of amyloid in the heart cause the disease known as cardiac amyloidosis. As the deposits increase, the heart gets increasingly stiff and eventually the pumping function deteriorates. Wild-type transthyretin (TTR) amyloidosis or senile systemic amyloidosis (SSA) is when non-mutated transthyretin protein deposits in myocardium leading to cardiomegaly and heart failure due to infiltrative cardiomyopathy.

Case

A 90-year-old male with hypertension, atrial fibrillation, stage 3 chronic kidney disease, and MCI presented to the office with increased lower extremity swelling and difficulty donning compression stockings. He noted dyspnea on exertion, weight gain and sudden functional decline. The patient lived at home with his frail wife. He had 2-3+ pitting edema of bilateral lower extremities on exam. Labs showed BUN 29/Cr 1.3, Na 131 and proBNP 2,752. Echocardiogram showed HFpEF with moderately reduced diastolic dysfunction, elevated RV systolic pressure, normal LVEF of 76%, and concentric LVH. Evaluation for primary AL amyloidosis using SPEP/UPEP, free light chain and immunofixation was consistent with MGUS. A 99mTc-Pyrophosphate myocardial scan suggested transthyretin-related cardiac amyloidosis. For diagnosis confirmation prior to therapy, a right heart catheterization with endomyocardial biopsy was performed; this was complicated by post-procedural hypotension due to pericardial effusion which improved after pericardiocentesis. Tissue biopsy demonstrated "apple-green" birefringence with Congo red stain under polarized light characteristic of amyloid. Sequence testing confirmed wild-type transthyretin (TTR) amyloid deposition. In addition to diuresis the patient was started on tafamidis, a novel treatment for TTR amyloidosis. The patient's leg swelling, dyspnea and weight improved, but his mental state declined, and he has required more care at home.

Discussion

Wild-type transthyretin (TTR) amyloidosis or senile systemic amyloidosis (SSA) is an often unrecognized disease of the elderly. This case illustrates the work up for a patient with rapidly declining diastolic heart failure with poor response to typical heart failure treatment regimens. Management also involves monitoring aggressive diuretic use, which may be challenging for patients with dementia and limited social support.

D21 Resident Presentation

"Social Security is a Scam": the Ethical Dilemmas in Treating Overvalued Ideas

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Background: In the 19th century, Carl Wernicke introduced the term üeberwerthige idee (overvalued idea), defined as a rigidly held belief that influences behavior and is shared by others. Delusions, on the other hand, are fixed, false beliefs, not accepted by others of that culture. Information is ever more readily accessed, leading to rapid transmission of ideas, including those considered fringe or extreme. Here, we present the case of a man with major neurocognitive disorder complicated by an üeberwerthige idee that undermined his care. We consider the diagnosis of delusional disorder versus an overvalued idea, and the ethical implications inherent in the distinction.

Case Summary: This is a case of an elderly homeless man with a history of major neurocognitive disorder, lower extremity deep venous thromboses, chronic venous stasis, and blindness secondary to glaucoma. He was hospitalized for treatment of cellulitis, then involuntarily transferred to an inpatient geriatric psychiatry unit for grave disability due to initial concern of psychosis. He had a long-standing suspicion of the American social security system, believing it to be a means of covert government control. He expressed a consistent preference to live on the streets, which was likely contributing to suboptimal conditions for his health as he required recurrent admissions for lower extremity cellulitis in the past year. Furthermore, his fixed beliefs were a barrier to supported housing, health insurance, and disability benefits. During the prolonged psychiatric hospitalization, he did not exhibit other psychotic symptoms and he refused to take psychotropic medication. The treating team was unable to secure a Lanterman Petris Short conservatorship for him; themes of the difference between delusion and extreme belief dominated the legal hearing. The patient was discharged to the streets, per his preference.

Discussion: Distinguishing between delusions and overvalued ideas can be a significant challenge. With the internet and the global growth of subcultures, encountering patients with extreme beliefs will become increasingly common. Examining the diagnosis and ethical considerations carefully are essential to providing the care most aligned with an individual's best interests and values.

D22 Resident Presentation
From diarrhea to delirium: risk of delirium with the use of dicyclomine in end stage renal disease (ESRD)
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Case presentation

A 76-year-old female with ESRD on hemodialysis, hypertension and rheumatoid arthritis, presented with intermittent abdominal pain and diarrhea for 3 weeks. Contrast tomography (CT) of the abdomen and pelvis was suggestive of pancolitis and the patient was started on ceftriaxone and metronidazole and shortly afterwards on an antispasmodic called dicyclomine. The patient underwent a significant change in behavior and became unaware of her surroundings. The patient's symptoms persisted following her dialysis session. Overnight, the patient became completely disoriented. CT of the head and laboratory work-up was within normal limits. The patient began to have visual hallucinations the next morning. The acuteness of symptoms and presence of inattention and visual hallucinations was consistent with delirium. Her medications were explored for drug-induced delirium and although ceftriaxone is known to cause delirium, dicyclomine was identified as the most recent change in the patient's medications and was discontinued immediately. She significantly improved the next morning and was back at her baseline mentation after her dialysis session.

Discussion

Delirium is a clinical syndrome characterized by a decrease in the level of awareness with inability to focus and is commonly encountered in the acute care setting. Drug-induced delirium accounts for 30% of all cases of delirium. Anticholinergic medications have been discouraged in patients greater than 65 years due to the risk of delirium, falls and impaired cognition. Dicyclomine is frequently prescribed as an antispasmodic to reduce smooth muscle spasm in irritable bowel syndrome. It is assigned a score of 3 on the anticholinergic risk scale (ARS), a categorical tool that assigns anticholinergic drugs ascending scores of 1, 2 or 3 based on the extent of their anticholinergic activity. The higher the ARS score, the greater the risk of anticholinergic adverse effects. However, pharmacokinetics and metabolism of anticholinergic medications, including dicyclomine, are unknown.

Conclusion

ARS scale is only meant to caution against anticholinergics as they may be prescribed if benefits outweigh the risks. The predictive yield of the ARS scale may be increased if drug metabolism and clearance were incorporated in it. ESRD patients may be at increased risk of anticholinergic side effects fro dicylcomine suggesting that kidneys may play a role in metabolism.

D23 Resident Presentation
Travel fatigue, jet lag and acute mountain sickness in the older adult
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Case presentation: A 70 yo woman presents to clinic to establish care. She is an avid traveler and noticed as she ages it takes her longer to recover from jet lag. Additionally, for high altitude destinations, she started taking acetazolamide for symptoms of acute mountain sickness (AMS), including nausea, anorexia and fatigue. She asks if this is common with aging and wonders what she can do to prevent these symptoms.

Discussion: As the number of older adults increases, so does the number of older travelers. Older adults often travel with medications, prosthetics or oxygen and because of this, may be at higher risk for travel fatigue. Symptoms include headache (HA), fatigue and weariness. Travelers should plan appropriately to prevent travel delays and stay nourished and hydrated while traveling to avoid travel fatigue. Jet lag occurs when traveling across several time zones and presents as poor sleep, fatigue, HA and anorexia. Results from studies evaluating the role of age in jet lag are mixed. Administration of melatonin or caffeine may help but benzodiazepines should be avoided. AMS presents as HA, nausea, dizziness, anorexia, poor sleep, fatigue and shortness of breath. Studies evaluating the role of age in the development of AMS are heterogeneous in both study design and results; in general, older age is not a contraindication to high altitude travel. Evaluation for cardiopulmonary comorbidities should be completed, education about safe ascent provided and acetazolamide can be considered. Because several symptoms of travel fatigue, jet lag and AMS overlap, it is important to take a detailed history of symptoms and address the underlying cause when treating symptoms acutely and guiding recommendations for future travel.

Conclusion: As the number of older adult travelers increases, providing recommendations for safe travel for the older adult is important. Geriatricians should be knowledgeable of travel fatigue, jet lag and AMS; plans for management should be arranged at pre-travel clinic appointments to avoid a poor travel experience or negative health consequence while traveling. Additionally, as travel medicine continues to expand, older adults need to be included in studies evaluating travel recommendations.

D24 Resident Presentation
Catatonia as an Etiology for Acute Encephalopathy in Hospitalized Geriatric Patients
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Catatonia is a behavioral syndrome with motor disturbances caused by medical or psychiatric disorders. Despite its high prevalence, catatonia can be overlooked in geriatric patients, especially when cognitive impairment is present. We present 2 cases of hospitalized patients who had mental status changes and were diagnosed and treated for catatonia. Recognition of catatonia in geriatric patients with encephalopathy is critical to avoid morbidity and mortality.

This is a case series of 2 patients admitted for altered mentation. They underwent cognitive assessments and medical work-up of encephalopathy.

The first case is an 82-year-old male, with major depressive disorder with psychoses, who presented with altered mentation after olanzapine overdose. Thyroid-stimulating hormone, vitamin B12 and

thiamine levels were normal. He also had unremarkable neuroimaging. EEG did not show evidence of seizure activity. He experienced psychomotor retardation and difficulty speaking and responded positively to lorazepam challenge. Given his mood disorder, he underwent 6 sessions of electroconvulsive therapy (ECT).

The second case is a 77-year-old female, with hypertension and no diagnosed psychiatric condition, who presented from home with acute aphasia and altered mentation. She was found to have urosepsis. Despite 72 hours of adequate antibiotic treatment, patient's mentation worsened, she refused oral medications and became mute. Neuroimaging was negative for any acute process and EEG did not show any epileptiform activity. She responded to lorazepam challenge initially, but then went back to a catatonic state. ECT was offered to the family and while patient was waiting for pre-procedure risk assessment, she was treated with valproic acid. Within 24 hours, patient's symptoms significantly improved and she no longer needed ECT.

Both patients who were initially admitted with altered mentation showed marked improvement after targeted treatment for catatonia.

Initial work-up for catatonia should include medication reconciliation and assessment of infection, stroke and vitamin deficiency. Along with treatment of underlying etiologies, patients should undergo therapeutic lorazepam challenge. ECT should be offered to patients who remain symptomatic. This case series highlights the importance of prompt diagnosis in older population to mitigate adverse outcomes and prolonged hospitalization.

D25 Resident Presentation

Pleasantly Pulseless; The Thrill of Narrowing in on the Diagnosis

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Case: A 68 year old female with iron deficiency anemia, osteoporosis, and cervical fusion presented with a four week history of bilateral upper extremity pain and weakness. She described the pain as "aching" and worse when getting dressed or washing her hair. She had intermittent numbness in her fingers and mild fatigue, but denied lower extremity symptoms. She had no headaches, double vision, jaw claudication, or neck pain. Work up included CT of the cervical and thoracic spine, notable for intact hardware and degenerative disc disease. ESR, CK, aldolase and ENA were normal. CRP was elevated to 22. On follow up she noted difficulty obtaining blood pressure readings at home. On physical exam, radial pulses were not palpable, and manual blood pressure was difficult to auscultate. There was a prominent bruit over the left subclavian artery. CTA of the chest and neck revealed thickening of the aorta and branch vessels, severe bilateral subclavian and axillary artery stenosis, occlusion of left brachial artery, and severe stenosis of proximal SMA, consistent with large vessel vasculitis.

Discussion: Large vessel vasculitis is split into two major categories: Takayasu and Giant Cell Arteritis. These diseases can be hard to differentiate even on histopathology. Takayasu arteritis primarily affects the aorta and the major branches, with onset usually occurring before the age of 40. Giant Cell Arteritis typically presents in patients older than 50. Classic symptoms of GCA include new headaches, visual disturbance, jaw claudication, fever, and high ESR or CRP. There is a close association with PMR. Although the most common form of GCA involves the cranial arteries, not all patients have cranial artery involvement. In some patients GCA is confined to the large vessels and symptoms include limb claudication, asymmetric blood pressures, and vascular bruits, as in our patient.

Case Conclusion: The initial differential included PMR, polymyositis, compression fracture, and radiculopathy. Pulselessness and difficulty obtaining BP raised suspicion for arterial pathology. The subclavian artery bruit then confirmed the presence of large vessel stenosis. CTA Chest and Neck revealed evidence of LV vasculitis. PET scan revealed diffuse LV involvement. Temporal artery biopsy was deferred given radiographical evidence, and high dose steroids were given. Her presentation was most consistent with LV giant cell arteritis given her age.

D26 Resident Presentation

Shalom trazodone: A case of trazodone induced Parkinsonism

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Introduction: Trazodone is one of the most frequently prescribed medications to treat insomnia, especially in older adults. It is the preferred medication in this patient population due to its relatively safer side-effect profile compared to other hypnotic agents. Established side effects of trazodone include suicidal behavior, excess sedation, QT prolongation, and priapism. Only three case studies have been published over the span of the last four decades describing Trazodone induced parkinsonism.

Clinical Findings: A 78-year-old male with a past medical history of paroxysmal atrial fibrillation (on amiodarone), Major Depressive Disorder (MDD), Benign Prostatic Hyperplasia (BPH), Chronic Obstructive Pulmonary Disease (COPD), hypertension, hypothyroidism, and Obstructive Sleep Apnea (OSA), was prescribed trazodone for his chronic insomnia. He was seen in the Emergency Department (ED) after one month with complaints of coarse tremors of his upper extremities, making him unable to write with a pen anymore due to shaking. He also noticed dragging of his feet while walking for over a month, which caused him to have multiple falls and significantly impacted his activities of daily living. On clinical exam, the patient had bilateral cogwheel rigidity in the ankles and a shuffling gait. The patient was admitted for further workup. Brain imaging was unremarkable. His CPK, Vitamin D, and Vitamin B12 levels were normal. Trazodone was discontinued and his symptoms reversed within a week.

Discussion: Trazodone was the offending agent causing parkinsonian symptoms in our patient. Amiodarone may have hindered trazodone metabolism causing higher levels of this medication in the blood. Multiple mechanisms of trazodone's effect on dopamine have been suggested, including its inhibitory effect through the serotonin-dopamine system interaction leading to high serotonin levels causing dopamine blockade. It is important for physicians to contemplate the benefits and detriments of new medications for older adults prior to initiating them.

Conclusion: Trazodone is not a benign medication and can cause parkinsonian symptoms. Polypharmacy can amplify the adverse effects of drugs that might not be seen in everyday practice.

D27 Resident Presentation

5-FU Hyperammonemia: A Rare Cause of Encephalopathy in the Elderly

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Introduction: Gastric cancer (GC) is a common cause of mortality in the elderly. 5-fluorouracil (5-FU)-based chemotherapy such as FLOT has shown higher survival but poses challenges due to side effects. Mild effects include nausea, vomiting, diarrhea. Severe side effects, such as encephalopathy, are rare in 5-FU treatment. We present a patient with gastric cancer who developed encephalopathy after 5-FU chemotherapy.

Case: 75-year-old man presents with confusion for one day. On exam, GCS is 9. Infectious and metabolic workup were negative. The patient has a history of gastric adenocarcinoma and received FLOT chemotherapy the day prior to admission. His labs noted hyperammonemia (153 μmol/L) and lactic acidosis (12.1 mmol/L). After a lactulose enema, encephalopathy resolved, ammonia decreased to 15 μmol/L and lactic acid to 1.2 mmol/L. No other causes explained

the encephalopathy and hyperammonemia. He was diagnosed with 5-FU-induced hyperammonemia and discharged with a plan to reduce 5-FU dose to 50% for subsequent cycles.

Discussion: While severe reactions to Fluorouracil are rare, more work is needed to understand how to prevent, diagnose and treat them. 5-fluorouracil hyperammonemia encephalopathy occurs in an estimated 0.7% of 5-fluorouracil patients and is characterized by an abrupt alteration in mental status.

Conclusion: Workup for altered mental status in an elderly patient receiving 5-fluorourail should include evaluation of ammonia levels. Recommended treatment is immediate discontinuation of chemotherapy, supportive hydration, and lactulose. Proper identification and diagnosis of 5-fluorouracil hyperammonemia encephalopathy is critical as recovery is rapid with treatment.

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D28 Resident Presentation

Left High and Dry: A Case of Delirium That Leaves You Salivating for More

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Case

An 83-year-old man was admitted for hip fracture. His history included hypertension, coronary artery disease, and advanced Alzheimer's dementia. He had post-operative delirium and received quetiapine as a result. On day thirteen, he became withdrawn, his oral intake decreased, and he developed leukocytosis. On exam, he was non-toxic appearing and afebrile but had suddenly developed a firm erythematous swelling of the right side of his face and purulent drainage from his buccal mucosa. A CT scan of the maxillofacial area showed a non-obstructing stone with inflammation and enlargement of the right parotid gland with surrounding soft tissue stranding consistent with parotitis. He was also found to have Methicillin-Sensitive *Staphylococcus aureus* in two sets of blood cultures. The parotitis was felt to be the source of this bacteremia with a normal skin exam and no vegetations found on echocardiogram. With treatment with cefazolin, his delirium and oral intake improved, and he cleared his bacteremia.

Discussion

Acute bacterial or suppurative parotitis is an uncommon infection of the salivary glands, which often presents with facial swelling and erythema, trismus, and fever. The development of bacterial parotitis is thought to be related to diminished salivary output and sometimes obstruction of Stensen's duct. These infections are often acute and unilateral. The elderly are at high risk of developing parotitis due to diminishing saliva production, poor oral health, and relative immune suppression. Cognitive impairment can limit a patient's access to nutrition and worsen dehydration. Medications used for delirium including antipsychotics often have anticholinergic and sedating properties, causing further dehydration. Antihistamines, antihypertensives, and diuretics can also contribute. Older patients often do not have typical systemic signs of infection and may present with hypoactive delirium or decreased oral intake.

Acute bacterial parotitis is a serious infection that can impact older patients. In this patient, typical signs of infection were likely masked by scheduled acetaminophen and metoprolol. New or worsened delirium in a hospitalized patient always warrants a careful physical exam and infectious workup. It is important to be aware that older adults are at risk of parotitis and include this in a differential diagnosis for hospitalized delirious patients.

D29 Resident Presentation

Review of Nonpharmacological Interventions in Managing Depression in the Elderly

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Background

The geriatric population is growing across the world. As screening and awareness for mental health increases, there is now more attention to treatment for illnesses such as depression and subsyndromal depression, which include depressive symptoms without meeting the full criteria for diagnosis. Depression is as high as 20% in the geriatric population, and thought to be even higher as it's likely underdiagnosed. In this review, we review use of nonpharmacological measures to treat depression in order to prevent risks associated with polypharmacy in this age group.

Methods

A literature search was conducted using Cochrane Library, PsycInfo, CINAHL, Pubmed, Scopus and Web of Science in August 2020. The search used keywords: "depression" AND ("elderly" OR "nursing home" OR "nursing homes" OR "long term care" OR "geriatrics") AND "nonpharmacological" OR "non-pharmacological" OR "recreation" OR "recreational"). We included those using the Geriatric Depression Scale, PHQ-9 or the Cornell Depression Scale as objective measurements, those with publication between 2005-2020, and excluded all series, meta-analyses and systemic reviews from the search.

Results

The most common interventions were subdivided into the following themes: exercise, arts (includes painting, singing, listening to music), pet therapy, patient centered approach, light, technology, sensory stimulation, mindfulness and other (includes sleep, humor). The use of exercise, making up 36% of all interventions studied, and listening to music, 9% of total, showed effective decreases in depression scores while singing did not. Art, light and pet therapy require some further studies to analyze its effectiveness. Many studies were limited in sample size and loss to follow up due to end of life. There is potential for the use of technology that may provide innovative ways to tackle and scale treatment for depression, such as video conferencing and video games. There is evidence to support the role of improving cognitive function in order to improve depression.

Conclusion

Exercise, creative arts and technology can be used to minimize polypharmacy. There should be efforts to improve cognitive function as well as this may improve response to nonpharmacologic therapy. However, there remains to be insufficient reimbursement with growing need for policy change to support increased funding and infrastructure to support the use of nonpharmacological measures to manage depression.

D30 Resident Presentation

Guillain-Barre Syndrome with Autonomic Dysfunction

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BACKGROUND

The severe manifestation of Guillain-Barré syndrome (GBS) with respiratory failure affects 20 to 30%[1] of cases and early initiation of intravenous immunoglobulins (IVIg) or plasma exchange (PE) is

crucial. Many develop autonomic disturbances necessitating admission in the intensive care setting[1]. A recent study[2] shows an increased incidence of predominantly demyelinating GBS during the COVID-19 outbreak which warrants further investigation.

CASE

This is a 70 year old female with a history of asthma and hypothyroidism who presented with two weeks history of symmetrical progressive weakness. Examination revealed flaccid weakness with loss of reflexes more proximal than distal with normal cognition. There was no antecedent respiratory illness or diarrhea. She received five days course of IVIg due to high suspicion GBS. However due to lack of improvement, she left hospital against medical advice. One week later she was re-admitted with her motor strength worsened and she was areflexic. MRIs of brain and spinal cord were unremarkable. Extensive laboratory work up including reeated Covid-19 tests were normal. Electromyography and nerve conduction study (EMG/NCS) revealed chronic and active predominantly motor polyneuropathy with axonal demyelinating features which supported the diagnosis of acute motor axonal neuropathy (AMAN) also known as axonal GBS. She received PE and intravenous steroid therapy but did not show any improvement. Three weeks later she developed respiratory failure and was intubated. She had a tracheostomy placed as well as gastrostomy for feeding. At nursing facility she had episodes of severe hypothermia (with EKG hanges) and fluctuations in hemodynamics. She also developed episodes of ileus. Severe autonomic dysfunction from GBS was suspected.

DISCUSSION

There has been an expert call[1] for development of prognostic biomarkers to better predict outcomes and guide management because a quarter of patients need ventilatory support and devlop severe autonomic disturbances. While up to 20% of patients remain severely disabled, approximately 5% die despite immunotherapy[3]. Serious autonomic dysfunction, such as arrhythmia and hypertension or hypotension, occurs in 20%[3]. The combination of PE followed by a IVIg is not significantly better than PE or IVIg alone[3]. Impact of COVID-19 pandemic on incidence and severity of GBS yet to be known[2].

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D31 Resident Presentation

Tardive Dyskinesia Masquerading as Delirium

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Introduction

Delirium can present as an array of symptoms which can include worsening dyskinesias, and can be caused by a multitude of factors. One of those factors is polypharmacy. With polypharmacy comes the risk of drug-drug interactions (DDI), which older adults are vulnerable to due to pharmacodynamic changes associated with age. We present a case of delirium masquerading as tardive dyskinesia due to DDI.

Case

A 71-year-old lady with mixed vascular and Alzheimer's dementia, depression, tardive dyskinesia (TD), and restless leg syndrome (RLS) was readmitted after left total knee arthroplasty. Patient was admitted with altered mental status. She also had ongoing eye rolling, mouth smacking, and restlessness in her lower extremities. She was started on piperacillin/tazobactam for concern of aspiration pneumonia. Upon review, her home medications, notably tetrabenazine, were held this hospitalization and newly prescribed tramadol was continued for postoperative pain. While she had multiple risk factors for delirium including infection and recent surgery, tramadol was the most likely culprit of her worsening TD. Tramadol was switched to acetaminophen and oxycodone and her mental status returned to baseline.

Discussion

Tetrabenazine limits synaptic transmission of serotonin. However, trazodone and tramadol work antagonistically against tetrabenazine, inhibiting serotonin reuptake and increasing its synaptic concentration. Case reports have also shown increased serotonin release by tramadol; likely increased central serotonergic transmission and induced development of TD when used with selective serotonin reuptake inhibitors. Our patient continued with the serotonergic agent while holding home tetrabenazine for her TD. This, with recent surgery and superimposed infection were all possible risk factors for delirium. After switching from tramadol to alternatives for pain control, and treating for infection, our patient returned to baseline.

Conclusion

Treatment strategies must be selected carefully in older adults given pharmacodynamic changes. Providers should be aware of possible TD as a side effect of combination of opioid analgesic with high-risk serotonergic agents especially in the geriatric population.

D32 Resident Presentation

Broken Neck: A Terminal Diagnosis?

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Background

Falls are the leading cause of traumatic cervical spine injury in older adults. Upper C-spine fractures carry significant morbidity and mortality. They most commonly occur in geriatric patients due to age-related mobility reduction and degenerative joint changes and are largely managed with rigid cervical immobilization. We present a challenging case of an elderly female who suffered a rapid decline in physical and emotional well-being following this traumatic injury.

Case Report

A 95-year-old woman with a history of dementia presented from a nursing facility after an unwitnessed fall. On examination, she had no sensory or motor deficits and was oriented only to self, which was her baseline. A CT cervical spine showed an acute Type III Dens Fracture through the C2 lateral masses without displacement and a displaced fracture of the transverse processes of C7. The patient was unsuitable for surgical intervention due to cardiac risk and dementia. Neurosurgery recommended three months of a rigid cervical collar. Immediately, the patient objected to wearing the collar. Her hospital stay was prolonged due to agitation and distress secondary to the collar. Two days after discharge, she returned with a repeat fall. CT cervical spine showed posterior displacement of known fracture, although patient's neuro exam was unchanged. Her agitation worsened and centered around constant attempts to remove the collar which was converted to a cervical-thoracic orthotic collar for safety. Medications for agitation were ineffective, and she required frequent restraints. During the hospital stay she refused to eat or drink, lost 8kg and became minimally conversant. An interdisciplinary team of medicine, surgery and geriatrics providers had discussions with family regarding the risk of tragic paralysis from collar removal versus her current slow suffering. The patient was made comfortable and passed in the hospital.

Discussion

This case illustrates the complexities of caring for patients with dementia who sustain high cervical spine fractures. C-spine fractures can cause a ripple effect of precipitous decline in functioning and overall health. This effect is largely due to the treatment with long-term immobilization, which can be detrimental to the mental health and quality of life of older adults. A multidisciplinary team approach is essential to advocating for the patient's wishes in the setting of these sinister injuries.

D33 Resident Presentation

Colchicine-induced Myopathy Presenting as Subacute Functional Decline and Dysphagia

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Background:

Drug-induced myopathy can manifest as the acute or subacute onset of myalgia or muscle weakness. Colchicine is commonly used in the treatment of gout; rarely, it can cause myopathy. Risk is increased with concurrent administration of medications such as statins and in renal failure. We describe a case of colchicine-induced myopathy manifesting as subacute functional decline and dysphagia.

Methods:

A 76-year-old man with a background of hyperlipidaemia, gout and atrial fibrillation presented with a 3-week history of functional decline, dysphagia, and diarrhoea. Over this period, he declined from being fully independent to being chairbound and requiring assistance with his daily activities. Examination revealed bulbar speech, symmetrical proximal weakness and severe oropharyngeal dysphagia. Reflexes were normal. Cranial nerves and sensation were intact.

His medications included allopurinol 100mg OD, atorvastatin 10mg OD, carvedilol 12.5mg BD and rivaroxaban 20mg OD. He also had been taking intermittent courses of colchicine 4 to 5 times a month for the past 4 to 5 years.

Results:

Laboratory investigations revealed: creatinine 102 umol/L (normal 60-107); creatine kinase 29 U/L (normal 30-350), aldolase 12.6 U/L (normal 0.0-7.6). Autoimmune workup (anti-nuclear antibody, anti-neutrophil cytoplasmic antibody, anti-extractable nuclear antigens panel, systemic lupus erythematous panel) and acetylcholine receptor antibody were negative. Brain and spine Magnetic Resonance Imaging (MRI) scans were unremarkable. Initial electromyography (EMG) showed myopathic changes in proximal muscles and myotonic discharges in bilateral deltoid muscles – this electromyographic myotonia in the absence of clinical myotonia suggested a drug-induced pathology. Atorvastatin and colchicine were stopped. A repeat EMG 1 week later showed improvement in myotonia.

Physiotherapy, occupational therapy and speech therapy were commenced and there has been a continued improvement in his swallowing function, muscle strength and functional status.

Conclusion:

Colchicine-induced myopathy is a rare complication of treatment with colchicine. Manifestations include proximal myopathy with or without polyneuropathy, which develop slowly after prolonged treatment with colchicine and resolve a few weeks after cessation of the medication. This case highlights the importance of taking a good drug history and considering drug-related causes of functional decline.

D34 Resident Presentation

Severe Hypernatremia in the Older Adult

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Introduction

Serum Na >160 meq/L is classified as severe hypernatremia wherein the older adult, is linked with increased morbidity and mortality. Multiple factors predispose the geriatric population: age-related decrease in total body water, impaired renal concentrating ability, and diminished thirst mechanism. Medications can also contribute. Symptoms can be non-specific, causing weakness, altered mental status, and seizures. Prompt workup and treatment is important as higher mortality is often caused by delay in management.

Case

A 75M with history of seizure disorder, CVA, DM, HTN, hypothyroidism was brought in by EMS for altered mental status. In the ED, vitals were stable, blood glucose 191. Labs were notable for leukocytosis without any clear source of infection. Electrolytes were: Na 170 K 6.1 BUN/Crea 158/5.0 SOsm 400. TSH level was 7 uIU/mL. No acute ischemic changes in EKG. UA revealed no proteinuria, trace ketones, UOsm 514, Una 26 Fena 0.2. Initial brain CT was negative for acute pathology. He was alert and oriented only to self; with dry mucus membranes. Rest of physical exam was unremarkable. Findings warranted ICU care where he was initially treated with isotonic saline to correct 7.5L fluid deficit. Later on he became increasingly lethargic, with repeat brain CT non-revealing for acute pathology. EEG showed diffuse cerebral dysfunction consistent with encephalopathy, without any epileptiform discharges. On the 6th hospital day, he was intubated secondary for respiratory distress due to flash pulmonary edema, and extubated the day after. Na correction to 143 was achieved after 8 days. In the medical floor, mental status continued to fluctuate with Na increasing again up to 148, corrected with D5W IV and free water intake. His waxing and waning was attributed as a neurologic sequela of hypernatremia in the setting of prior stroke, or worsening vascular dementia. He was in the hospital for 21 days, and was discharged to SAR.

Discussion

Hypernatremia usually implies an impairment in thirst mechanism or lack of access to fluid intake. The urgency of clinical state is revealed with volume status and neuro exam. Isotonic saline is recommended for the hemodynamically unstable patient regardless of serum Na. Volume depletion should be corrected before initiating replacement therapy to correct the deficit. Correction greater than 4 days may lead to permanent loss of cognitive function and higher mortality.

D35 Resident Presentation

An interdisciplinary approach to medication reconciliation in Parkinson Disease

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Introduction

Medication reconciliation is an essential component of inpatient medical management and is especially crucial in patients with Parkinson Disease (PD). The primary treatment for PD is a combination of levodopa, the prodrug of dopamine, and carbidopa, which prevents peripheral metabolism outside of the central nervous system. Maintaining consistent dosing regimens prevents withdrawal, decreases morbidity, and shortens hospital stays. We present a case of rapidly progressive PD in an elderly patient who failed to receive levodopa as an outpatient due to a home medication list error.

Case Presentation

An 86-year-old man with PD presented to the hospital with multiple falls and altered mental status. Evaluation by inpatient neurology deemed it to be rapidly progressive PD. He was in his usual state of health and was independent until he presented for the first time in years 1 month prior. His admission medications then included carbidopa-only for PD and he was treated with carbidopa-levodopa during his hospital stay. However, he was discharged home once again on carbidopa alone. The pharmacist noted that this had occurred on each of his multiple admissions in the past month. Carbidopa-levodopa 25mg-100mg was resumed on day 1 of this hospital admission and 8 days later the patient demonstrated significant improvement in mental status and tone.

Discussion

Sudden medication discontinuation and poorly timed administration of carbidopa-levodopa can have detrimental effects and lead to relapses manifesting as the progressive motor symptoms seen in our patient. Inaccurate medication histories and complex regimens are risk factors for inappropriate medication administration, the consequences of which increase proportionately with age. An interdisciplinary

approach to medication reconciliation upon hospital admission that includes a team of physicians, pharmacists, and nurses has been shown to prevent similar medication errors from occurring in elderly patients.

Conclusion

Sudden levodopa withdrawal is associated with poor outcomes in patients with PD. Our case demonstrates the importance of an interdisciplinary approach to medication reconciliation to avoid preventable relapses in disease progression for elderly patients with complex medication regimens.

D36 Resident Presentation

"We together helped my father to have a much better life"

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Introduction:

Polypharmacy is a common problem in elderly patients with increasing adverse effects, risk of falls and frequent hospital admissions. Polypharmacy is usually defined as having more than five prescribed medicines. We focus in this case about the importance of shared decision making in managing polypharmacy. Shared decision making depends on discussion between clinician and patient to make the best decision for the patient.

Case:

A 67 year old male with multiple comorbidities including mild cognitive impairment, chronic low back pain, hypertension and depression on multiple medications presented with frequent falls (more than 6) in the past year. Home medication list includes 11 medications. HCTZ, Amlodipine, Baclofen, Gabapentin and NSAIDs are part of his daily medications.

Patient had multiple admissions to the hospital with falls. Work up was without significant finding. Initially patient and family were not interested in de-prescribing any medication. They were concerned that taking away those medications could potentially cause a decline in function.

In clinic over multiple visits. Patient and family were engaged in numerous discussions. A shared-decision was finally made to start de-prescribing. Gradually HCTZ, Amlodipine, Baclofen, NSAID and gabapentin were discontinued. Since discontinuing those medications patient has no falls for more than a year. Patient and family were satisfied any happy by this achievement.

Discussion

Polypharmacy prevalence is increasing with having more elderly people with multiple comorbidities. Prevalence estimated to be 87% among ambulatory elderly patients with cancer. Current literature showing that using shared decision making enhances the prevalence of appropriate de-prescribing. In our case, shared decision making approach was successful to empower the patient and family to engage in decisions about deprescribing. They felt comfortable with the plan after having multiple discussions with the providers.

Conclusion

Polypharmacy is more frequent than ever, ongoing assessment of prescribed medications and considering de-prescribing is significantly important in decreasing side effects, minimize harms and decrease hospitalization. However de-prescribing cannot be approached without shared decision with patient and family.

D37 Resident Presentation

A Case of the Blue Lady

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Introduction

Methemoglobinemia (Met-Hb) is a rare cause of hypoxia. If not recognized at an early stage, it may lead to life-threatening consequences. Here we present a case of methemoglobinemia secondary to dapsone.

The Case

A 75-year-old female with a medical history (PMHx) significant for COPD on 5L nasal cannula (NC) at home presents to the emergency room on in January 2020 for acute worsening exertional dyspnea and hypoxia (71% on 5L NC). Other associated symptoms include headache and gradual development of central cyanosis.

Her other PMHx includes NASH cirrhosis status-post liver transplant and chronic Hepatitis B infection (from the liver transplant donor). In October 2019, the patient was hospitalized for Pneumocystis Jiroveci Pneumonia (PJP). Subsequently, she was started on Dapsone for PJP prophylaxis.

During her initial ED visit, the patient was discharged home with a diagnosis of COPD exacerbation with instruction to increase her supplemental oxygen and start a short course of steroids. However, the patient's condition continues to deteriorate despite the interventions. Per her geriatrician recommendation patient returned to the hospital for further investigations. During her second visit, the patient's oxygen saturation remained at 80% despite being on the venti-mask. The oxygen saturation gap was greater than 5%. Based on the constellation of clinical presentation, methemoglobinemia was considered. Dapsone was discontinued, and Methylene-blue was administered. Over time the patient's condition stabilized.

Discussion

Met-Hb is a result of high levels of ferric iron (Fe^{3+}). The presence of the ferric constituent changes the structure of hemoglobin, which in turn reduces oxygen-carrying capacity. Two majors causes for methemoglobinemia include congenital and acquired etiologies. Met-Hb may occur due to enzyme deficiency from hereditary causes. Though more commonly, it results from acquired means from exposure to exogenous substances (i.e. medications). Clinical presentation of methemoglobinemia may vary based on the serum level of Met-Hb, making it difficult to recognize, especially in individuals with other co-morbidities. The purpose of this case discussion is to raise the awareness of potential medication-induced Met-Hb. Though rare in clinical settings, if left untreated, it will become fatal.

D38 Resident Presentation

Deprescribing in the time of COVID-19

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Background: COVID-19 has elevated the importance of deprescribing, due to risks of drug-drug interactions with COVID-19 treatments. It has also created barrriers to deprescribing with the transition to telehealth, which are discussed in a relation to a patient case at the Univeristy of California, Irvine Senior Health Center, a multidisciplinary primary care clinic.

Case Presentation: A developmentally delayed 62-year-old female with RA, chronic cough, MDD, anxiety, excessive sweating, HTN, HLD, GERD, ADHD, OSA, managed by multiple specialists and a geriatrican presented to the clinical pharmacist for intermitant slurred speech and polypharmacy, with multiple psychoactive medications. Psychoactive medications included: acetaminophen/codeine, promethazine/codeine, lorazepam, oxybutynin, tramadol, and more.

Prior to the pharmacy visit, these medications were held: oxybutynin for 3 days, with no noticeable effect, and promethazine/codeine, with recurrence of cough. The patient and brother were consulted over telephone, despite a scheduled video visit, since neither could navigate the technology required. The patient and brother managed her medications, creating unreliable narrations of doses. Recommendations made by pharmacy: discontinue oxybutynin, acetaminophen/codeine, tramadol, taper lorazepam, reduce doses of nortriptyline and pregabalin due to anticholinergic and sedative effects, and a home visit when safe.

Discussion: Multiple barriers to deprescribing were identified in this case: inability to view medications, unreliable narration, difficulty with telehealth communication, and multiple high risk medications prescribed by multiple prescribers.

Conclusions: COVID-19 has disupted usual care for patients. Barriers to deprescribing are exacerbated with the lack of in-person and home visits. It is important to consider how to help older adults access telehealth services during the pandemic to keep healthcare equitable.

Psychoactive Medications	Non-Psychoactive Medications	Vitamins/ Supplements	Topical Medications	Other
1. Acetaminophen-codeine-30mg 3x/day PRN (took 0 tabs in past 2 weeks) 2. Atomoxetine 80mg daily 3. Duloxetine 30mg daily 4. Duloxetine 60mg daily (not taking) 5. Lorazepam 0.5mg 2x/day PRN anxiety (takes 1 tab most days of the week) 6. Nortriptyline 25mg 2 tabs qHS 7. Oxybutynin CR 15mg daily 8. Pregabalin 75mg 2 caps qAM + 3 caps qPM (TDD = 375mg) 9. Promethazine-codeine 6.25-10mg/5mL take 10mL 4x/day 10. Topiramate 25mg 5 tabs qHS (TDD = 125mg) 11. Tramadol 50mg 1 tab q4h (0 tabs in past 2 weeks)	1. Amlodipine 10mg daily 2. Atorvastatin 10mg daily 3. Desmopressin 0.1mg 1 tab 3x/day and 1/2 tab qHS (taking 1 tab 2x/day) 4. Famotidine 20mg 2x/day PRN heartburn 5. Hydrochlorothiazide 25mg daily 6. Ibuprofen 800mg q8h prn mild pain (not using) 7. Ibuprofen 600mg three times per week 8. Leflunomide 20mg daily 9. Rizatriptan-MLT 10mg ODT PRN migraine, may repeat in 2 hrs if needed 10. Melatonin 5mg 2 tabs qHS 11. Metoprolol tartrate 100mg 2x/day 12. Omeprazole 40mg qAM 13. Potassium Cl ER 20MEQ (not taking) 14. Potassium Cl 20MEQ (not taking) 15. Prednisone DR 5mg 3 tabs daily (takes 1 qHS) 16. Polyethylene glycol 3350 powder 17g daily 17. Acetaminophen 500mg 1-2 tabs daily	1. Biotin 5000mcg daily 2. Ca/Vit D3 (500mg/20mcg) 2 tabs daily 3. Folic acid 1mg 3 tabs daily 4. MagOx 400mg 2x/day 5. Vit B2 100mg 2 tabs 2x/day 6. Vit B6 10mg daily 7. Occuvite 1 tab daily 8. Senna 8.6mg qPM	1. Amlactin 12% cream 2x/day 2. Diclofenac 1% gel 2g 4x/day 3. Lidocaine 5% patch 12h on/ 12h off 4. Nitro-dur 0.4mg/hr patch daily 5. Triamcinolone 0.1% cream 2x/day 6. Triamcinolone 0.5% cream 2x/day 7. Urea 40% cream 2x/day	1. Albuterol 90mcg inhaler 2 puffs q6h PRN wheezing 2. Ipratropium 0.1% nasal spray 2 sprays 2x/day PRN 3. Fluticasone 50mcg 1 spray in each nostril 2x/day 4. Ipratropium 0.03% nasal spray 2 sprays 2x/day 5. Naloxone nasal spray PRN overdose 6. Beclomethasone 80mcg inhaler 1 puff 2x/day

D39 Resident Presentation, Encore Presentation
Diagnosis and Treatment of May-Thurner Syndrome in a Geriatric Patient

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INTRODUCTION: May-Thurner Syndrome (MTS) is the extrinsic compression of the left common iliac vein by the right common iliac artery against the lumbar vertebrae. While most MTS patients are asymptomatic, some develop deep vein thrombosis (DVT) from venous flow obstruction. Incidence and prevalence are unknown but estimated to occur in 2-5% of patients with lower extremity venous disease. Symptomatic MTS commonly presents in patients 20-40 years-old and rarely occurs in geriatric patients.

CASE: An 82-year-old female with past medical history of hypertension, former smoker (quit 50 years prior) presented with acute left lower extremity (LLE) swelling and pain. No prior history of thrombosis, recent travel or surgery, hormone use, trauma or malignancy. Patient lived alone and was functionally independent. Upon admission, patient was afebrile and in no respiratory distress. COVID-19 testing negative. Physical exam notable for unilateral LLE 2+ pitting edema with erythema and mild tenderness. LLE ultrasound revealed extensive femoropopliteal, peroneal and posterior tibial DVT extending into the external iliac vein. CT chest, abdomen and pelvis with contrast showed compression of the proximal left common iliac vein by the right common iliac artery. Initially treated with heparin drip. Later underwent left iliofemoral pharmacomechanical thrombectomy with placement of bare metal stents resulting in successful restoration of blood flow. Patient was discharged on dual antiplatelet therapy and enoxaparin with plan to transition to rivaroxaban.

DISCUSSION: Symptomatic MTS commonly presents in women and risk factors include hypercoagulable states, scoliosis, dehydration, cancer and radiation exposure. MTS can be treated with catheter-directed thrombolysis, venoplasty and/or stent placement. Post-thrombotic syndrome develops in 60% of iliofemoral DVTs within the first 5 years. While the decision to pursue thrombolysis and stenting is straight-forward in the typical MTS patient, this was not as obvious in our patient due to her geriatric age and uncertainty of benefit. Given her independence and few comorbidities, intervention was elected. Our case demonstrates that symptomatic MTS can present for the first time in a geriatric patient and that careful consideration is warranted in developing a treatment plan.

D40 Resident Presentation
Don't be rash—trust but verify: A rational approach to rare rash.

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Case: A 63-year-old gentleman with a history of hypertension and pre-diabetes presented with one week of pruritic rash beginning on his ankles and spreading to the abdomen and upper extremities plus dark frothy urine. Dermatopathology revealed leukocytoclastic vasculitis (LCV), with neutrophilic exudate and negative direct immunofluorescence. Autoimmune and infectious workup was negative outside of a positive ANA to 1:80 and a positive atypical ANCA with negative MPO and PR3 antibodies. Urine protein-creatinine (UPC) ratio was 0.2 with normal eGFR and UA positive for protein and blood without RBC casts. Given the extent of skin involvement, he was started on empiric glucocorticoid therapy with the diagnosis of idiopathic LCV. He was discharged and seen two weeks later in nephrology clinic at which time he was noted to have an elevated creatinine and UPC ratio of 1.2. Renal biopsy revealed focal proliferative and crescentic necrotizing IgA glomerulonephritis confirming a diagnosis of IgA vasculitis (IgAV).

Discussion: LCV is a form of cutaneous small vessel vasculitis defined by neutrophilic inflammatory infiltrate on histopathology that is often triggered by an underlying infection, medication, illicit drug, malignancy or other autoimmune disease. It is skin-isolated but can mimic other systemic small vessel vasculidities, including IgAV, which is rare in adults. Systemic involvement may help differentiate between the two, but direct immunofluorescence is essential to identify immunoglobulin and complement deposits in the skin, characteristic of IgAV. Notably, as in our patient, diagnosis of the underlying etiology can be challenging as often cutaneous histopathologic findings are nonspecific. The positive and negative predictive values of IgA immunofluorescence in patients with IgAV are 84% and 81% respectively, thus negative immunofluorescence should not preclude a diagnosis of IgAV.

Conclusion: Suspicion for IgAV must remain high in patients with LCV and evidence of end organ involvement, but negative direct immunofluorescence. Repeat skin biopsy or renal biopsy should be considered. Ultimately, this patient was treated with IV steroids and cyclophosphamide with improvement of rash and leg pain. Use of immunosuppressive therapies remains controversial in terms of long term outcomes, but undoubtedly improves acute symptoms of disease as seen in this patient.

D41 Resident Presentation
A Stroke of Bad Luck: A Case of Acute Altered Mental Status

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A 74 year-old female with a history of hypertension, hyperlipidemia, diabetes, and prior CVA presented with marked acute encephalopathy. She was disoriented to person, place, and location as well as inattentive on exam without focal neurological deficits. Previously, she was independent in her functional status without memory or cognition deficits. She was found to have a urinary tract infection, and an acute ischemic stroke affecting the left posterior cerebral artery territory with infarcts in the left occipital lobe, corpus callosum, thalamus, and caudate nucleus. She had no metabolic derangements, and her EEG was normal. She was outside the window for tPA, and dual

antiplatelet therapy was not recommended due to infarct size. She was continued on her home aspirin and statin, and her urinary tract infection was treated with a five-day course of ceftriaxone and amoxicillin. Her mental status, attention, and delirium improved; however, her short-term memory remained poor, needing daily reminders that she was in the hospital for a stroke.

Discussion: This case represented delirium superimposed on new-onset short-term memory loss. The contribution of delirium in settings where acute strokes impact a patient's baseline mental status can be difficult. Her stroke's anatomical location supported her acute infarcts as the principal cause of her memory dysfunction. Her stroke affected the medial and anterior portions of her left thalamus, areas that are associated with memory loss. However, she was at high-risk for developing delirium due to her acute on chronic brain injuries, urinary tract infection, multiple medical co-morbidities, and acute hospitalization. Improvement in her mental status and attention with the treatment of her underlying urinary tract infection suggest a component of delirium was contributing to her acute presentation. Unfortunately, at follow-up with her primary care physician, the patient continued to exhibit significant short-term memory loss without recollection of her hospitalization or recent stroke, indicating long-term memory deficits from her stroke.

Summary: In a patient with altered mental status and a new stroke, it can be challenging to assess whether delirium contributes to the presentation. A review of an acute brain injury's anatomic significance should not exclude careful evaluation for delirium, including thorough metabolic and infectious workup.

D42 Resident Presentation

Evidence-based strategy for evaluating older adults, living in post-acute long-term care and taking anticoagulants, for intracranial hemorrhage following low impact falls

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Background:

One in three individuals > 65 years old suffer falls annually and 50% of those seek emergency department cares. Ground level falls are the most common cause, accounting for up to 80%, of traumatic intracranial bleeding (ICB). Fall-associated ICB in older adults (OA) account for 50% of fall-associated deaths.

Prevalence of Atrial fibrillation (AF) rises with age and therefore, the number of adults on anticoagulants increase with age. Direct oral anticoagulants (DOACs) are being used as a preferred anticoagulant across age groups. Hence, one would expect the risk of ICB to be greater in fallen OA taking a DOAC. Thus, there needs to be clear indication for the use of DOAC in OAs with AF who have fallen or are at significant risk for falls. Further, to provide cost-efficient care, evidence-based tools are needed to triage fallen OAs in various settings including post-acute long-term care (PALTC).

Methods:

This case seeks to provide insights into best practices in efficiently triaging the need for imaging and further evaluation on an emergent basis after an OA taking a DOAC experiences a fall. It will showcase current available tools for assessing risk of ICB from falls in OAs.

Results:

An OA (78 year) residing in a PALTC taking a DOAC falls from the bed. Available evidence-based tool is used to efficiently triage and manage the case.

Conclusions:

As previously highlighted in the stated statistics, falls are a significant concern in the geriatric population. For OAs with AF, even those with history of falls, the risk of stroke greatly outweighs the risk of major bleeding events. The preferred agents for treatment of AF are the DOACs. In the case of a fall, signs of an injury above the clavicles are a statistically significant indicator of increased risk of ICB.

D43 Resident Presentation

Wernicke Encephalopathy in an Older Veteran with Gastric Outlet Obstruction

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Background: Wernicke encephalopathy (WE), an acute neurologic condition secondary to thiamine deficiency, presents with confusion, nystagmus and ataxia. Older adults with malnutrition and/or history of alcohol abuse are at risk of developing thiamine deficiency and WE. Early recognition and treatment of WE with IV thiamine increases likelihood of symptom resolution and decreases likelihood of developing Wernicke-Korsakoff syndrome (WKS) which is rapidly progressive and non-reversible.

Case Presentation: A 65-year-old male with severe depression, alcohol use disorder in long-term remission and peptic ulcer disease previously independent in all basic and instrumental activities of daily living was admitted for altered mental status (AMS) in the setting of hyponatremia and a recent 30-lb weight loss. He was found to have partial gastric outlet obstruction and treated with endoscopic balloon dilation. His sodium was corrected. Geriatrics was consulted on Day 8 for persistent confusion. On exam the patient was alert and oriented to person and place and disoriented to time and situation. He would repeatedly state "Doc, I feel confused" and assert the need to return home to support his 90-year-old father with dementia for whom he is primary caregiver. He was found to have horizontal nystagmus and ataxic gait on exam. MOCA was 16/30 when adjusted for education and digit span was 5. Geriatrics recommended thiamine, head MRI and a paraneoplastic panel. MRI head showed old bilateral frontal lobe cortical infarcts and chronic microvascular ischemic changes. The patient received 500mg IV thiamine thrice daily for 2 days, followed by 200mg IV thiamine thrice daily for 3 days. His thiamine level, which was drawn after 1-2 thiamine doses, was normal. Vitamin D was low. His other vitamins and paraneoplastic panel were normal. Following IV thiamine administration, his nystagmus and gait improved however his confusion persisted. He was discharged on oral thiamine and with the support of his ex-wife as primary caregiver for the patient and his father.

Conclusion: Consider early parenteral thiamine supplementation in all older adult inpatients with AMS and a history of malnutrition and/or alcohol abuse. WE is treated with IV thiamine supplementation. Persistent cognitive impairment in this case is concerning for WKS and/or the unmasking of an underlying vascular dementia.

D44 Resident Presentation

Coil took my memory: A case of anterograde amnesia after stent-assisted coil embolization

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Introduction:

As use of advanced imaging becomes more widespread, there is corresponding increase in discovery of asymptomatic, non-ruptured cerebral aneurysms. Some well-known complications of stent-assisted coil embolization include thromboembolism and aneurysmal rupture, but many or consequences are yet to surface. Here we discuss unique sequelae resulting from an elective stent-assisted coil embolization and its implications.

Clinical Findings:

57-year-old African American woman with past medical history of hypertension, type 2 diabetes mellitus, and pulmonary sarcoidosis underwent MRI of brain for evaluation of headaches. Incidental finding of 4mm right-sided bilobed anterior communicating artery (AcoA) aneurysm was noted. Patient was then referred to Neurosurgery for evaluation. Stent-assisted coil embolization was performed. Patient was then seen in ED seven days after procedure due to emergence of

profound memory difficulties. She couldn't recall coming to hospital, basic events that occurred earlier in day, or her recent procedure. Her long-term memory remained intact. Repeat brain MRI revealed acute ischemia involving anterior column of fornix bilaterally. Her stroke workup was unremarkable. Patient was diagnosed with acute anterograde amnesia secondary to ischemic complications from her recent procedure. She was discharged on dual antiplatelet therapy with plans to pursue cognitive and occupational therapy in hopes of further improving her memory and functionality.

Discussion:

This may be first report documenting anterograde amnesia with stent-assisted coil embolization. Fornix is part of hippocampus that helps to encode new episodic memory. Anterior columns of fornix are supplied by subcallosal artery, which arises from perforating branches off of posterior ACoA. Occlusion of perforating arteries leads to forniceal stroke. Prospective studies have shown that risk of aneurysmal rupture only increases with a size of more than seven millimeters. Given that the size of this patient's aneurysm was 4mm, Conservative approach would have been more beneficial. Such interventions come with variety of lesser-known complications about which patients need to be educated.

Conclusion:

Coiling of anterior communicating artery aneurysm can lead to anterograde amnesia. This case highlights burden of morbidity and mortality associated with undue interventions for incidental findings.

D45 Student Presentation

A Program of Intergenerational Sharing of Tea and Poetry with the Elderly Successfully Translated onto a Virtual Platform during the COVID-19 Pandemic.

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Background

Social isolation and loneliness among the elderly is common, increases with age and is associated with negative physical, emotional and cognitive health and higher mortality. Older adults with intergenerational connections report less depression, better physical health and greater life satisfaction.[1] Poems that foster reminiscence of memories improve life balance and combat depression.[2] We previously reported the establishment of a successful monthly community *Tea & Poetry* program led by high school students geared toward improving the moods of the geriatric outpatients who attended. During the COVID-19 pandemic, we successfully translated this program onto a virtual platform.

Methods

Tea & Poetry sessions conducted at the Irving Wright Geriatric Center and two additional NYC sites were cancelled due to COVID. High school students with an interest in poetry had led groups of geriatric outpatients in reading and discussing poetry. A video recording of two students reading and discussing three poems was shared via a secured YouTube link with the three program Directors and the PRISM software system[3] designed to support connectivity of seniors including those with mild cognitive impairment.

Results

The virtual session was accessed by members of all three NYC programs and the PRISM participants. Viewers commented : "This video uplifted me at a time when I felt so alone and anxious." "It was wonderful to see young adults focusing on kindness - I felt connected with them." "It made me remember there is beauty and kindness in this world." "I found the video incredibly uplifting, it gives me hope for the future."

Conclusions

Social isolation and loneliness are both common and detrimental to the well-being of our elderly population. COVID has exacerbated this. An intergenerational program of reading and discussing poetry can be successfully translated onto a virtual platform. It appears to have a positive effect and improve the moods of its elderly participants. Future results will illuminate the degree to which this program improves elderly adults' moods and may highlight an effective intervention to improve the mood and mental health of elderly adults.

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D46 Student Presentation

Telehealth Visit Satisfaction in Geriatric Patients

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Background: COVID 19, an infectious viral disease, has caused a pandemic. This led to a shutdown in access to healthcare, for which the use of telephone visits has increased. Surprisingly, the literature lacks the effectiveness, acceptability and satisfaction of telehealth visits for geriatric patients (patients over 65), who need it the most. The purpose of this study was to explore the opinions of geriatric patients about telephone visits.

Methods: This study developed and utilized a telephone survey to investigate satisfaction and acceptability of telephone telehealth visits for 58 geriatric patients at the University of North Texas Health Science Center, Department of Internal Medicine and Geriatrics, geriatrics clinic during May through June of 2020. Patients were asked about the quality of the call, sharing sensitive information over the phone, whether a telehealth visit was as good as an in person visit and if they would choose telehealth over in person visits. Questions were rated on a Likert-type scale from 0 to 10 with 0 being unlikely, 10 being very likely and 5 being neutral.

Results: Participants in the survey consisted of 70.7% females, most of whom were Caucasian. 62% of patients were extremely satisfied with the telehealth visit quality and none were dissatisfied. 62% of patients were extremely comfortable with sharing sensitive information with none being uncomfortable. When asked if telehealth visits were good as in person visits, 33.6% of patients agreed and 28.1% disagreed. Patient opinions revealed that they did not want to miss out on the immersive experience of physical interactions with their physicians after being mostly homebound. Lastly, 21.4% of patients were very likely to choose telehealth visits in future whereas 12.5% of patients were very unlikely to choose these.

Conclusions: Most geriatric patients were satisfied with the quality of the telehealth visit and felt comfortable sharing sensitive information. Due to the pandemic, the majority of patients preferred virtual visits over in person visits. However, the failure to provide physical interaction was a major drawback of telehealth visits. Nonetheless, the study showed the crucial nature of virtual visits for geriatrics patients. Future research needs to include a more diverse geriatric patient population and also incorporate options for virtual (video and audio) telehealth visits.

D47 Student Presentation

Fostering Clinicians' Comfort in Leading Goals of Care Conversations: An Evaluation of the Veterans Affairs' Life-Sustaining Treatment Decisions Initiative

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Background:

About half of physicians regularly seeing patients aged 65 and older feel unprepared to facilitate advanced care planning with their patients, which underscores the need to identify interventions designed to increase comfort and knowledge with end-of-life care. The Veterans Affairs' (VA) Life-Sustaining Treatment Decisions Initiative (LSTDI)

aims to ensure that the values, goals, and life-sustaining treatment decisions of veterans with serious illnesses are honored. LSTDI includes mandatory goals of care conversations (GOCC) training for clinicians. The goals of this study were to evaluate the effectiveness of LSTDI at the South Texas Veterans Health Care System (STVHCS) and determine if comfort with GOCC correlates with performance.

Methods:

Clinicians attended a 1.5-hour interactive GOCC training highlighting communication techniques and the REMAP framework for GOCC. Clinicians were given an 11 item survey assessing comfort with various dimensions of GOCC prior to and after the training. The McNemar exact conditional test was used to assess if the training changed the proportion of clinicians who agreed to each item (α=0.05). Several months later, trainees participated in a GOCC Observed Skills Clinical Evaluation (OSCE). Spearman's rank correlation coefficient was calculated to determine if there was a correlation between comfort with GOCC and OSCE performance (α=0.05).

Results:

28 participants completed both the pre- and post-surveys, and 14 participated in the OSCE. Each item on the post-survey indicated increased comfort with GOCC; 6 out of 11 items indicated significantly increased comfort with GOCC. The Spearman's rank correlation coefficient between level of agreement with post-survey item "I feel comfortable discussing GOC with my patients" and total OSCE score was r_s=0.63 (N=14; p=0.017), which indicates a strong, positive monotonic correlation.

Conclusions:

The VA's LSTDI increased comfort with various dimensions of GOCC at STVHCS. In addition, comfort with GOCC positively correlated with OSCE performance. The post-survey may serve as a useful predictor of GOCC performance. Implications for further research include replicating the intervention on a larger scale and evaluating effectiveness in other settings.

D48 Student Presentation, Encore Presentation
Accelerometer-Based Physical Activity Patterns and Associations with Outcomes among Individuals with Osteoarthritis

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Background: This study examined patterns of physical activity and associations with pain, function, fatigue and sleep disturbance among individuals with knee or hip osteoarthritis (OA).

Methods: Participants (n=54) were enrolled in a phone-based PA coaching intervention trial; all data were collected at baseline. Self-reported measures of pain and function (WOMAC), fatigue (10-point numeric rating), and PROMIS sleep disturbance were collected via phone. Subejcts wore accelerometers for at least 3 days. Proportion of time participants spent in sedentary behavior during the morning (from wake until 12:00 pm), afternoon (12:00 pm until 5:59 pm), and evening (6:00 pm until sleep) each day was averaged across all days of wear. Pearson correlations assessed associations between activity and self-reported measures.

Results: Participants were majorily sedentary in behavior: 65.6% of mornings, 70.0% of afternoons, and 76.6% of evenings. Associations between sedentary behavior and reported outcomes were strongest in the afternoon, strongest for WOMAC function, and lowest for PROMIS sleep disturbance. In the evening hours, sedentary time was most strongly associated with fatigue.

Conclusions: Overall, we observed lowest activity during the evening. As one of few studies to examine physical activity patterns across times of day among individuals with OA, our findings emphasize the need to continually increase physical activity among individuals with OA and suggest that patient's symptoms (e.g., pain, function, and fatigue), as well as daily variations in activity, should be considered in intervention approaches.

Trial registration: NCT03780400, December 19, 2018

Average times spent in each activity type throughout the day

	Morning			Afternoon			Night		
Activity Type	Avg. Activity Mins (SD)	Avg. Mins of Wear (SD)	% time activity in wear (range)	Avg. Activity Mins (SD)	Avg. Mins of Wear (SD)	% time activity in wear (range)	Avg. Activity Mins (SD)	Avg. Mins of Wear (SD)	% time activity in wear (range)
Sedentary	145.7 (55.3)	222.2 (71.0)	65.9 (35.2-91.6)	243.6 (34.0)	348.2 (17.4)	70.0 (54.4-90.4)	201.7 (65.6)	262.0 (74.4)	76.6 (52.7-90.8)
Light Activity	73.2 (32.8)	222.2 (71.0)	33.0 (8.4-54.4)	101.5 (33.5)	348.2 (17.4)	29.1 (9.6-45.6)	59.3 (24.9)	262.0 (74.4)	23.0 (9.2-46.0)
MVPA	3.3 (5.7)	222.2 (71.0)	1.4 (0-10.4)	3.0 (4.8)	348.2 (17.4)	0.9 (0-6.2)	1.0 (1.3)	262.0 (74.4)	0.4 (0-1.9)

D49 Student Presentation
The Effect of COVID19 on the Caregivers of Dementia Patients

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Investigating the effects of COVID19 on caregivers of those with dementia is paramount because of unique challenges for caregivers such as limited resources, separation from their patient, and neglect of personal health. By evaluating the effects of COVID on caregivers we can improve pandemic response to improve outcomes for caregiver and patient. This inquiry focused on describing the impact of COVID on caregivers of patients with dementia using survey data.

Inclusion criteria selected for caregivers of dementia patients from the University of North Texas Health Science Center Dementia CARES (Caregiver Access to Resources, Education, and Support) Program in 2019 who completed the program. From the 25 participants selected, 17 responded to a 12 question survey between June and August 2020. Participants were asked to rate how often they experienced situations or feelings due to COVID-related changes on a scale of "never" to "nearly always." Responses were analyzed using the Qualtrics data analysis tool. Qualtrics is a web-based survey tool to conduct research and analyze responses.

Survey results indicate 18% of participants felt frequently overwhelmed with their role as a caregiver during COVID. Nearly 25% of participants reported increased mental health concerns and the same proportion felt their daily life would be less challenging if COVID restrictions weren't in place. Most participants never faced unique financial challenges due to COVID and most felt the availability and access of beneficial services was adequate. 35% reported difficulty attending to their own health needs because of COVID related changes to their caregiving role.

The results of the survey suggests a need to address mental health and unique caregiver challenges due to the COVID pandemic. Caregiver health needs should also be prioritized during a pandemic. The results also suggest financial burden was less of a concern from COVID changes, however conclusions are limited due to sample size. This investigation is relevant because to treat dementia patients holistically, physicians must address the health of those who influence outcomes such as caregivers and loved-ones. Next steps should include a larger sample size and should focus on more selective cohorts to determine more specific relationships between pandemics and caregivers. By increasing data and awareness we can improve outcomes for caregiver and patient during COVID19 and future pandemics through quality patient care and policy.

D50 Student Presentation

Assessing the Impact of Community-Based Exercise on Healthcare Utilization Among Older Adults in the LEAP Study

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Background: Social isolation in older adults drives increased morbidity, mortality, and Medicare costs. The Leveraging Exercise to Age in Place (LEAP) study seeks to engage community-dwelling older adults (age≥50) in community-based exercise classes to improve social connectedness. LEAP has yielded statistically significant changes in measures of social isolation, including 3.3% increase in the Duke Social Support Index (n=382, p<0.0001) and 6.9% decrease in the UCLA 3-Item Loneliness Scale (n=382, p<0.0001). We seek to assess whether LEAP also impacts healthcare utilization rates.

Methods: Since 2018, LEAP has enrolled 382 participants via health system or self referrals. Of these, 184 were members of the Cedars-Sinai Health Network (Los Angeles, California) and consented to review of their medical records. Using encounters in the EMR, we analyzed healthcare utilization across 3 indicators: ED visits, inpatient hospital admissions, and average length of stay. We compared encounters 6 months before class start date with those 6 months after. We excluded participants who did not complete class (<50% attendance); had inaccessible records; and/or were deceased before the 6 months after date. We also excluded those completing classes after March 19, 2020, when LEAP classes became virtual due to COVID-19. From this, we identified n=65 eligible participants.

Results: There were no statistically significant changes in healthcare utilization. McNemar analysis resulted in two-tailed p=1.00 for ED visits and two-tailed p=0.75 for inpatient hospital admissions. Paired t-test analysis on average length of stay resulted in p=0.79.

Conclusion: While LEAP has shown success in enhancing social connectedness in older adults, its effect on healthcare utilization has not reached statistical significance. This may be due to many factors. Analyses excluded those outside of Cedars-Sinai Health Network. Meaningful trends may also not be detectable yet. Future aims include assessing data over time, expanding sample size, and employing cost-based metrics. LEAP remains a viable option to combat social isolation; further evaluation is required to explore the extent of its impact on healthcare utilization.

D51 Student Presentation

Caregiving Burden for those with Diabetes and Dementia during COVID-19

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Background: One third of older adults with diabetes (DM) have co-occurring cognitive impairment and/or Alzheimer's disease and Related Dementias (ADRDs). This presents a significant challenge for their caregivers (CG) faced with disruptions in logistics, decision-making, and healthcare management of DM. The COVID-19 pandemic has likely exacerbated caregiving burden in New York City, the first epicenter in the US. To what degree this burden is differentially impacted by CG relationship to the care recipient (CR) is unknown. The aim of this study was to assess to the impact of COVID-19 on caregiver burden and to what extent caregiver relationship to CR influenced that burden.

Methods: We used caregiver surveys collected as part of a QI intervention being conducted at NYU Langone Health. Inclusion criteria for patients were age ≥ 65, cognitive impairment and DM. We completed telephone surveys with CGs of eligible patients. We analyzed associations between CG characteristics (age, gender, race, ethnicity, relationship to CR) and the caregiver Treatment Burden Questionnaire (TBQ).

Results: CGs that completed a COVID-19 survey (n=177) had a mean age of 54.6 years, 75% (n=132) female, 74% (n=129) white, 35% Hispanic or Latino (n=61) and 69% (n=122) were a child of a CR. Children of CR versus other relationships were more likely to report disruptions in access to a home health aide (56.8% vs. 31.4%, p<0.01), case management (60% vs. 26.5%, p<0.01) and/or a care coordinator (58% vs. 27.1%, p<0.01). Children of a CR versus other relationships reported more difficulty caring for themselves and their CR due to the COVID-19 pandemic (77% vs. 53%, p<0.01). Children of a CR versus other relationships had higher rates of unemployment due to the COVID-19 pandemic (29% vs 15%, p=0.05).

Conclusions: Our findings suggest that while all caregivers experience burden and disruption in services during the COVID-19 pandemic, children of DM-ADRD patients have significantly greater burden. Future studies are needed to confirm these findings and determine ways of strengthening safety nets for children of CRs in times of national disaster.

D52 Student Presentation

Beyond Skin Deep: Identifying Early Pressure Injuries on Dark Pigmented Skin

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BACKGROUND: Pressure-induced skin injuries (PrI's) are local areas of skin and soft tissue damage due to prolonged pressure and ischemia. They pose a great cost burden for patients and providers, particularly within the Black American community. Studies suggest Stage 1 PrI's, which forecast irreversible injuries, are underdiagnosed in darker skin, necessitating more concrete visual descriptions and diagnostic methods beyond the gold standard of visual assessment. This study seeks to identify the most common descriptions of Stage 1 PrI's in dark pigmented skin, and alternative reliable and cost-effective detection techniques, to improve their early detection in patients with dark skin tones, most specifically Black Americans, and address a significant racial disparity contributing to morbidity and mortality within long-term care.

METHODS: A comprehensive Boolean search of PubMed, MEDLINE, EBSCO, CINAHL, and Google Scholar*, (stage I OR stage 1) AND (pressure ulcer OR pressure-induced skin injury OR decubitus ulcer OR pressure injury) AND (Black OR African-American OR African American OR dark pigmented),* was used to find studies specifically addressing PrI's on dark pigmented skin. All articles were reviewed in careful detail, and relevant information on PrI appearance and diagnostic methods was extracted. We also referenced the official NPUAP definition of Stage 1 PrI's.

RESULTS: Of 83 studies yielded from the search, 23 studies were extensively reviewed and observations were catalogued.

CONCLUSIONS: Visually, Stage 1 PrI's present differently in darker skin (blue, grey, maroon, purple, brown, nonblanchable) compared to lighter skin (red, nonblanchable), suggesting visual assessment alone may be insufficient. Tactile components, such as temperature extremes, were identified as potential means to detect PrI's. Of all alternative diagnostic techniques, ultrasonography and skin conductance were the most promising and cost-effective methods to identify subclinical Stage 1 PrI's in facilities serving Black American residents, though both require additional research to compare them to the gold standard. Finding a reliable and cost-effective diagnostic strategy for incipient Stage 1 PrI's will help address an important racial disparity in long-term care, thus reducing cost burden and improving the quality of life for Black American patients.

D53 Student Presentation
Differential Impact of COVID-19 On Urban and Rural Veterans in South Florida
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Introduction Older adults have the most COVID-19 deaths, but the pandemic may be impacting them indirectly. We aim to understand the pandemic's effect on mental health and resource access in south Florida older veterans.

Methods Veterans of a VA in-person or virtual geriatric frailty clinic were called (April-June 2020) using a quantitative survey to assess their current mood and access to healthcare and certain resources. Patients were divided into two cohorts (50 rural and 89 urban) based on the Rural-Urban Commuting Areas system. We performed descriptive statistics and chi-square analyses to assess statistically significant differences.

Results Average age of rural and urban veterans was 73.5 (SD = 5.7) & 73.3(5.2), Jen Frailty Index: 6(2) & 7(1.3); Care Assessment Needs score: 81.6(21.3) & 93(7.5), respectively. Compared to pre-COVID, a significantly greater percentage of rural veterans reported increased anxiety [20(40%) vs 25(28.2%) $p<0.05$] and depression [20(40%) vs. 15(16.9%), $p<0.05$]. More rural veterans stated trouble getting groceries [6(12%) and 2(2.2%), $p<0.05$] and transportation [8(16%) and 2(2.2%), $p<0.05$]. Both groups stated inability to see their provider [31% (62%) and 58% (65.2%), p=0.8], but significantly fewer rural veterans stated having telehealth visits [21% (42%) vs. 61% (68.5%), $p<0.05$]. Our results are limited by small sample size, and our rural cohort being less frail than the urban cohort.

Discussion Older rural veterans face disproportionately greater challenges compared to urban veterans during COVID-19, including increased mental health struggles and decreased healthcare and resource access. Improving telehealth implementation may improve healthcare access, though it appears underutilized for rural veterans. A better understanding of these specific challenges by geographic area may help the VA and other health systems formulate programs to support older patients, especially targeted strategies in rural areas, as our data suggest rurality may influence patients' ability to cope with life-changing events.

D54 Student Presentation
Intergenerational Connection in COVID-19
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Background: Social isolation and loneliness are significant health risks for older adults. The COVID-19 pandemic exacerbated these risk factors due to social distancing and quarantine regulations. To mitigate isolation in our local senior population, an intergenerational mentoring program, GW Reaching Out, was created. This student-led volunteer call service enabled medical students to meet an immediate need for social connectedness among older adults while informing their future medical practice of the impacts of the pandemic on older adults.

Methods: In March 2020, GW Reaching Out was created. Medical students called independently living community-dwelling seniors to provide social connection and helped seniors access community services. Students were recruited through internal listservs. Older adults were recruited through community partners, and a website was created for older adults to self-enroll. To avoid increasing staff burden in long-term care facilities (LTCs), older adults in LTCs were not included despite the recognized need for social connection in this population. Prior to participating, students attended a virtual orientation on program goals and HIPAA compliance and electronically signed a commitment to program expectations. Starting in September 2020, students documented the duration and discussion topics of their calls in a REDCap survey.

Results: From September 2020 to December 2020, students made 168 completed calls to older adults resulting in 85 hours of connection. Students reported discussing COVID-19, healthcare access, and loneliness. Students and older adults reported an overwhelmingly positive response and gratitude for the program.

Conclusions: GW Reaching Out aimed to establish intergenerational mentorship and mitigate social isolation. The program demonstrated that medical students could foster meaningful connections with community-dwelling older adult mentors through longitudinal conversations. GW Reaching Out employs a unique, empathy-driven approach to supporting older adults while building intergenerational relationships. This program has significant reproducibility given its virtual format. Feasibility for ongoing service-learning beyond the pandemic is high as virtual programs will be an important component in future medical education curriculums.

D55 Student Presentation
Fall Concern, Primary Care Provider Follow-Up, and Adoption of Prevention Strategies for Older Adults Sustaining Falls
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Background: Falls are the leading cause of fatal and nonfatal injuries in the United States for adults aged 65 years and older. Older adults want to maintain autonomy, fear vulnerability, and do not know what their risk of falling is. Primary care providers (PCPs) can assist patients by performing a comprehensive fall assessment and recommending fall prevention strategies, like increased exercise activity, physical therapy, and home environment modification. Thus, this study aims to determine the impact of patient concern about falling and PCP follow-up on the adoption of fall prevention strategies in older adults who sustained a fall resulting in an emergency department (ED) visit. *Methods:* A prospective study was conducted at two South Florida trauma centers over the course of a year. Patients ≥65 were identified from the ED census by ICD-10 diagnosis of head injury (S00-S09) or head CT performed for trauma. A telephone survey was conducted 14 days after ED presentation. Patients with a self-reported fall were asked about and grouped based on concern for a repeat fall and PCP follow-up since discharge. Of those who had PCP follow-up, adoption of fall prevention strategies (exercise activity, physical therapy, and home environment modification) was assessed. Chi square tests of independence were performed. *Results:* Of 1,527 patients surveyed, 769 (50.4%) were concerned about falling again and 758 (49.6%) were not. There was a significant association between PCP follow-up rate for those concerned vs. not concerned (62% vs 56%, $p< .05$). Among patients with a PCP follow-up, those concerned were more likely to adopt fall prevention strategies (65% vs 46%, $p< .01$). No significant differences were found for the adoption of each individual fall prevention strategy between PCP follow-up patients concerned vs. not concerned. *Conclusions:* In this study, patients with a fall concern were more likely to follow up with a PCP and start a fall intervention compared to those without. Fall prevention education can reduce hospital return costs and the amount of falls nationwide. Therefore, we strongly recommend PCP follow-up after ED visits for falls in older adult patients.

D56 Student Presentation

Implementation and Adaptation of Physician-Pharmacist Collaborative Management Hypertension Service for Geriatric Patients during the COVID-19 Pandemic

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Background

Physician-pharmacist collaborative management (PPCM) is a model shown to improve management of chronic diseases including hypertension (HTN), diabetes, and asthma. At the University of Chicago Medicine, this model was implemented in an adult primary care clinic starting in 2018 with improvement in blood pressure control and both patient and provider satisfaction. This service was expanded in June 2020 to a geriatric population at the South Shore Senior Center (SSSC) where 46% of patients had uncontrolled HTN. Due to the COVID-19 pandemic, the service was adapted to a hybrid in-person and telehealth format.

Methods

Patients with uncontrolled HTN were referred by their primary care provider to the Pharmacy Hypertension Management Service (PHMS). During PHMS visits, a pharmacist performed a thorough medication review, reviewed in-clinic and at-home blood pressure measurements and laboratory results, and assessed lifestyle factors. The pharmacist then formulated a plan involving both pharmacological and non-pharmacological interventions.

Results

In the first 6 months, 72 patients were enrolled in PHMS at SSSC. Six patients were discharged from the program, with 66 patients still participating. Thirteen patients have consented to the PHMS Database, with a median age of 75.2 (SD: 6.1). Fifty-four percent identify as female, and 92% identify as African American. Of the 10 providers at SSSC, 7 have referred patients to PHMS and clinic operations have doubled from 2 to 4 half-day clinics per week due to increased patient referrals. Challenges faced included transition of previously in-person visits to a hybrid in-person and telehealth model and obtaining accurate home blood pressure measurements to facilitate telehealth visits.

Conclusions

Despite new implementation challenges posed by the COVID-19 pandemic, PHMS at SSSC has enrolled a significant number of patients and been adopted into practice by a majority of providers. This experience provides insight into the feasibility of a hybrid in-person and telehealth PPCM model.

D57 Student Presentation

Impact of COVID-19 on the Rate of Falls in One Community of High-Risk, Community-Dwelling Older Adults

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Background

Stay-at-home orders prompted by COVID-19 have decreased levels of physical activity. Prolonged reductions in activity levels may adversely affect health and functional outcomes in older adults at increased risk for deconditioning. This study examines the relationship between falls among high-risk, community-dwelling older adults at one Program of All-Inclusive Care for the Elderly (PACE) and the COVID-19 closure of its Day Health Center (DHC), a setting that provides participants with social and rehabilitative services and contributes to their weekly physical activity.

Methods

This was a descriptive study of retrospective fall data from participants at Hopkins ElderPlus (HEP) in Baltimore, MD. Self-reported falls during the three months before the DHC's closure ("pre-COVID-19") and the three months after its closure ("COVID-19") were reviewed. Falls during the same months as COVID-19 of the previous year ("2019") were also reviewed to better evaluate the impact of time of year on falls, independent of COVID-19. Paired t-tests and chi-squared tests were used to analyze the impact of time period on falls per participant, location of fall, activity during fall and harm level/injury associated with fall.

Results

135 HEP participants (mean age: 76 years ±11, 74% female, 69% Black) were enrolled during pre-COVID-19 and COVID-19. 37% of participants (n=50) fell at least once during this time. Participants who fell experienced fewer falls during COVID-19 (mean=.64 falls) than they did pre-COVID-19 (mean=1.24 falls, $p<.05$). Falls that occurred during COVID-19 were less likely to have occurred while walking than falls pre-COVID-19. Participants who were enrolled during both COVID-19 and the same three months of 2019 and who fell during one of these time periods (n=45, 33%) fell less frequently during COVID-19 (mean=.44 falls) than they did during 2019 (mean=1.20 falls, $p<.05$).

Conclusions

An abrupt reduction in activity levels may have reduced falls in one population of high-risk, community-dwelling older adults. Physical activity has been shown to both increase and protect against falls in older adults. The longer-term consequences of a comparably prolonged period of inactivity merit further study.

D58 Student Presentation

How might an intelligent voice assistant address older adults' health-related needs?

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Background

Unique solutions need to be developed to address the challenges of the aging population. Technology can help older adults maintain their independence in their activities of independent living, assist with cognition, communication and social connectivity, personal mobility and transportation, and also improve their access to health care. Intelligent voice assistants (IVAs) can address barriers many older adults face in utilizing unfamiliar technology. Our purpose for this study was to identify the needs of older adults that could be supported by an IVA.

Methods

We recruited adults 65 years and older from the greater San Diego area. We conducted semi-structured interviews. Topics included daily activities, management of health and medications, use of technology, and ideas for voice assistants' features. The interviews were then transcribed and analyzed using deductive and inductive coding to identify themes.

Results

Sixteen participants were recruited with mean age of 77 (range 68-90), seven males and nine females, one African American, two Asian Americans, 12 Caucasians, and one Latinx. Eleven resided in the general community and five lived in retirement communities. Fifteen had some college education. Nine of the participants had prior experience using IVAs and two had no prior knowledge of IVAs. Participants identified medication, exercise, and appointment

reminders, as well as health data logs for weight, blood glucose and blood pressure, and nutritional information as needs that they would like addressed by an IVA. Their primary concerns regarding usage of IVAs included privacy, speech recognition, and limited ability to personalize the system to them.

Conclusion

We identified healthcare needs and concerns to be addressed in the design process for building an IVA for older adults. This design process will engage older adults to ensure their viewpoints are included and to develop an IVA that is as useful and usable for them as possible.

D59 Student Presentation

Utilization of Small Group Learning to Improve Understanding and Completion of Advance Care Planning Documentation in a Primary Care Setting

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Background: Advance Care Planning (ACP) is a key component of patient-centered care and offers many benefits including improvements in quality of life and communication with health care professionals and loved ones. Many Americans, especially those of disadvantaged backgrounds, have not completed ACP documentation. Only 18% of ethnic minorities surveyed nationally reported having ACPs compared to 34% of White counterparts. A small group model provides efficient, valuable, and effective patient education and increases rates of completed documentation. One study saw a 50% increase in the completion of advance directives in a primary care setting.

Methods: A similar program was implemented at Nebraska Medicine's Fontenelle Health Center (FHC) and the surrounding community. FHC is a primary care medical home whose patient population is 52 % Black, 39%, White, and 9% Asian or of other ethnicities. The program was implemented in two small group sessions, two weeks apart. Topics covered include the benefits of ACP, defining key terms and concepts, and choosing a health care proxy. ACP documents were provided and reviewed in the 2nd session. There was also an emphasis on personal reflection and evaluation of health goals to foster the ACP process. Patients were surveyed on their experience and understanding of ACP before and after attending the small group sessions.

Results: Preliminary data (N=7) shows that after completing the small group sessions participants improved in their knowledge of ACP, 7 participants reported they knew what ACP was after completing the second session while 2 reported knowing before the first session. Of the participants 6 of 7 also reported they had chosen a health care proxy; 6 defined their health care goals and 3 were in the process or had already completed their advance directives. All 7 of the participants were Black, 6 were female and one was male, 6 were between the ages of 51 and 75, and 1 was over 75.

Conclusion: Small group education offers an effective method to educate patients on the importance of and tools to complete ACP thus providing an opportunity for a crucial aspect of medical care to be incorporated into a primary care setting.

D60 Student Presentation

A Survey Analysis of TeleHealth Access to Geriatric Patients During COVID-19

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COVID-19 increased the need for remote access to healthcare; however, there remains the concern that the patient population has the capability to use the software to employ TeleHealth. This study focused on elucidating the most effective way to reach out to the patient population for educational intervention. We surveyed participants from Summa Health Akron City Hospital and the Direction Home Akron Canton Area Agency on Aging and Disabilities on the current use of TeleMedicine both prior to and during the pandemic. 16 out of 22 (72.7%) participants participated in the survey. The participants consisted of 5 (33.3%) physicians. 11 participants (73.3%) noted that less than 25% of their patients reside in nursing homes. We further explored the practitioner's perception on the patient capability to employ TeleHealth. 9 (60.0%) of the participants use TeleHealth, of which 5 (55.6%) started utilizing it within the past six months. In assessing comfort level among patients using TeleHealth, a majority (69.2%) of the participants state that their patients feel somewhat uncomfortable to completely uncomfortable in utilizing TeleHealth. A greater majority (76.9%) state that their patients feel a medium level of comfort utilizing devices such as blood pressure monitors and glucose machines at home. Finally, 12 participants (92.3%) state that a volunteer service to aid patients and/or caregivers in use of medical devices and TeleHealth would be extremely useful.

We are utilizing this data to develop a student-led virtual program to provide assistance to patients in using medical devices. The shape of this program is to actively recruit developing medical professionals into getting involved with the local community around them during the COVID-19 pandemic. Student volunteers will be trained to effectively communicate, educate and formulate guides to better aid geriatric individuals in understanding technology necessary to use TeleHealth. Students will be able to answer questions related to using software as well as medical devices. In this ever-changing environment, we hope to facilitate patient-provider conversation and improve adherence to medical treatment and therapy.

D61 Student Presentation

Incorporating a Rapid Geriatric Assessment in Primary Care

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Background: As patients age, complexity of their care increases and the likelihood of developing geriatric syndromes becomes greater. Identification and documentation of geriatric syndromes can be a helpful first step to providing quality care. The goal of the project was to assess documentation of frailty, sarcopenia, risk for weight loss, and cognitive impairment (CI) before and after screening with the Rapid Geriatric Assessment (RGA) tool.

Methods: Convenience sampling of participants took place at a primary care Geriatrics clinic once a week for 16 weeks. Charts were reviewed prior to the clinic visit for mention of frailty, sarcopenia, risk for weight loss, and CI. If any type of CI was mentioned, they were excluded from the cognitive screening. After verbal consent, SH screened individuals with the RGA and shared results with the physician before the visit. A repeat chart review following the visit determined if these geriatric syndromes were documented in the problem list or the clinic visit note.

Results: Ninety patients were screened with the RGA. Pre visit screening revealed 2 patients with a diagnosis of either frailty, sarcopenia, or weight loss in the problem list or last provider note. Fifty-nine of those patients were screened with the cognitive portion of the RGA. Mean age 80.5 years, 61% female. Pre-frailty or frailty was found in 80%, sarcopenia in 51%, and risk for weight loss in 48% of patients. Of the 59 patients screened for CI, 15 had mild cognitive impairment while 16 met criteria for dementia. After the intervention, 7/46 with sarcopenia were documented in the chart, 6/31 of those with either form of CI, 5/43 of those with risk for weight loss, and 5/72 of those with frailty were documented in the chart.

Conclusions: We were able to increase documentation of the above geriatric syndromes to a small degree. The RGA was incorporated into a busy Geriatrics clinic as a quality improvement project. Identification of the geriatric syndromes could be considered an important first step to improve patient outcomes. Additional components

must be present for subsequent change such as provider buy-in, system change, and an appropriate workflow. While it only takes a few minutes to administer, routine use would require dedicated time from someone. The project provided a worthwhile first step in process improvement of identifying and documenting on geriatric syndromes.

D62 Student Presentation
Mobility Goal Setting on an ACE Unit
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Background: Low mobility is common among hospitalized older adults. It leads to deterioration in mobility skills and activities of daily living. Goal setting is an important step used to direct rehabilitation and is known to improve satisfaction and recovery. After successful implementation of daily mobility documentation on an Acute Care for Elders (ACE) unit, we sought to involve patients in identifying prehospitalization mobility levels and setting daily mobility goals, with the aim of 70% documentation rates for each.

Methods: Participants (n=64) were age 65+ admitted to a 19-bed ACE unit in August-September 2020. Mobility was measured daily by nurses and care partners with the Johns Hopkins Highest Level of Mobility (JH-HLM) (intraclass correlation coefficient 0.94). Scores range from 1 (lying in bed) to 8 (walk 250+ feet). Plan-Do-Study-Act (PDSA) cycles were conducted to 1) obtain prehospitalization JH-HLM and daily goal for patients in 4 rooms, 2) simplify documentation template questions, and 3) expand to entire unit. Auditing was recorded daily for 18 days, and results were analyzed with a run chart. A survey elicited nursing perceptions (n=15) using 5-point Likert scales, with results reported as median (IQR).

Results: Prehospitalization JH-HLM documentation rates were 75%, 71.4%, and 71.4% and daily goal JH-HLM median documentation rates were 50%, 58.3%, and 11.8% during PDSA cycles 1, 2, and 3 respectively. Aim was met for prehospitalization mobility documentation but not goal setting. Run chart showed random variation with 8 runs and no shifts, trends, or astronomical points.

On the survey, nurses felt that goal setting 1) helps care for patients 4 (3.5, 5), 2) is burdensome 2 (2, 2.5), 3) benefits patients 4 (4, 5), 4) results in good patient response 4 (3, 4), 5) is aided by prehospitalization mobility documentation 4 (4, 5), and 6) causes unsafe activity 2 (2, 2). Challenges reported include unrealistic goals and hesitations to mobilize patients.

Conclusions: Nursing documentation of prehospitalization mobility and goal setting is achievable on an inpatient ACE unit. Although it was well-received at our institution, intended documentation rates for daily goal setting were not met. Goal setting is important to actively engage patients in mobility care, yet rehabilitative evidence suggests that it presents significant social difficulties. Future work should explore nurse education on goal setting conversations.

D63 Student Presentation
Addressing Telehealth Barriers Among Older Adults During COVID-19
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Background: While COVID-19 has increased the use of telehealth, only 30% of older adults report using it and there is less use among older minority populations. Several barriers contribute to older adults' decreased use including cost, technical literacy, and a lack of desire. Due to the vulnerability and severity of COVID-19 infections in older adults, it is essential that we increase telehealth use among this population.

Methods: We implemented a program at UNMC in partnership with ENOA to educate older adults on telehealth and how to use it. Presentations and supplemental guides detailed what telehealth is, its uses, and instructions on the use of various technologies. Socially distanced, small-group educational sessions lasting 20 minutes were offered to older adults in independent living facilities. A survey was completed before and after the sessions to gauge the participants' understanding of telehealth and interest in using it.

Results: Preliminary data (N=14) showed that the small group sessions were beneficial. Prior to the sessions, 21% of attendees were familiar with telehealth; at the end, 86% were familiar with and could explain telehealth. Before the presentation, only 3 attendees were avoiding their healthcare providers due to COVID-19. However, 80% of attendees that were asked said they would be more likely to try telehealth services in the future. Results showed that 71% of participants had all their questions answered during the presentation but would still want more information and 43% said they had someone to help them with telehealth. Only 3 people had access to the internet, but 71% had a landline or smartphone that would accommodate communication with providers. Sixty percent (60%) of participants were 76 or older; 64% were female, 79% were African American, and 64% were single/widowed.

Conclusion: Data suggests that through small-group sessions we can increase older adults' understanding of telehealth and increase the likelihood they use it in the future. Due to COVID-19's continued effect on older adults, it is vital that older adults feel comfortable with telehealth and we address knowledge barriers to using it. Future efforts will include additional learning sessions, with an emphasis on minority groups.

D64 Student Presentation
Patient and Provider Voices in the Geriatrics Navigator Program
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Background: Health systems must optimize access to community resources to address a diverse urban aging population's complex needs. Since 2018, providers in the Los Angeles County Department of Health Services have used the Geriatrics Navigator Program (Geri eConsult) for telephonic navigation of geolocated, culturally appropriate, low-cost community resources for older patients and caregivers. To improve utilization and linkage to resources with the Geri eConsult program, feedback from stakeholders can ensure the service meets the needs of vulnerable older adults as intended.

Methods: Our retrospective qualitative cohort study collected feedback from 1) participating patients, through telephonic interviews, and 2) participating providers, through online surveys, regarding their experience with the Geri eConsult. By convenience sampling, focus groups explored perceived strengths and barriers of the service with 3) providers new to the Geri eConsult service, and 4) social workers as potential Navigators.

Results: 15 patients (87% ≥ 80 years old, 73% female, 73% Spanish-speaking), 16 providers, and 8 social workers were interviewed across multiple sites. All (100%) participating patients reported that they would receive the service again despite a 53% linkage rate. While 38% of participating providers reported that the program was easy to use, all emphasized it was useful in caring for older adult patients. Focus groups of program-naive providers and social workers revealed perceived strengths of enhanced patient care and integration into the electronic health record from the online portal. Barriers included concerns regarding resource and personnel capacity, and in integrating the program into existing clinic workflows.

Conclusions: Patient and provider participants were satisfied with the program and felt it was useful. Program-naive stakeholders identified concerns regarding workflow integration and sustainability. These results may help expand the program to new clinical sites with improved workflows and Navigator support. In the era of COVID-19, user-friendly virtual linkage programs for community resources may support innovative, patient-centered, and coordinated geriatrics care to better address the social determinants of health in underserved older adult populations.

D65 Student Presentation
Implementation of SOAP-R Screening Tool to Assess Adult Opioid Misuse in Rural Clinics
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Introduction:

Opioid misuse is an epidemic in the United States with estimates of opioid overdose deaths increasing 156% between 2010 and 2015[1]. Rural communities are disproportionately burdened[2]. Barriers in the rural health systems include distance, cost, and lack of methadone treatment clinics[3]. The aim of this project is to assess the effectiveness of an opioid screening questionnaire in a rural clinic.

Methods:

Implementation of the Revised Screener and Opioid Assessment for Patients with Pain (SOAPP-R) was assessed over a 4-week period. Patients who were prescribed opioids twice over a two-week period and who were age 19-80 were included. Cancer patients on opioid therapy were excluded.

Results:

Out of the 15 patients who were eligible to take the questionnaire, 11 chose to participate (73%). Three patients refused and one patient was not offered the questionnaire. None of the patients who took the questionnaire tested at risk for opioid abuse.

Conclusion:

Implementation of the SOAPP-R screening tool may alert physicians to potential misuse of opioids leading to earlier intervention and treatment for such patients[4]. The present study showed an increase of screening from 0% to 73%. Future Plan Do Act (PDSA) cycles should include larger sample sizes. To assess the impact and influence of SOAPP-R, researchers should measure whether screening leads to early intervention.

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Data Collection	Time Frame	Number of adults ages 18 to 90 with opiate prescription evaluated for misuse during time frame	Number of adults ages 18 to 90 with opiate prescription during time frame	Results	Target
Prior to Enhancement	June 31, 2020 to July 24, 2020	(A) 0	(B) 24	A/B= 0	
Enhancement	August 3, 2020 to August 28, 2020	(C) 11	(D) 35	C/D = .73	Enhancement results >=80%

D66 Student Presentation
A quality improvement study to assess melatonin use and the impact of pharmacist desprescribing recommendations in a Progam of All-inclusive Care for the Elderly (PACE)
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Background/Objectives: Guidelines and clinical practice differ with regards to the use of melatonin for the treatment of insomnia. The 2019 VA/DoD clinical practice guidelines and the American Academy of Sleep Medicine 2017 guideline recommend against the use of melatonin due to lack of efficacy and potential side effects. The objectives of this quality improvement study are to evaluate current prescribing practices for melatonin within a Program of All-Inclusive Care for the Elderly (PACE), identify patients appropriate for deprescribing, and assess acceptance rate of clinical pharmacy/provider recommendations for dose adjustments.

Methods: This longitudinal quality improvement study will assess the use of melatonin for sleep disorders in a PACE program located in Mattapan, MA. Clinical pharmacists will utilize the Pittsburgh Sleep Quality Index (PSQI) to guide recommendations for melatonin dose changes. Given data from previous studies and barriers to modifying medication regimens for older adults, this study aims to achieve >40% recommendation acceptance rate. The PSQI will also be administered 4 weeks after melatonin dose changes to assess effectiveness of the change. Inclusion criteria: active melatonin prescription and age ≥55. Exclusion criteria: deceased or disenrolled during study and living in a long-term care facility.

Results: Electronic medical records (EMR) identified 121 patients with an active melatonin prescription and 82 patients were eligible after applying exclusion criteria. Demographics: average age 78 years (58-98 years); 76% female; 78% white, 18% Black/African American, 4% Hispanic/Latino. Sleep disturbance diagnosis: 54.8% (insomnia 82.6%, obstructive sleep apnea 6.5%, nocturia 8.6%, other 15.2%). Comorbidities: depression 54%, dementia 41%, anxiety 27%. Concomitant medications: antidepressants 23%, anticonvulsants 15%, antipsychotics 17%, and benzodiazepines 4%. The average melatonin dose is 5mg daily (range 1mg-10mg). PSQI results and acceptance rates for melatonin dose adjustments will be presented.

Conclusion: Insomnia continues to be a prevalent issue in the older adult population. With the increase of polypharmacy, it is imperative that pharmacists and providers collaborate to reduce adverse effects, limit pill burden, and optimize patient care.

D67 Student Presentation
Development of a Pre-Health Professions Student Volunteering/ Mentorship Program Provide Positive Exposure, and Address the Economic Challenge of the Caregiver-Patient Ratio in Geriatric Memory Units
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The Garrison Geriatric Care and Education Center was established in 2005 as a teaching nursing home at Texas Tech University, (TTU), focused on memory care. Pre-health profession students run a volunteer group and have created a progressive learning platform to perform dementia caregiving tasks, including emotional support, managing behavioral symptoms, feeding, and structured activities. Our objectives were to provide experiential learning for pre-health students in a memory care unit, and to provide supportive care for dementia patients without increasing financial burden. Students are given opportunities for innovation, interprofessional collaboration, and leadership experience. Experiential learning of future health care professionals in

this setting may produce healthcare teams that are more empathetic, anticipatory of patient needs, and who value an integrated health care system. Additionally, pre-health students receive volunteer hours in a healthcare setting which improve their professional school applications. Unpaid caregivers provided 18.6 billion hours of care to patients with age-related dementias in 2019.[1] Despite this, the lifetime cost to a patient diagnosed with dementia for skilled care, medical attention, and housing is $357,297.[1] Over the past four years through spring 2020, TTU volunteers contributed ~1700 hours of unpaid care. We estimated the value of this care to be ~$5,355 per year. The COVID-19 Pandemic has provided an opportunity to implement and evaluate innovative and collaborative education models in long-term care. The TTU Clinical Council has recently developed a work group, reporting to the Office of the President, based upon the success and passions of our student-run group. Undergraduate pre-health students are an untapped resource that could decrease the financial burden on families and the healthcare system, and serve as a powerful driver for change in the care of memory patients.

D68 Resident Presentation

Improving Communication in Nursing Homes Using Plan-Do-Study-Act Cycles of an SBAR Training Program

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Background

Incomplete communication may cause adverse outcomes for nursing home residents. The Situation-Background-Assessment-Recommendation (SBAR) tool can improve communication. The Indiana CMS demonstration project OPTIMISTIC developed a project-specific SBAR tool to improve communication when there is a resident change in condition (CIC). The primary goal of this study was to implement a program to increase use of the OPTIMISTIC SBAR during a resident CIC. Decreasing hospital transfers and improving documentation were secondary outcomes.

Methods

This study deployed four Plan-Do-Study-Act (PDSA) cycles to develop and refine implementation of the OPTIMISTIC SBAR in four nursing homes (Buildings A-D). Improved protocol interventions for SBAR use and documentation on CIC based on provider and nursing feedback were successively employed at each facility. A ten-point scoring system developed to assess use of SBAR and quality of documentation pre- and post-intervention was instituted in Buildings B-D. Pre- and post-intervention surveys regarding communication and collaboration between nurses and practitioners were used in Buildings C-D.

Results

OPTIMISTIC SBAR use increased for resident CIC in Buildings B-D (60% pre-intervention vs 72% post-intervention in Building B, 4% vs 67% in Building C, and 0% vs 44% in Building D). Documentation quality increased in Buildings B-D (7/10 to 10/10 in Building B, 4.8/10 to 6.4/10 in Building C, 4.1/10 to 5.6/10 in Building D). During the study period more nursing home residents with CIC stayed in house in Building B and D but not in Building C. Participants surveyed noted improved communication and collaboration between nurses and providers after SBAR protocol intervention in Buildings C and D.

Conclusion

While the effect on avoidable hospital transfer was inconclusive, this project demonstrates a successful approach to increasing use of a structured communication tool in nursing homes. Successive PDSA cycles implementing changes in OPTIMISTIC SBAR protocol for acute changes in resident condition in a subset of OPTIMISTIC nursing homes led to an increase in SBAR use, improved documentation, and better collaboration between nursing staff and facility practitioners.

D69 Resident Presentation

The ALIGN Pilot: Designing Intensive Outpatient Geriatrics Care

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BACKGROUND

The ALIGN program (Acute Life Interventions, Goals & Needs) was piloted in 2016 to serve community-dwelling, elderly patients with high illness burden and complex socioeconomic backgrounds. This study seeks to define qualities of "high-risk" geriatric patients, who would benefit from an intensively resourced outpatient model of care.

METHODS

Electronic medical records of ALIGN referrals (April 2016-May 2020), completed by primary geriatricians in an ambulatory academic setting, were reviewed. Each profile was mined for medical history, socioeconomic descriptors, and the initial referral survey. There were 3 survey designs over time: descriptive, 5-point scales, and yes-no questions. Ordinal and binary scales were analyzed by Kruskal-Wallis test and 1-way ANOVA, followed by post-hoc Dunn's and Tukey's test, respectively.

RESULTS

From 2016 to 2020, there were 306 referrals with 263 individuals. Average length of enrollment was 218 days. The cohort had a median age 81±7 years, predominantly female (77%), English-speaking (70%), and self-identified as Hispanic or Latino/a (47%). Majority held Medicare (83%) as primary insurance and Medicaid (45%) as secondary. On average, patients had 5 active diagnoses.

There were three distinct surveys: descriptive (Apr 2016-), ordinal scales (May 2017-), and binary perceptions (Aug 2018-). The most common reasons for referral were care coordination (35%) and chronic illnesses (30%). A significant number of geriatricians shared the anticipation that their referrals would have a "decline in functional status" or would "seek acute medical care" in 1 month ($p<0.01$).

CONCLUSIONS

ALIGN is a high-intensity outpatient program that delivers personalized care to high-risk community-dwelling geriatric patients. One of the initial initiatives is to define what constitutes a "high risk" patient. In evaluation of the patient referrals, we found high-risk geriatric patients to be those identified by longitudinal providers as ones with 1) complex medical management, 2) in need of care coordination, and 3) at risk for functional decline or 4) request acute medical care within 1 month. Further steps will be to correlate these characteristics to changes in hospital/urgent care use, length of stay, patient and geriatrician satisfaction, etc. to evaluate the overall impact of this innovative care model.

D70 Resident Presentation

Leaves Fall, but You Don't Have To

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Purpose: Education regarding geriatric fall presents an opportunity to decrease morbidity and mortality associated with fall in the geriatric population. We aim to investigate if fall prevention knowledge can be increased via educational handouts provided at doctor visits in people age 18 and older.

Methods: In this cross-sectional project completed over a three-month period (December 2019 – February 2020), English-speaking adults age 18 or older who visited Physician's at Sugar Creek, a patient-centered medical home and residency continuity clinic, were

given a true/false quiz over fall risks and prevention. The quiz was given alone to the participants in the afternoon clinic (Group B) while participants in the morning clinic received an additional educational handout along with the quiz (Group A). The data were analyzed via one-tail t-tests to determine if there was a statistical significance between knowledge about fall risk between Groups A and B.

Results: We collected 180 quizzes with educational handout and 135 quizzes without educational handout. T-test analysis showed a statistically significant difference between both Groups (t=1.64, p=0.032) with an average score of 5.08 in Group A compared to 4.79 in Group B. In the sub-group analysis divided by demographics, there was no statistical significance in the following categories between group A and B: age (p=0.165 in ≥ 65 years old; p=0.163 in < 65 years old), sex (p=0.091 in male; p=0.114 in female), uninsured population (p=0.373), African American (p=0.322) and Asian (p=0.412). P was less than 0.05 in three ethnicity categories; however, this did not represent meaningful difference since small sample size was in each of the three ethnicities: Caucasians (t=0.047, n=36), Hispanics (t=0.018, n=26), other ethnicity (t=0.008, n=4). Insured population showed a statistical significance between group A and B (p=0.034) with a large sample size (n=128 in group A; n=165 in group B).

Conclusion: This study showed a statistically significant difference among scores between those who received educational materials vs. those without. We are hopeful that knowledge regarding other health topics can similarly be increased via educational handouts provided at doctor visits.

D71 Resident Presentation
Appropriate Use of Direct Oral Anticoagulants in an Interprofessional Outpatient Geriatric Practice

K. Chatellier, A. Grimes, H. Sakely, E. Mohan. *University of Pittsburgh Medical Center, Pittsburgh, PA.*

Background: Direct oral anticoagulants (DOACs) continue to become increasingly popular in clinical practice due to atrial fibrillation (AF) and venous thromboembolism (VTE) guidelines advocating for DOACs over vitamin K antagonists as first line agents. [1,2] While DOACs do not require therapeutic monitoring, other patient factors need to be considered when dosing these agents. This is particularly important when treating AF due to various dosing parameters. One study found that approximately 25% of older adults with AF were on an inappropriate dose of DOAC.[3] DOAC dosing evaluation services have been shown to successfully identify and address potential efficacy and safety issues.[4]

Methods: This is a retrospective chart review evaluating the appropriateness of DOAC dosing among patients of our interprofessional geriatric practice. The population for this project includes outpatients of our practice on DOAC therapy. An evaluation of DOAC dosing appropriateness will be performed via the electronic health record by a pharmacist in our practice. The definition of inappropriate dosing will be incorrect dose or frequency per indication, incorrect dose per renal function, and inappropriate duration of therapy per indication. Other items reviewed will be criteria recommended from package insert such as drug-drug and drug-disease interactions. If an area to optimize dosing is identified, the pharmacist will intervene and communicate the recommendation to the patient's primary care physician. If the recommendation is accepted, the pharmacist will contact the patient and alert them of the recommended change.

Results: Research in progress. Results will include percentage of reasons for inappropriate DOAC dosing and the subsequent intervention.

Conclusions: We anticipate the majority of DOACs in our population are appropriately prescribed. Results of our initial review of patients will be used to guide the implementation of a targeted monitoring plan for continual evaluation of DOAC usage. Moving forward, we can look to incorporate DOAC dosing monitoring with assessment of patient modifiable factors that can influence DOAC therapy.

References:

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D72 Resident Presentation
Proton Pump Inhibitor Deprescribing within Home-Based Primary Care

A. Gabrielski, R. Roa. *VA Eastern Colorado Health Care System, Elizabeth, CO.*

Background: Proton pump inhibitors (PPIs) are one of the most prescribed medications in the United States and are used for the treatment of acid related diseases and secondary prevention of aspirin/NSAID induced ulcers. Guidelines for the diagnosis and management of gastroesophageal reflux disease (GERD) set forth by the American College of Gastroenterology recommends an 8-week duration for initial GERD treatment. Despite recommendations, PPIs are often prescribed for non-FDA approved indications or continued beyond the recommended duration. Studies regarding long-term use of PPI medications have noted many potential adverse effects. This quality improvement (QI) project aimed to identify the number of patients who were appropriate for PPI deprescribing among older adults enrolled in the Home-Based Primary Care (HBPC) program at the VA Eastern Colorado Health Care System, with the overall goal of deprescribing these medications.

Methods: This QI project utilized the pharmacist's scope of practice to identify eligibility and initiate PPI deprescribing. A list of all HBPC patients actively prescribed a PPI at the time of data collection was generated; the pharmacist then conducted a comprehensive chart review including indication, length of therapy, and antisecretory medication history. A note was entered in the patient's electronic medical record, and the prescribing provider was co-signed to the review information as well as recommended PPI taper schedules, alternative pharmacological and non-pharmacologic management options, and notification of pharmacist intent to contact the patient regarding PPI deprescribing. If the pharmacist was unable to successfully contact the patient after two phone attempts, an addendum to the original note was entered for the prescriber to address at the next appointment.

Results: Of 230 patients enrolled in HBPC at the time of data collection, 69 were actively prescribed a PPI with 38% (n=26) eligible for deprescribing. Of these, 5 were excluded prior to contact: 2 discharged, 1 deceased, 2 prescriber declined. Of the 21 patients contacted, 43% (n=9) were contacted successfully, for which 56% (n=5) discontinued the PPI and 44% (n=4) declined.

Conclusions: HBPC patients are often prescribed PPIs and continued for an inappropriate duration without a compelling indication. Pharmacists can help identify these patients and assist with PPI deprescribing to limit potential negative long term effects.

D73 Resident Presentation
Maximizing Efficiency of Telemedicine in the Skilled Nursing Facility During the Covid-19 Pandemic: A Quality Improvement Study

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Background:

In the midst of the Covid-19 pandemic, more skilled nursing facilities (SNFs) are adopting telemedicine to provide patient care, but often run into telemedicine-related disruptions that lead to inefficiencies. Our QI project aims to provide solutions to improve delivery and maximize efficiency of telemedicine in the SNF.

Methods:

Our QI project was conducted at two SNFs in Los Angeles, CA and included two phases: Phase 1 involved identifying disruptions during telemedicine rounds over a two-week period and performing a traditional Plan-Do-Study-Act (PDSA) approach to modify our workflow for more efficient rounding. In Phase 2, we spot-checked telemedicine rounds over the following six months and repeated efficiency measures to assess sustained practice changes. Rounding efficiency, defined as a percentage of quality time spent in relation to total rounding time, was recorded during each PDSA cycle. Our target efficiency goal was >85%.

Results:

Phase 1 identified four broad categories of telemedicine-related inefficiencies: 1) communication barriers between medical team and SNF staff, 2) technology troubleshooting, 3) patient, family and caregiver barriers, and 4) history and exam obstacles. Prior to workflow modification, rounding efficiencies ranged between 40-50%. During subsequent interventions, rounding efficiency improved to 80-100%, with a target goal >85%.

Conclusions:

Our QI project identified common telemedicine-related delays and disruptions that lead to SNF rounding inefficiencies, and provided possible solutions to these barriers. When optimized, telemedicine provides a valuable tool in delivering nursing home care during a pandemic crisis.

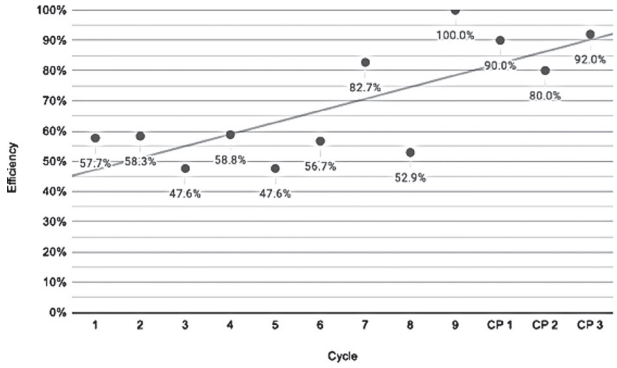

Figure: Efficiency trend during PDSA cycles

D74 Resident Presentation

HBPC IMPROVE: An interprofessional deprescribing initiative in Home-Based Primary Care incorporating VIONE tools

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Background: Polypharmacy is a common problem in older adults and is associated with increased potential for falls, hospitalizations, and mortality. Geriatricians at the Central Arkansas Veterans Affairs implemented a tool named VIONE which aimed to standardize deprescribing to address polypharmacy concerns. "VIONE" stands for **V**ital, **I**mportant, **O**ptional, **N**ot indicated, and **E**very medication has a diagnosis or indication. The VIONE project includes a web-based dashboard which assigns each patient a VIONE Risk Score, identifying those at the highest risk of polypharmacy-related adverse events. Our objectives are to determine the prevalence of polypharmacy in our population, implement a deprescribing program utilizing the VIONE tools, assess the number of medications deprescribed with the potential cost savings, and potentially integrate this process within other areas of our health system.

Methods: This is a prospective cohort quality improvement project to be conducted within a single health system. Patients are eligible for inclusion if they are enrolled in the home-based primary care patient aligned care team, are prescribed 15 or more medications, and have a VIONE risk score of 3 or higher. Patients will be enrolled up to a cohort of 50 patients. Patients receiving hospice care will be excluded. Baseline information captured for each patient will include demographic information, medication list, medical history, functional status, falls and hospitalizations within the prior calendar year, and any prior cognitive assessments. Our measures include the number of medications deprescribed, cost savings associated with deprescribed medications, and reasons (if any) for deferral of a VIONE review by the patient or their caregiver. Data analysis to determine cost savings will employ the same calculation used by the original VIONE investigators: annualized cost avoidance = (price per dispensed unit x quantity dispensed)/days supply x days of cost avoidance achieved (max. 365).

Results: The results will be discussed pending project completion.

Conclusions: Conclusions and findings will be stated following project completion.

D75 Resident Presentation

Optimizing the "g" in EmerGency Medicine - Delirium screening by ED Physicians

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Background

It is estimated that 7-10% of older adults attending the Emergency Department (ED) have delirium but it often goes undetected. The Irish National Clinical Program for Older Persons in conjunction with Emergency and Acute Medicine Programs advise that all older adults (≥65) presenting to the ED or Acute Medical Unit, should be screened for delirium using a validated screening tool. This quality improvement initiative aimed to increase screening for delirium in older adults by ED staff using a validated delirium screening tool (4AT).

Methods:

We performed a retrospective review of ED attendances by patients aged 65 and older over a 24-hour period to ascertain baseline rates of delirium screening.

The Model for Improvement was used with several Plan, Do, Study, Act (PDSA) cycles completed. These included stakeholder mapping and engagement, identification of champions for the initiative, verbal prompting by senior physicians at twice daily team huddles, re-design of the medical record to include a template dedicated to delirium screening and a delirium education program. The progress of the initiative was presented at departmental educational meetings and email communication with all ED staff. The outcome measure recorded was number of delirium screens completed.

Results

Improvements in proportion of delirium screens completed for older adults in response to the PDSA cycles were measured on three occasions to date (Table 1).

Conclusion

Delirium screening is of utmost importance early in the hospital course of an older adult. Our QI initiative achieved rapid and marked improvement in completion of screening for delirium by ED physicians. Future directions for this initiative include ongoing and sustained improvements, measurement of additional outcomes such as hospital admission rates and length of stay and initiatives to improve prevention and treatment of delirium.

Table 1: Improvements in delirium screening following PDSA cycles over a two month period.

	Measurement 1	Measurement 2	Measurement 3
Number of charts reviewed	42	49	39
Median Age of Cohort	77 years	77 years	78 years
% Patients ≥65 with 4AT performed	2%	16%	46%
% Patients ≥75 with 4AT performed	5%	20%	54%

D76 Resident Presentation
Delirium Rates in Hospitalized Patients

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Background: The incidence of delirium ranges widely in hospitalized patients, due to challenges with accurate diagnosis. Delirium is associated with increased mortality, prolonged hospitalization and higher costs. Although all hospitalized patients at our institution are screened for delirium using the Confusion Assessment Method (CAM), we suspect not all patients screening positive are formally diagnosed. The aim of this QI project is to evaluate the rate of delirium based on CAM score and rates of diagnostic codes for delirium within an academic hospital.

Methods: In this retrospective analysis, data was collected from electronic medical records of hospital admissions to the general Family Medicine (FM) floors of an academic tertiary care center, Thomas Jefferson University Hospital (TJUH), between September and December 2019. Descriptive analyses determined rates of CAM positive scores and diagnostic codes of delirium defined as 'delirium', 'altered mental status' and 'encephalopathy'. T-test will be performed to compare age and length of stay (LOS) between CAM positive and negative FM patients.

Results: Between September and December 2019, 10,095 patients were admitted to TJUH. 592 patients were admitted to FM, mean age 60, 59% female. Hospital wide, 782 (7.7%) had a positive CAM during their admission, 32 (5%) on FM floors. Of these FM patients, 14 (43.8%) had a positive CAM within the first 24 hours of admission. Mean age for FM patients with a positive CAM was 66; 60 for FM patients with a negative CAM. Mean LOS for FM patients with a positive CAM was 11.8 days; 4.3 days for a negative CAM (results from T-test to follow). Of the FM CAM positive patients, 1 (3%) had a diagnostic code synonymous with delirium.

Conclusion: On FM floors, patients who screened positive for delirium by CAM rarely had a corresponding diagnostic code for delirium. This project raised awareness of the prevalence of delirium and its potential under-diagnosis. In order to decrease delirium, future directions could focus on improving communication between nursing and physicians, increasing training for physicians, and considering different scales to assess risk for delirium.

D77 Resident Presentation
Quality Improvement Initiative to Mobilize Older Inpatients

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Background

Older adults spend as much as 95% of their time in bed during hospitalization. Immobility causes falls, pressure injuries, delirium, new nursing home admissions, and functional decline. Our quality improvement (QI) initiative aimed to increase mobility for older inpatients and to improve related outcomes.

Methods

Study site: 25-bed Acute Care of the Elderly (ACE) unit.

Population: Hospitalized older adults (age >65 years) between July and November 2020, excluding patients with contraindications to mobility, inability to follow directions, and terminal illness.

QI initiative: An interprofessional team implemented a mobility protocol. On admission, physical therapists assessed and created an individualized mobilization plan. Nursing staff implemented the plan and documented instances of mobilization, defined as any out-of-bed activity. Data for pre- and post-implementation were extracted from the electronic medical record.

Measures: Our primary outcome was mobilization ratio, defined as the number of mobilization instances per hospital day, and reported as an average by month. Secondary outcomes included delirium assessment (using Confusion Assessment Method), in-hospital falls, discharge location, and level of assistance at admission vs. discharge. We also examined baseline demographic data, comorbidities, ambulation distance, and timing of therapy consult and first evaluation.

Results

To date, 275 older adults (55% women, 75% Caucasian, 21% African American) with mean age 81.4 ± 8.3 years are included. Baseline mobilization ratio was 0.62; at initiation of the mobility protocol, mobilization ratio increased to 1.05 then stabilized (mean 0.86-0.90) in subsequent months. Use of CAM assessment has increased from 80% at baseline to 90% at follow-up. Data on secondary outcomes is ongoing and will be presented.

Conclusion

We demonstrated the feasibility and effectiveness of an interprofessional QI initiative to increase mobilization for hospitalized older adults, yielding a near doubling of the frequency of mobility for geriatric patients.

D78 Resident Presentation
Fall related medication deprescribing in older Veterans with mental health and chronic pain diagnoses

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Background: The Falls Assessment of Medications in the Elderly (FAME) initiative gives deprescribing recommendations to Veterans, ≥ 65 years, who are prescribed high-risk medications. The objective is to determine the impact of mental health and/or chronic pain diagnoses on patients' acceptance of these recommendations.

Methods: This study was conducted at the Durham Veterans Affairs (VA) Health Care System. Veterans included in the FAME cohort were ≥ 65 years, assigned to a local VA primary provider, with either a fall on problem list, an acute care visit for a fall, or a positive screen on annual falls risk assessment between September 2016 and September 2018. Deprescribing recommendations for target medications (antidepressants, antiepileptics, benzodiazepines, anticholinergics, antipsychotics, sedative hypnotics) were completed by a multidisciplinary team.

A chi-squared nonparametric comparison of the patients' acceptance of deprescribing recommendations in veterans enrolled into the FAME study with active mental health and/or chronic pain diagnoses to those without. Secondary objectives independently assessed the acceptance rates in mental health diagnoses or chronic pain diagnoses compared to those without these diagnoses respectively.

Results: Overall, 238 Veterans were enrolled, the majority male (95%), white (65%), with a mean age of 72.8 years. A total of 212 Veterans (89%) had active mental health and/or chronic pain diagnoses, and 81% of these Veterans accepted recommendations compared

to 89% of Veterans without any mental health/chronic pain diagnosis (P=0.33). In a secondary analysis, 79% of Veterans with active mental health diagnoses accepted recommendations versus 91% in those without (P=0.04). No statistically significant difference in acceptance of recommendations was found between those with and without chronic pain (P=0.92).

Conclusions: In this single center study, a statistically significant reduction in acceptance for Veteran with active mental health diagnoses versus no mental diagnoses was found. Care complexity of Veterans with mental health and/or chronic pain can affect deprescribing acceptance. Future deprescribing work could determine potential barriers in this population and if these are related to specific medication classes.

D79 Resident Presentation
Promoting Age-Friendly Medication Use through Geriatric Clinical Pharmacy Specialist Consultation

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BACKGROUND: Veterans in the United States comprise a population that is older and frequently requires more complex care than the general population. To better guide geriatric care, the Geriatric Primary Care clinic at the Atlanta Veterans Affairs (VA) Health Care System joined the Age Friendly Health Systems initiative and implemented the 4Ms Framework. The 4Ms Framework is a set of evidence-based elements of high-quality care for older adults centered around four core components: What Matters, Medication, Mentation and Mobility.

METHODS: Study methods were adapted from Integrated Management and Polypharmacy Review of Vulnerable Elders (IMPROVE), an ongoing initiative developed by the Atlanta VA GRECC to improve medication management in older veterans using a pharmacist-led comprehensive medication management visit. Aimed at ensuring the use of age-friendly medication, a geriatric clinical pharmacy specialist (CPS) conducted a medication review to include medication reconciliation, evaluation of medication indication, safety and appropriateness and adherence and health literacy screenings, prior to the first visit with the geriatrician. Recommendations were relayed via electronic medical record. The primary project outcome was the number of medications reduced. Secondary outcomes included the number of potentially inappropriate medications (PIMs) discontinued, number of CPS recommendations made and accepted and identified barriers to adherence. Data was collated and analyzed using descriptive statistics and the Student's t-test.

RESULTS: Initial results for 19 veterans identified for study inclusion between 8/24/20 and 1/11/21 are reported. Mean age was 78.3 (range 63-92) and an average of 11.5 (range 5-24) medications were being taken prior to CPS intervention. The primary outcome resulted in a 1.9 mean reduction in the number of medications taken (range 0-8). PIMs were reduced from an average of 0.9 to 0.3. A mean of 1.2 (range 0-3) barriers to adherence were identified and the mean number of medication changes recommended by CPS was 3.1 (range 0-7).

CONCLUSION: Among older veterans receiving care in a geriatric outpatient setting, integration of the 4Ms Framework, with a focus on medication safety by a geriatric CPS, resulted in identification of barriers to adherence and an overall reduction in polypharmacy and PIMs.

D80 Resident Presentation, Encore Presentation
Assessing the Relationship between HbA1c and Neurocognitive Impairment in the Primary Care Setting Using Digital Technology

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Background and Hypothesis:

Cardiovascular risks including hypertension, hyperlipidemia, and diabetes have been linked to neuropsychological decline. These cardiovascular risks are common in many primary care patients. The aim of this research is to use digitally administered neuropsychological tests and assess the relationship between cognitive decline and cardiovascular risk.

Methods:

Participants (n=189) included middle-aged and older community-dwelling patients seen in a large primary care practice for routine care (age= 60.85+14.82; n= 123); and community-dwelling participants who were referred for putative dementia assessment seen at a specialty memory clinic (age=75.43+7.26; n=66). All patients were screened for dementia using the Montreal Clinical Assessment (MoCA; mean= 23.31+3.40). Two digital neuropsychological tests were administered via an iPad - the Backward Digit Span Test (BDST) and the Philadelphia Point Span Test (PPST). Systolic blood pressure (SBP), diastolic blood pressure (DBP), total cholesterol, LDL cholesterol, HDL cholesterol, and A1C were obtained. Regression analyses assessed relations between iPad administered test performance (dependent variable); and age, sex, and cardiovascular risks (independent variables). Age and sex were entered first followed by cardiovascular risks.

Results:

PPST analyses found worse performance on the 4-span trial block and higher A1C (R= 0.374, R2=0.140, df= 1, 27, beta= -0.374; p< 0.053). Similar relationships were observed between A1C and 5-span BDST performance where worse test performance was associated with higher A1C (R= 0.442, R2= 0.195, df= 1, 36, beta= -0.458, p< .007). Age and sex were not significant.

Conclusion:

Cardiovascular risks are linked to neuropsychological impairment and eventually dementia. Current research found elevated A1C was associated with measurable neuropsychological impairment using a brief iPad digitally administered test. This technology could be integrated into primary care to provide comprehensive medical care for patients of all age groups.

Acknowledgment:

This study was approved by Rowan University's Institutional Review Board. The authors thank the Osteopathic Heritage Foundation for providing funding for this project

D81 Resident Presentation
Integrating a deprescribing tool into a pharmacist-led primary care clinic in a veteran affairs hospital

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Background: Polypharmacy is common among older adults and can lead to increased healthcare costs, adverse drug events, medication non-adherence, cognitive impairment, and falls. Systematic deprescribing can reduce these risks and improve patient outcomes. VIONE is a mnemonic to guide deprescribing. VIONE categorizes medications as **V**ital, **I**mportant, **O**ptional, or **N**ot indicated and ensures **E**very medication has an indication. This report describes the implementation of VIONE methodology into a pharmacy-driven clinic targeting a high-risk population with the goal to reduce risks and costs associated with polypharmacy.

Methods: All patients enrolled in the health system are eligible for inclusion. Hospice patients are excluded. High-risk patients are identified using a national scorecard that uses patient data from the electronic medical record. The electronic tool assigns patients a score of 1-5, 5 representing the highest risk. A chart review is performed on these patients to identify potential interventions. Eligible patients are scheduled for an appointment with a geriatric pharmacist and/or resident. Pharmacists use the VIONE mnemonic to modify drug regimens under a scope of practice and send recommendations to the primary provider. Interventions and recommendations are documented in patients' charts. The number and types of interventions made under the initiative are tracked. Anticholinergic burden scores (ABS) before and after clinic visits are compared.

Results: In 2020, 15 patients received intervention. The average age was 83 years (71-101). The population was primarily white males (93%). 60% of patients had diabetes, 80% had hypertension, 27% had obstructive lung disease, 27% had kidney disease and 20% had heart failure. At baseline an average of 22 medications were prescribed per patient. On average, pharmacists discontinued 5 medications and adjusted the dose of 1 medication per patient. Mean anticholinergic score decreased by 0.3 (p=0.015).

C**onclusion:** Pharmacists can make meaningful interventions to reduce polypharmacy. However, visits were limited due to COVID 19 restrictions and time-intensive chart review. To expand outreach, providers and other pharmacists will be educated on the VIONE tool to enable all primary care patients to be reviewed for polypharmacy as part of routine care.

Reference: Halli-Tierney AD, et al. Polypharmacy: Evaluating Risks and Deprescribing. *Am Fam Physician*. 2019;100(1):32-38.

D82 Resident Presentation

Utilization of an Early Warning System for Detection of Delirium in Hospitalized Older Adults

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Background:

Delirium remains a challenge in hospital settings not just in management, but also early diagnosis. Several validated diagnostic tools rely on trained personnel for interview-based assessments like the Confusion Assessment Method (CAM). However, despite the high sensitivity and specificity of these tools, these interview-based tools fail to identify delirium in community hospital settings. An Electronic Health Record (EHR) based tool is needed which can help trigger a warning for more specialized teams to assess for delirium.

Methods:

In a large academic center, an EHR based delirium detection tool called NOVAD was created and validated against the brief CAM (bCAM) results as gold standard. NOVAD utilized a daily auto-generated report which captured information from three directly observed nursing assessment variables: patient's neurologic symptoms, best verbal response from the Glasgow Coma Scale, and orientation assessment. An abnormal finding on any of these 3 variables triggered a "delirium alert". NOVAD was measured utilizing assessments within 24 hours and up to 72 hours prior to bCAM.

Results:

Of the 30 hospitalized patients over the age of 70 analyzed, 9(30%) were positive by bCAM, 12(40%) by NOVAD 24 hours and 21(70%) by NOVAD 72 hours assessment. The sensitivity and specificity of the NOVAD 24 hours was 44% and 62% respectively. An increase in sensitivity was seen for NOVAD 72 hours (78%) with decrease in specificity (33%).

Conclusion:

NOVAD is a tool that can be easily generated through commonly used EHR datapoints. 72-hour NOVAD "delirium alert" is a good early warning system for delirium identification. Further validation of the tool is needed with a larger population to assess its utility for assessment of delirium.

D83 Resident Presentation

Effect of COVID-19 on the quality of care provided to warfarin patients in a geriatric primary care clinic

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Background: During the COVID-19 pandemic, clinics that monitor warfarin patients developed new ways to provide warfarin management. At UAMS our geriatric clinic developed a drive-through anticoagulation clinic. Our clinic is similar to one developed in Qatar during COVID-19 and also adopted infectious disease practices to ensure the health and safety of patients and staff. However, no one has compared the impact of the change to a drive-through anticoagulation clinic on efficacy and safety. Our study hypothesis is that patients seen in a drive-through anticoagulation clinic have no difference in time in therapeutic range or adverse events as compared to an indoor anticoagulation clinic.

Methods: To identify patients in the UAMS geriatric anticoagulation clinic, a report was generated from the electronic health record, EPIC, to determine warfarin patients attributed to the clinic pharmacist from April 1, 2019-July 31, 2019 and April 1, 2020-July 31, 2020. In addition, paper charts from the clinic are reviewed to ensure all patients were captured. Patient who self-test and/or are patients in the house calls program will be excluded from the data analysis. After the list of patients was compiled, a chart review to collect indication for anticoagulation, demographics, INR results, and adverse events will be completed.

Results: A total of 175 patients in 2019 and 181 patients in 2020 have been identified for inclusion in this study. Data collection is ongoing and further results will be reported at a later date.

Conclusions: Research in progress.

D84 Resident Presentation, Encore Presentation

Enhancing Cultural and Medical Competency for LGBT Older Adults

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Background: Studies have shown that LGBT older adults are more likely to mistrust the healthcare system and experience discrimination from healthcare providers.1 LGBT individuals often have specific needs with advancing age and at end of life that Geriatric providers must be aware of and address. The LGBT "community," although frequently referenced and studied as a group, is diverse and made up of individuals with a variety of unique identities and health issues.2 Training for geriatricians should include cultural competency to care for diverse aging populations including LGBT individuals. This initiative aims to enhance care for LGBT individuals at two urban, primary care practices, one family medicine and the other, a geriatric practice.

Methods: A voluntary, anonymous on-line survey was emailed to providers and staff. The survey assessed self-reported knowledge and attitudes related to culturally competent care for LGBT patients. Additionally, providers were assessed about their comfort providing medical care for LGBT patients.

Results: 57 providers and staff completed the survey. A majority expressed comfort with providing care for LGBT patients but less comfort caring for trans patients. Most reported comfort in respectful communication, but 25 were "only somewhat" or "not so" comfortable with using appropriate pronouns. Providers identified medical knowledge gaps related to HIV management and gender-affirming hormone therapy. 22 participants reported witnessing discrimination towards LGBT patients, families, or staff in the workplace.

Conclusions: This assessment demonstrated a need for cultural competency training to care for LGBT patients as well as more training in specific areas. As a result, we are implementing cultural competency training and training on identified topics, including gender-affirming hormone care and basic HIV management.

References:

1. Choi SK, Meyers IH. LGBT Aging: a Review of Research Findings, Needs, and Policy Implications. The Williams Institute: UCLA School of Law.

2. Emlet CA. Social, Economic, and Health Disparities Among LGBT Older Adults. Generations. 2016 Summer: 40(2):16-22

D85 Resident Presentation

Feasibility of Assessing Steps, Pain and Mood Using the Annie Texting Platform in Older Veterans with Chronic Back Pain and Depression

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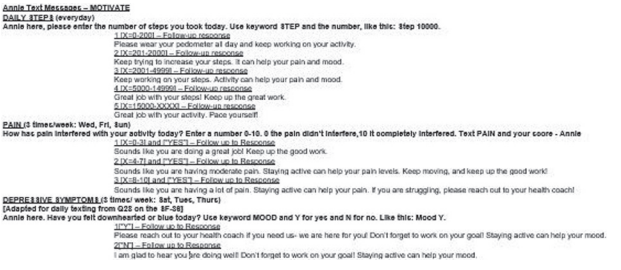
Background: Chronic low back pain (cLBP) and comorbid depressive symptoms in older adults are major public health concerns and non-pharmacologic interventions in this population are urgently needed. Our group developed a novel 8-session, telephone-delivered intervention targeting older adults with cLBP and depressive symptoms. MOTIVATE (Moving to Improve Chronic Back Pain and Depression in Older Adults) is delivered by a health coach using motivational interviewing and value-concordant goal setting to increase activity. In this sub-study, we will assess the feasibility of a texting-based protocol to capture data on step counts, pain scores, and mood.

Methods: We will recruit older Veterans from a subset of the waitlist control group from the existing pilot RCT. In the first phase of this study, up to five veterans who have completed MOTIVATE will provide feedback on the understandability of the texting system. In the second phase, we will purposefully select a subgroup that represents extremes of older age, women, and minority Veterans (n=10) who will receive Annie texts and provide feedback on barriers/facilitators of using the texting system via semi-structured individual interviews.

Results: A draft of the Annie texting protocol is included (Image 1). Feasibility results will be presented.

Conclusions: This pilot study will determine the feasibility and usability of the Annie texting system to assess steps, pain and mood among older Veterans already enrolled in a novel behavioral intervention designed to enhance activity in patients with comorbid cLBP and depressive symptoms.


Annie Text Messages – MOTIVATE
DAILY STEPS (everyday)
Annie here, please enter the number of steps you took today. Use keyword STEP and the number, like this: Step 10000.
1 IX=0-2001 – Follow-up response
Please wear your pedometer all day and keep working on your activity.
2 IX=2001-20001 – Follow-up response
Keep trying to increase your steps. It can help your pain and mood.
3 IX=2001-49998 – Follow-up response
Keep working on your steps. Activity can help your pain and mood.
4 IX=5000-149998 – Follow-up response
Great job with your steps! Keep up the great work.
5 IX=15000-XXXXI – Follow-up response
Great job with your activity. Pace yourself!
PAIN (3 times/week: Wed, Fri, Sun)
How has pain interfered with your activity today? Enter a number 0-10. 0 the pain didn't interfere,10 it completely interfered. Text PAIN and your score - Annie
1 IX=0-3I and ["YES"] – Follow up to Response
Sounds like you are doing a great job! Keep up the good work.
2 IX=4-7I and ["YES"] – Follow up to Response
Sounds like you are having moderate pain. Staying active can help your pain levels. Keep moving, and keep up the good work!
3 IX=8-10I and ["YES"] – Follow up to Response
Sounds like you are having a lot of pain. Staying active can help your pain. If you are struggling, please reach out to your health coach!
DEPRESSIVE SYMPTOMS (3 times/ week: Sat, Tues, Thurs)
[Adapted for daily texting from Q2S on the SF-36]
Annie here. Have you felt downhearted or blue today? Use keyword MOOD and Y for yes and N for no. Like this: Mood Y.
1["Y"] – Follow up to Response
Please reach out to your health coach if you need us- we are here for you! Don't forget to work on your goal! Staying active can help your mood.
2["N"] – Follow up to Response
I am glad to hear you are doing well! Don't forget to work on your goal! Staying active can help your mood.

D86 Resident Presentation

Analysis of the Medication Review Process as Patients Transition Care

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BACKGROUND: Transitions of care is the process of a patient moving from one setting or level of care to another, such as from a hospital stay to home. A recent report identified up to 60% of all patient medication errors occurred during times of transition of care.[1] Medication reconciliation (MR) is a part of the transitional care management (TCM) process to help minimize medication errors.[2] To meet quality metrics, MR must be completed within 30 days of a patient's transition from a hospital or skilled nursing facility to home.[2,3] The purpose of this research is to describe the current practice of medication reviews, quantify the number of medication alterations made in the electronic health record (EHR), and characterize medications and disease states susceptible to change during transition.

METHODS: This project will be conducted at an academic Geriatric Care Center (GCC) in Pittsburgh, PA. The GCC is staffed by an interprofessional team of nurses, pharmacists, fellows, and physicians. The intervention of interest is the MR portion of the TCM encounter in which medication changes are identified in the EHR. A retrospective chart review will include patients of the GCC who were billed for a TCM visit encounter from Jan 1, 2020 – Dec 31, 2020. To be included and eligible for a TCM encounter individuals must be discharged from either a hospital or a nursing facility to home. MR may be completed via telephone, video, or in-person by a nurse, pharmacist, or physician. A descriptive analysis of the review will identify current medication review practice at the GCC and number and type of medication alterations made in the EHR.

RESULTS: Results in progress.

CONCLUSIONS: The results will identify current practices and aid in the development of future projects regarding MR within transitions of care. This research will enable the creation of robust protocols and procedures for the medication review process.

REFERENCES:

1. The American Society for Automation in Pharmacy. 2014 Midyear Conference. Transitional Care: How Pharmacies Can Impact Outcomes for Discharged Patients. June 26-28, 2014

2. Transitions of Care. (2020, Dec. 28). Retrieved January 13, 2021. https://www.ncqa.org/hedis/measures/transitions-of-care/

3. Part C and D Performance Data. (n.d.). Retrieved January 13, 2021. https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/PerformanceData

D87 Resident Presentation

Impact on Polypharmacy by a Clinical Pharmacy Specialist in a Geriatric Primary Care Clinic at the South Texas Veterans Health Care System

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Background: Polypharmacy risk factors are common in the elderly and include multiple disease states, hospitalizations, inappropriate prescribing, over-the-counter medication use, multiple providers, and using multiple pharmacies. Consequently, polypharmacy can lead to non-adherence, adverse drug events, drug interactions, hospitalizations, and medication errors. VIONE (Vital, Important, Optional, Not indicated, and Every medication with an indication) is a tool utilized to assess and reduce polypharmacy. A scale of 0-5 is used based on ≥ 15 medications, ≥ 65 years of age, a Care Assessment Need (CAN) score ≥ 90, ≥ 2 emergency room visits, or a fall within the past year. CAN scores assess the risk of hospitalization or death within

90 days or 1 year. The purpose of this study is to assess the role of a pharmacist led polypharmacy reduction pilot program in a geriatric primary care clinic at the South Texas Veterans Health Care System.

METHODS: This is an ongoing prospective quality improvement pilot study assessing potential polypharmacy reduction utilizing clinical pharmacy services in a geriatric clinic. Patients with a VIONE score of 3-5 were included. Medications were reviewed using the VIONE acronym. Results were analyzed using descriptive statistics.

RESULTS: A total of 17% of the clinic patients had a VIONE score of 3-5. For the 15% of patients receiving the intervention to date, there was an average of 7 interventions per patient. The most common interventions were categorized in the following groups: vitamins/minerals (22.5%), cardiology (20.63%), gastrointestinal (12.1%), and pulmonary (10.2%).

CONCLUSIONS: Medication review and intervention by a clinical pharmacy specialist led to a reduction in polypharmacy. The findings will be utilized to demonstrate the impact of this service to hospital leadership.

D88 Resident Presentation

Continuous Provider Education is Key to Limiting Fluoroquinolone use in Long Term Care

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Objective: The aim of this project is to evaluate the effects a multifaceted antimicrobial stewardship campaign on antibiotic prescriptions at Charles Morris Nursing and Rehabilitation Center (CMNRC) in Pittsburgh, Pennsylvania.

Background: Efforts to improve antibiotic prescribing have become essential due to increased bacterial resistance. Studies have shown that up to 47-97% of residents of Long term care (LTC) facilities receive antibiotics annually. Fluoroquinolones (FQs) are among the most commonly prescribed, especially for UTIs. Resistance rates of E.coli to FQs are high, up to 31% in Pittsburgh. Additionally, FQs carry a risk of adverse events including black box warnings on use (tendon rupture, QTc prolongation), and CDC guidelines recommend the use of other agents. Despite all these factors, providers continue to use FQ's routinely.

Quality Improvement Methods: CMNRC is a non-profit 93-bed NH affiliated with the Jewish Association on Aging. A multifaceted antimicrobial stewardship campaign has been implemented over time. Educational material regarding high rates of resistance to FQs was distributed, and quarterly reports including urine pathogens, culture sensitivity, and antibiotic use were generated and shared with providers. These efforts have been ongoing since 2017.

Results: Before the antimicrobial stewardship campaign started, FQs were noted to be 49.3% of the antibiotics used to treat UTI. With continuous education/intervention the presence of FQs has fallen to 17.82% + - 2.9, ranging from 12.2-24.24% in the last 18 months as reviewed quarterly.

Conclusion: This ongoing QI project aims to decrease over prescription of FQs in a LTC facility. In preliminary data, FQs were the most frequently prescribed first line therapy despite high rates of resistance, risk of adverse events, and guidelines recommending

the use of other agents. Ongoing education and provider reports have reduced the use of FQs. This intervention could serve as a model to maintain appropriate antibiotic use into the future. Conveying simple messages to health-care workers through routine training and updates and reinforcing these measures continuously helps ensure that appropriate antibiotic stewardship methods are applied.

D89 Resident Presentation

Primary care pharmacist role in reduction of anticholinergic medications in patients with cognitive impairment

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Background:

Polypharmacy and use of medications with anticholinergic properties are concerning among patients with dementia due to the potential to cause a variety of undesirable adverse drug effects (ADEs). The Anticholinergic Risk Score (ARS) is a tool clinicians can use to assess anticholinergic burden. The purpose of this quality improvement project was to assess the effectiveness of a primary care pharmacist in reducing anticholinergic burden in patients with cognitive impairment.

Methods:

The project was conducted from June 29 – September 4, 2020, during which a primary care pharmacist provided recommendations to lower anticholinergic burden. Patients were included if they received care through the Minneapolis VA or associated clinic, had a diagnosis of dementia or cognitive impairment, and had an active prescription for an anticholinergic medication as defined by the ARS. The primary outcome was the percent of recommendations accepted by the prescriber. Secondary outcomes included: change in ARS, dose reductions, or discontinuation of anticholinergic medications, and provider documented plan to address pharmacist recommendations.

Results:

The pharmacist provided 30 recommendations for 20 patients (95% male, mean age 75.6 ± 7.1 years). Thirty percent of these were accepted and resulted in either discontinuation, change to an alternative agent, or a dose reduction of an anticholinergic medication. A provider documented a plan to address another 5 of pharmacist recommendations. The average ARS decreased from 3.35 to 2.70 after pharmacist intervention.

Conclusions:

Approximately one-third of pharmacist recommendations were accepted, leading to an overall reduction in anticholinergic burden. It is likely with a longer follow-up timeframe, a greater percentage of recommendations would have been accepted. Pharmacist involvement may be valuable to help reduce the use of anticholinergic medications and prescribing cascades in patients with cognitive impairment.

D90 Resident Presentation

Impact of a Dementia Caregiver Support Program: Increasing Self-Efficacy and Decreasing Burden

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Background

The challenges of caring for a person living with dementia (PLWD) may include negative outcomes such as caregiver burden, depression, and low self-efficacy. Care Ecosystem is a dementia caregiver support program providing education and resources with demonstrated efficacy in a randomized clinical trial. The aim of this evaluation was to determine whether an adaptation of the program into geriatric primary care improved caregiver outcomes.

Methods

Dyads, consisting of a PLWD and their caregiver, enrolled in the Living with Dementia clinical initiative at an academic geriatric primary clinic over an 18-month period. A trained dementia care team navigator had monthly phone contact with dyads. Caregiver report of Zarit Burden Index (12-item), Patient Health Questionnaire-4, and a Care Ecosystem self-efficacy scale were assessed at enrollment and post-enrollment (either 6- or 12-months). The 6-month assessment was added after the program started to assess outcomes earlier.

Changes in caregiver outcomes were calculated using Student's t-tests (significance defined as $p<0.05$). Cohen's d was calculated to determine effect sizes.

Results

Sixty-six dyads enrolled in the dementia caregiver program. For PLWD, mean age (SD) was 83.4 (7.0) years and 68% were women. For caregivers, mean age (SD) was 68.6 (13.1) years, 71% were women, and 49% were the spouse or partner. Seventeen dyads graduated from the program or died prior to 6-month assessment. Of the remaining 49 dyads, 37 dyads had both baseline and follow-up data on caregiver outcomes. Caregiver burden (ZBI-12) improved from 15.6 to 12.4 ($p=0.0011$) with a small to medium effect size of 0.46. Caregiver depression (PHQ-4) at baseline and follow up (2.52 vs. 2.22) was not significantly different ($p=0.60$). Caregiver self-efficacy improved from 10.2 to 12.2 ($p=0.0006$), with a medium effect size of 0.65.

Discussion

This early evaluation of a dementia caregiver program integrated into geriatric primary care suggests that specific, integrated caregiver support improved caregiver burden and self-efficacy. Longer term and larger scale evaluation is needed to determine whether this adaptation of the Care Ecosystem model can show sustained improvements in caregiver outcomes.

D91 Resident Presentation

Documentation of resuscitation status in hospitalized older patients during the COVID-19 pandemic in an Irish university teaching hospital

L. J. Dooley, S. Murphy, A. Long, P. Gallagher. *Geriatric Medicine, Cork University Hospital, Cork, Ireland.*

Background

Cardiopulmonary resuscitation (CPR) is a life-saving intervention following cardiac arrest and is the default standard of care where advance care planning has not occurred. Frail older patients have more adverse outcomes and are less likely to survive following CPR[1]. The COVID-19 pandemic has highlighted the importance of advance care planning in hospitalised patients; unwanted or unbeneficial CPR will cause unnecessary strain on already limited healthcare resources. The Health Service Executive (HSE) of Ireland issued guidelines regarding advance care planning during the COVID-19 pandemic, including aims for documentation of resuscitation status within 48 hours of hospital admission and inclusion of patients in decision making processes[2]. We aimed to establish if these standards were being met.

Methods

We performed a retrospective analysis of inpatients admitted under geriatric and orthogeriatric inpatient services. We conducted chart review to collect baseline demographics, documentation of resuscitation status, and documentation of discussions with patient/family.

Results

28 inpatients (median age 82 years) were identified, 50% of whom had a documented 'Do Not Resuscitate' (DNR) order. Of these, only 36% (*n*=5) had a documented discussion regarding their personal views and wishes. Of those who did not have a documented resuscitation decision, 5 patients (36%) were subsequently identified as being inappropriate for cardiopulmonary resuscitation due to significant irreversible concomitant frailty. A minority of these patients (n=2, 14%) had DNR discussion within 48 hours of their admission. Patients with a DNR order were more likely to have high burden of comorbidity compared to patients without DNR orders (100% vs 57%). None of the patients included had infection with COVID-19.

Conclusions

This study highlights deficiencies in documentation of advance care planning amongst frail older adults during the COVID-19 pandemic in our institution. Involvement of patients and families in discussion as well as early timing of discussion were highlighted. Further research is needed to ascertain how to optimise early advance care planning discussions in hospitalised older patients, particularly those with irreversible frailty and life limiting illness.

D92 Resident Presentation

A geriatric sliding scale insulin protocol for hospitalized older adults

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Background: Older adults (≥ 65 years) are prone to hypoglycemia, especially those that are frail and have co-morbidities. Hypoglycemia is associated with increased length of stay and risk of in-hospital mortality. Sliding scale insulin (SSI), which is typically rapid-acting insulin that is adjusted based on a threshold of blood glucose (BG) values, is listed in the Beers Criteria as a potentially inappropriate medication due to its risk of hypoglycemia. The American Diabetes Association Standards of Care recommend adding rapid-acting insulin for glucose levels greater than 180mg/dL in hospitalized older adults. Numerous studies have shown a correlation between strict glycemic control and mortality in older adults, particularly those that are clinically complex. Loosening glycemic control in older adults helps to decrease the risks of hypoglycemia.

Methods: A retrospective chart review will be completed to determine the incidence of hypoglycemia in patients ≥65 years hospitalized on the Acute Care in the Elderly (ACE) unit at Baystate Medical Center who have an order for SSI. Those patients that are admitted for hyperglycemic crises, on steroids, on an insulin pump, or with an endocrine consult will be excluded. Based on the data collected, a sliding scale protocol will be developed for use in patients ≥65 years on the ACE unit that has higher BG thresholds for the administration of short-acting insulin. The development and implementation of this protocol will be carried out by an interdisciplinary team including pharmacists, a geriatrician, and an endocrinologist. Clinical pharmacists, in collaboration with ordering providers, will then provide education and recommendations for this SSI order for appropriate patients who meet inclusion criteria.

Results: We anticipate that adults ≥65 years who are ordered the current SSI protocol at our institution are at risk of developing hypoglycemia. Using our retrospective review, we will develop a new protocol that we expect will lower the incidence of hypoglycemia in this population.

Conclusions: Development of a SSI protocol specialized for older adults will decrease the incidence of hypoglycemia by using less aggressive thresholds for the administration of rapid-acting insulin. Pharmacists are in an optimal position to implement a specialized protocol to provide a safer strategy for inpatient glycemic control in adults ≥ 65 years.

D93 Resident Presentation

Title: Evaluating the effectiveness of a telehealth delivered group exercise program for older adults developed by an interdisciplinary geriatric team.

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Background: Social isolation has detrimental consequences for older adults, including decreased life-space mobility, quality of life, cardiovascular function, increased anxiety and accelerated cognitive decline. This interdisciplinary model aims to assess the effects of a holistic telehealth delivered group exercise program, Veteran's Video Connect – Balance, Exercise, and Stability Training (VVC BEST).

Method: This prospective quality improvement project was completed in two cycles of ten weeks from April – September 2020. Geriatricians and geriatric nursing staff screened and medically

cleared older veterans. Geriatric physical therapists assigned individuals to a sitting or standing group based on functional level. The course structure entailed two telehealth classes per week of one-hour duration. Each week highlighted a different area of fitness: aerobic conditioning, flexibility, strengthening, and balance training. Interventions were modified based on participant's cognitive, auditory, and/or visual impairments. Veterans were referred to in-person chiropractor or acupuncture services for musculoskeletal pain management to minimize polypharmacy. Veterans demonstrating low attendance were referred to telehealth psychology services for motivational interviewing. Primary outcome measures included performance on the modified Berg Balance Scale (mBBS). Secondary outcomes included patient satisfaction and self-reported activity level.

Results: Twelve participants M^{age} = 85.7 (6.9) years (n=7 in sitting, n=5 in standing) completed an average of 27.8 (19.5) telehealth sessions. Veterans demonstrated a significant improvement in their mBBS scores, $t(9) = -5.79$, $p < 0.001$ and self-reported physical activity, χ^2 (4, n = 9) = 11.14, $p = 0.025$. All participants reported satisfaction and would recommend VVC BEST. Technology constraints limited participation to seven individuals per class.

Conclusions: High program satisfaction coupled with objective improvements in balance and increased self-reported physical activity demonstrate the acceptability and preliminary benefits of this telehealth interdisciplinary program. This program remains ongoing while older veterans continue to shelter-in-place due to COVID-19 restrictions.

D94 Resident Presentation
Utilization of the VIONE medication management methodology to reduce polypharmacy in older Veterans

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Background: The VIONE (**V**ital, **I**mportant, **O**ptional, **N**ot indicated, **E**very medication having a specific indication or diagnosis) medication management methodology was developed to guide clinicians towards decreasing polypharmacy. The Veterans Affairs (VA) VIONE workgroup utilizes a dashboard to identify Veterans at risk for polypharmacy-related adverse events through a risk stratification scoring system based on age, number of medications, falls, emergency department visits, and Care Assessment Needs score, which predicts hospitalization and mortality in the Veteran population. The aim of this study was to utilize the dashboard in the VA Palo Alto Health Care System (VAPAHCS) geriatric clinics and evaluate its impact on decreasing polypharmacy.

Methods: This was a prospective, interdisciplinary, quality improvement study conducted at VAPAHCS, taking place from August 25, 2020 through March 31, 2021. Veterans were identified using the VIONE dashboard. Patients 65 years of age or older, currently on five or more medications, with a risk score of 1-5, and without prior VIONE review in the last year were included. Patients were excluded if at the time of review, they were admitted inpatient or residing in a skilled nursing facility. Pharmacist recommendations for regimen improvement were sent to providers via the electronic medical health record system. The primary outcome was the proportion of patients identified by the dashboard with at least one recommendation for regimen improvement. One secondary outcome was the average number of medications per patient in this population.

Results: A total of 179 patients were identified by the dashboard. As of December 15, 2020, 83 patients were reviewed and 6 patients were excluded for not meeting inclusion criteria. Of the 77 patients reviewed, the average age was 85 years and 96.1% (n=74) were male. A total of 236 recommendations were made to geriatric providers. At least one recommendation for regimen improvement occurred in 90.9% (n=70) of patients. The average number of medications per patient was 13 medications.

Conclusions: Preliminary results show utility of the VIONE dashboard to positively identify Veterans with concurrent polypharmacy. Further analysis through March 2021 will be used to evaluate the impact of VIONE on decreasing polypharmacy through an interdisciplinary team approach in at risk older Veterans.

D95 Resident Presentation
Telemedicine Video Duration as a Predictor of 30 Day Hospitalization: a Cohort Study of Skilled Nursing Facility Patients.

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Background: With the rapid implementation of telemedicine during COVID 19, the quality of the medical encounters remains unclear. One measure of the telemedicine visit is the length of the visit. As a part of medical billing, the telemedicine visit length is documented. Our aim is to determine the relationship between telemedicine video length and adverse health outcomes of 30 day hospital readmission.

Methods: This was a cohort study of patients dismissed from the hospital to a skilled nursing facility (SNF) from March 2020 to July 2020 in Olmsted County, MN. The residents were in nursing homes which used iPad telemedicine during COVID 19. The primary outcome was 30 day hospital readmission. The primary predictor was telemedicine video time as documented in the record. The other predictors included age, sex, race, elder risk assessment (ERA) index, heart failure, dementia, diabetes, and educational status. We analyzed the outcomes using chi square or logistic regression for unadjusted analysis. We created a multivariable model using conditional logistic regression for age, sex, ERA, video time and significant variables.

Results: In this study of 722 SNF residents, the median age was 84 (IQR 77-90) with 65 % female. Overall, we found 76/722 (10.5%) of the SNF residents were readmitted. The average video visit length was 34 min (95% CI 27-41) in admitted patients versus 30 min (95% CI 29-31) in patients without readmission (p=0.11). We found that increased age (p=0.0007), history of diabetes (p=0.02) lack of dementia (p=0.002) predicted hospital readmission. Sex, race, elder risk assessment index, educational level, and heart failure were not associated with hospital readmission. After adjustment for age, sex, ERA, dementia and diabetes, video visit time remained insignificant.

Conclusion: In this study of 722 SNF residents, video visit length was not associated with 30 day hospital readmission. The finding of 10.5% 30 day hospital readmission was below our average nursing home readmission rates. Further studies on telemedicine quality metrics in SNF will provide further insights into this growing practice model.

D96 Resident Presentation, Encore Presentation
De-prescribing proton-pump inhibitors through patient empowerment in older adults within a Veterans Affairs primary care clinic.

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Background: The 2019 Beers Criteria discourages chronic use of proton-pump inhibitors (PPIs) in older adults without strong indications due to potential adverse drug effects, yet are commonly prescribed in primary care.[1] Inappropriate long-term use of PPIs has been associated with bone fracture, infections, and micronutrient deficiencies.[2] The EMPOWER trial has shown successful de-prescribing practices through patient empowerment using educational materials.[3] The purpose of this study is to evaluate if older adult patients provided with a patient-empowering educational brochure discontinue or decrease PPI use.

Methods: Patients 65 years and older on PPI therapy in a primary care clinic were identified through a PPI dashboard for inclusion, then mailed an educational brochure encouraging discussion of PPI appropriateness at their upcoming appointment. Veterans were excluded if they did not complete a primary care encounter or had one of the following indications not appropriate for de-prescribing: dysphagia, esophageal, idiopathic pulmonary fibrosis, ulcer, or Zollinger-Ellison syndrome. Data collection included indication, generic drug name, dose, duration of use, and refill history. Providers received PPI de-prescribing education via academic detailing using nationally approved materials. Intervention impact was evaluated by subsequent PPI discontinuation or dose decrease.

Results: The results will be discussed.

Conclusions: Outcomes will be analyzed to evaluate if patient empowerment strategies impacted PPI use in a VA primary care clinic. Future directions may include system-wide targeting of patients on PPI therapy for evaluation of appropriateness by clinical pharmacists.

References:

1. American Geriatrics Society 2019 Updated AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. *JAGS*. 2019:67(4): 674-694.

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3. Tannenbaum C., Martin P., Tamblyn R., et al. Reduction of inappropriate benzodiazepine prescriptions among older adults through direct patient education: the EMPOWER cluster randomized trial. *JAMA Intern Med*: 2014;174(6):890-8.

D97 Resident Presentation

Does one size fit all? Redesigning clinical literature to meet the needs of older adults, a quality improvement initiative.

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Background:

Due to age-related visual changes and pathologies, older adults face difficulties completing and comprehending forms with small fonts and narrow spacing. Studies have indicated that older adults prefer at least 14-point font and larger spacing between words (1).

Methods:

Due to perceived and voiced difficulties from patients and family members, a geriatric clinic redesigned a standardized intake form with the goal to address visual changes that occur with aging. Adjustments made to the standard form included increasing font size, spacing, and form organization. Over the course of three months, cognitively intact patients or adult family members who were present at a geriatric clinic visit were asked to participate in a short likert scale questionnaire. Statistical paired methods were used to compare responses regarding the ability to see and read intake forms using a Wilcoxon signed rank test; a p-value of <0.05 was considered significant.

Results:

Of the 35 survey respondents, 94.2% (n=33, 95% CI, 80.8-99.3%) preferred the modified intake form. Paired statistical analysis revealed that the updated intake form with larger font size and increased spacing was easier to see and read ($P<0.0001$).

Conclusion:

While standardization of forms across hospital systems likely expedites the intake process, considerations should be made to address the physiologic and cognitive changes that occur with aging. Formatting literature to meet the needs of older adults is a necessity to ensure access to quality healthcare. Due to the COVID-19 pandemic the sample size was small, many clinic appointments were transitioned to virtual visits, and those patients were unable to participate.

References:

1. National Institute on Aging (2008). Making your printed health materials senior friendly, tips from the national institute on aging. Http://www.nia.nih.gov/HealthInformation.

Geriatric clinic intake form preference

Question (n=35)	Standardized intake form (mean)	Modified intake form (mean)
Readability	3.24	1.20
Visual preference	3.20	1.26

Likert scale, Wilcoxon signed rank test.

D98 Resident Presentation

Developing a Community-Based Response to Food Insecurity in Older Adults in Walnut Hills

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Background: Older adults in the Walnut Hills (WH) neighborhood of Cincinnati, OH are at high risk of food insecurity based on the neighborhood's low socioeconomic status and designation as a food desert. Food insecurity has significant health consequences for older adults. With an existing community partner, we created a food insecurity needs assessment to develop community-identified interventions to address food insecurity and a sustained community-academic partnership with WH residents.

Methods: A mixed-methods food insecurity needs assessment was developed from the USDA Household Food Security Survey Module. The survey focused on barriers to accessing healthy food, food preferences, preparation methods, impact of COVID-19 on food access, and interest in joining a community advisory board. Demographic data was also collected including race, gender, and years spent in WH. Flyers for survey participation were posted throughout WH with a focus on low-income senior housing and community food distribution events with our partner. The survey was administered by phone to 38 adults over 55 years old. Data collection is ongoing with a goal of 50 surveys total. No one was excluded. Data from the first 38 surveys was analyzed to identify high-yield interventions. Chi-square analysis will be performed to measure associations between demographic data and food insecurity.

Results: Preliminary data analysis shows that 58% (22/38) of respondents report high food insecurity scores and 50% (19/38) identified healthy food as the biggest need for older adults in WH. Of those who responded, most commonly cited barriers to healthy eating included lack of a grocery store (73%; 22/30) and sufficient knowledge on how to make healthy meals (46%; 7/15). The majority of respondents (68%; 26/38) expressed interest in becoming community advisors for the project. Data analysis is ongoing and will be presented.

Conclusions: A majority of surveyed older adults in WH live with food insecurity and identify access to healthy food through a neighborhood grocery store and knowledge in preparing healthy meals as primary needs. We are forming a community advisory group to further inform our response and intervention. One probable avenue is a cooking curriculum in collaboration with an existing community partner.

D99 Resident Presentation

Formative Evaluation of the Implementation of Patient Priorities Care in Two Home-Based Primary Care Programs

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Background: Patient Priorities Care (PPC) is a framework to identify patients' health goals and care preferences and to align patients' care with these priorities. This approach is especially important for older adults with multiple chronic conditions. The objective of this study was to identify barriers and facilitators to the implementation of PPC in two home-based primary care programs (HBPCs).

Methods: We used the Promoting Action on Research in Health Services (PARIHS) framework to conduct formative evaluations prior to the implementation of PPC at two HBPCs. One HBPC is located within a large, urban Veterans Affairs medical center and the other is a community-based HBPC serving a mixed rural-suburban population. The formative evaluations used data from audio recordings and notes of PPC implementation planning meetings.

Results: While the components of the intervention (evidence and facilitation) were similar across both sites, the unique context of each HBPC, particularly the local culture and leadership, gave rise to unique barriers and facilitators to PPC implementation at each site.

Conclusions: Successful implementation of PPC in the HBPC setting requires partnership with local internal facilitators and understanding of the local context. Barriers and facilitators to PPC implementation within HBPCs are context-dependent. Conducting a formative evaluation using the PARIHS framework can identify potential barriers and facilitators to implementation and be used to adapt the implementation to the local context.

D100 Resident Presentation

The Impact of Pharmacists in Outpatient Geriatric Clinics: An Interdisciplinary Approach

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Background:

Pharmacists are an integral part of patient care teams. Clinical pharmacists can play an important role in caring for older adults, by providing medication reconciliation, medication education, and identifying opportunities for both optimizing therapy and deprescribing. There are many successful interprofessional geriatric models in current literature that integrate pharmacists into geriatric primary care clinics. Up until recently, out institution did not include pharmacist presence in our outpatient geriatric care model. The objective is to determine the value of pharmacists in geriatric multidisciplinary care teams at Baystate Health (BH) primary care clinics.

Methods:

This is a quality improvement project in which the impact of pharmacist presence in the geriatric clinic will be defined. The primary outcome of this project is to describe the types of clinical pharmacy interventions a pharmacist makes within the interprofessional geriatric team. Eligible visits will be patients who are 65 years of age or older, on 5 or more medications, and who are seen by both the pharmacist and the geriatrician. Clinical decisions will be made collaboratively, upon discussion with the geriatrician, the patient, and family members involved in their care. The data collected will include patient demographics, and the type of clinical interventions made by the pharmacist; these interventions include deprescribing, dose and therapy optimization, immunizations administered, monitoring recommendations, adherence tools, and medication education. Data collection will also include any communications with outside providers, pharmacies, and telephonic patient follow-up.

Results:

The quality improvement project is in progress. Results are yet to be determined.

Conclusion:

We anticipate that pharmacists' integration into the geriatric care team in the outpatient clinics at our institution will enhance the care for older adults through interventions, recommendations, and facilitated communications for patients and their care teams.

D101 Resident Presentation

Motivational Interviewing and the 4M's of Geriatric Care: Assessment of Knowledge and Comfort in Deprescribing High Risk Sleep Medications

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AUTHORS: DeMarco, S, Sakely, H

INSTITUTION: UPMC St. Margaret

BACKGROUND: The 4M's of geriatric care are an evidence-based framework which aim to guide age-friendly patient care. The major components of the 4M's are to identify what matters most to patients, mentation, high risk medications, and mobility concerns.[1] Prescription and over the counter sleep medications are recognized as high-risk medications as they carry adverse effects that are more pronounced and severe in older adults.[1,2] Deprescribing sleep medications can be a challenge due to lack of patient willingness, absence of clear guidelines, and perceived barriers by providers.[3] Motivational interviewing (MI) is a communication skillset that's proven efficacious in enhancing medication adherence as well as reducing addictive behaviors.[4,5] MI has not been thoroughly explored in the art of deprescribing high risk sleep medications in older adults.

METHODS: This project will be conducted at an academic Geriatric Care Center (GCC) in Pittsburgh, PA. Participants in the project include; 6 physicians, 2 geriatric fellows, 3 pharmacists, 1 social worker, 2 nurses, and 4 medical assistants. A retrospective chart review will identify current prescribing practices. Electronic based pre and post -surveys will be administered prior to and after the intervention to assess self-reported knowledge on sleep medicines and comfort with deprescribing. The intervention will provide background on sleep medicines, introduce MI in deprescribing, and provide tools to encourage interprofessional collaboration when deprescribing. Behavioral health faculty will participate in the intervention to provide the information on MI.

RESULTS: Anticipate an increase in interprofessional knowledge on high risk sleep medications and comfort with the art of motivational interviewing.

CONCLUSIONS: Results have the potential to bring awareness to current prescribing practices and high risk sleep medications. Anticipate an increase in confidence and implementation of MI across the interprofessional team to promote deprescribing.

References;

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Smedslund G, et al. *Cochrane Database Syst Rev*. 2011

D102 Student Presentation

Soy isoflavones supplements have a limited effect on improving physical performance in middle-aged or elderly adults: a meta-analysis of randomized controlled trials

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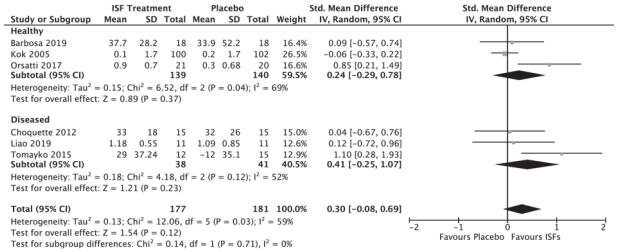
Background: Soy isoflavones (ISFs) could potentially contribute to the improvement of physical performance in middle-aged and elderly adults through mechanisms including serving as a surrogate of the hormone therapy in postmenopausal women, and improving neurodegeneration through a number of beneficial effects (estrogen-like effect, antioxidation, and anti-inflammation). This review aims to evaluate the effects of ISFs on physical performance in middle-aged or elderly adults.

Methods: We searched the PubMed, Embase, and Cochran Library by following PICOS criteria: adult participants, ISFs as the intervention, changes in physical function/capacity, mobility, or muscle strength as the outcomes, and randomized controlled trials (RCTs) with an intervention duration of greater than 2 months. A random-effects meta-analysis was used to pool estimates across studies.

Results: Among the 98 articles retrieved, six high-quality RCTs (358 participants) met our criteria. Three RCTs were conducted among healthy adults and the other three among patients with kidney disease, stroke history, or obesity. We find ISFs supplements tend to improve physical performance (standardized mean difference (SMD) 0.30, 95% confidence interval (CI) -0.08, 0.69, p=0.12, I^2=59%) but the finding does not reach statistical significance. Subgroup analyses identify that low-dose (<50 mg/day) ISFs significantly improve physical performance (SMD 0.95, 95% CI 0.44, 1.45, p=0.0002, I^2=0%), but no significant effect is observed among the sub-groups of high-dose ISFs, healthy, diseased, women, men, East Asians, or Westerners.

Conclusions: The results of the present meta-analysis do not support the view that ISFs have favorable effects on physical function in middle-aged and elderly adults.



The effect of soy isoflavones (ISFs) on physical performance in middle-aged or elderly adults

D103 Student Presentation

Effects of a WeChat-based transtheoretical model-based home-exercise intervention for older adults with knee osteoarthritis: A quasi-experimental study

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Purpose:

To use WeChat as a modern technology to promote KOA home-exercise across time and space and to identify the effect of a WeChat-based Transtheoretical Model-based home exercise intervention for elderly patients with Knee osteoarthritis, on knee-joint function, exercise adherence, and acceptance of the WeChat intervention.

Methods:

A 24-week, three-arm quasi-experiment study that included an historical comparison group was designed. Participants in the Control group and the WeChat intervention group were recruited from six communities in Beijing between June and July 2019. Community intervention group was composed of patients who were recruited and received an exercise intervention in 2018, based on the Transtheoretical Model. The WeChat intervention group received a similar exercise intervention conducted over WeChat, and the Control group received knowledge about Knee osteoarthritis. Exercise adherence was recorded every 4 weeks and other outcomes were measured at baseline, 8 weeks, and 24 weeks. Repeated-measures analysis of variance and independent t-tests were used to analyze the data.

Results:

Most participants were woman (94.07%), had a college degree or higher (52.59%), lived with a spouse (87.41%), used a walker (94.81%), had never fallen (77.78%), and did not have other diseases (62.96%). There was no significant difference in pain or stiffness between the WeChat group and Community group. However, knee-joint function (lower limb muscle strength, range of the knee-joint motion, balance, and exercise endurance) differed significantly in the WeChat group at different points in time. There also was a significant difference in the trends of the adherence scores between the WeChat and Community group over time. Patients' acceptance of the WeChat intervention was very good.

Conclusion:

A theory-based home-exercise intervention for elderly patients with Knee osteoarthritis that is conducted through WeChat can significantly improve patients' knee function, exercise adherence, and acceptance of home-exercise interventions.

D104 Student Presentation

Feasibility of using Advanced, Bio-Integrated, and Cloud-Enabled Sensors for COVID Monitoring in the Long Term Care Setting

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Background: The COVID-19 pandemic continues to be a major health crisis. Given the high mortality rate in seniors, especially those living in long-term care settings, developing technology that can provide real-time analytics is an important tool for monitoring such populations. We have developed an advanced bio-integrated skin mounted wireless sensor (ANNE™) that provides a novel comprehensive assessment of cardiopulmonary biomarkers as well as other metrics beyond conventional wearables. The aim of this feasibility of use study is to investigate if this wearable technology can be implemented remotely and produce accurate data in seniors residing in long-term care facilities.

Methods: We conducted a single arm prospective pilot study to assess the feasibility of deploying this wireless sensor in a completely remote manner to monitor high risk seniors residing in two urban long term care settings. Using remote teleconferencing, long-term care staff were virtually trained on use and application of the sensor by research staff. The devices were then applied to patients by staff and used to monitor seniors over the course of two weeks. Data from the devices was then analyzed to assess for accuracy of the collected data, demonstration of battery life and memory performance, and successful device use over the course of the monitoring period.

Results: The results will be discussed.

Conclusions: This study demonstrated that the ANNE™ wearable sensor can be successfully implemented and used remotely in the long-term care setting. This novel sensor technology has significant applications in a clinical setting and with this study we hope to show

that implementation is feasible in this setting. Immediate analytics provided by this device may be able to help more accurately diagnose and monitor those with infections such as COVID-19, as well as allow for more rapid treatment to reduce mortality in high risk populations. In addition, with the increasing use of telemedicine, physicians will be able to utilize data gathered from wearables such as ANNE in seniors to have more comprehensive health metrics during visits to improve diagnostic and treatment accuracy. Further research into these areas is planned.

D105 Student Presentation

A Pilot Study on the Use of Financial Incentives for Smoking Cessation in Cognitively Impaired Patients

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Background: Modifiable risk factors contribute to not only the development, but also the progression of dementia. Smoking is a relevant risk factor, and although relatively few people with dementia are smokers, smoking cessation can positively impact both patient quality of life and healthcare system costs. Notably, these patients also have an increased risk of smoking-related accidents and fire hazards. Despite this, smoking cessation is not routinely addressed in dementia care, and there are no reported smoking cessation interventions specifically for dementia patients. Therefore, we are developing and pilot testing an approach to help smokers with cognitive impairment quit smoking.

Methods: We are conducting a study of financial incentives to increase smoking cessation among patients hospitalized at 2 public safety net hospitals. We received an NIA supplement to include cognitively impaired patients, who were originally excluded from the study. We will begin by investigating how to adapt smoking cessation interventions for patients with cognitive impairment by conducting structured interviews with 15 current smokers, who have a diagnosis of cognitive impairment or dementia, and their caregivers. Based on analysis of interview transcripts, we will adapt both the intervention arms and our smoking cessation counseling manuals. We will then test these modifications on 6 patients with cognitive impairment and adapt them further. For the FIESTA II pilot study, we will recruit 50 participants, who will be randomized to standard therapy or one of the two financial incentive arms. Standard therapy includes the use of NRT, medication, and individual counseling targeting smoking cessation. The two financial incentive arms will be either outcome-based or goal-based, where patients are compensated for successful smoking abstinence or utilization of counseling and quitting aids, respectively. Our outcomes for the pilot study are use of smoking cessation treatments, quit attempts and abstinence.

Results: We are currently conducting the initial qualitative interviews.

Conclusions: We will discuss the results of the pilot study and their implications for geriatric practice.

D106 Student Presentation

Relationship between Prognostic Expectations and End-of-Life Outcomes among Patients Admitted to an LTACH

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Background: Older adults admitted to a long-term acute care hospital (LTACH) have limited survival but low palliative care and hospice use. LTACH patients' prognostic expectations may account for this discrepancy. Therefore, we sought to describe the relationship between prognostic expectations before LTACH admission and end-of-life care.

Methods: In this observational study we included consecutive Medicare beneficiaries with an LTACH admission between 2003-2015 with a linked Health and Retirement Study interview (nationally representative cohort) within 2.5 years before admission. Prognostic expectation was defined as baseline self-reported 10-15 year survival and categorized as optimistic if ≥50% chance of survival, pessimistic if <50%, and unknown if the response was 'don't know', 'refused', or missing. The primary outcomes were death 2.5 years after admission and end-of-life outcomes **(Table 1).**

Results: Of 361 patients admitted to an LTACH, 30% were optimistic, 45% were pessimistic, and 25% were unknown. Compared to pessimistic patients, optimistic patients were of similar age and sex, but were more likely to be Black (30% vs 11%) and in good health (45% vs 24%). Death occurred in 55% of optimistic patients, 68% of pessimistic patients, and 72% of patients with unknown prognosis (P=.02). End-of-life outcomes among 235 decedents were similar by prognostic expectation, except patients with unknown prognosis were more likely to die in a hospital **(Table).**

Conclusions: Prognostic expectations were associated with survival after LTACH admission, but not with end-of-life care. Further research is needed to examine why expectations did not translate into better end-of-life care.

End of Life Outcomes by Baseline Prognostic Expectation among Decedents after an LTACH Stay

	Overall (n=235)	Optimistic (n=60)	Pessimistic (n=110)	Unknown (n=65)	p-value
Death was expected [a]	60.3%	56.9%	64.7%	56.3%	0.46
Advance care planning, any [a,b]	75.0%	69.0%	77.5%	76.6%	0.46
Hospice >3 days before death	21.3%	16.7%	22.7%	23.0%	0.60
Living in NH at time of death [a]	45.1%	39.7%	43.1%	53.1%	0.28
Hospitalization in last 30 days	61.3%	60.0%	61.8%	61.5%	0.97
ICU stay in last 30 days	45.1%	51.7%	43.6%	41.5%	0.48
In-hospital death [a]	49.1%	44.8%	43.1%	62.5%	0.04

[a]Responses available for 224 decedents (95.3%) with a Proxy Interview

[b]Advance directive, durable power of attorney, or discussed wishes with a surrogate

D107 Student Presentation

Post-Discharge Outcomes in Older Patients Hospitalized for COVID-19 Infection

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Background

Little is known about recovery among older patients hospitalized for severe COVID-19 infection. We analyzed the impact of severe COVID-19 on the mental and physical health of older patients at 1 and 6 months following discharge.

Methods

This is a subanalysis of subjects ≥65 years enrolled in a prospective observational cohort study of patients hospitalized at one health system for COVID-19 infection requiring the use of at least 6 L of oxygen. Eligible patients had intact cognition and function at baseline and were discharged alive to a home or non-hospice facility. Patients were contacted 30-40 days following discharge to complete two validated surveys (PROMIS Dyspnea Characteristics and PROMIS Global Health-10) based on current and pre-COVID-19 health; surveys were repeated 180-211 days following discharge with a review of systems.

Results

Among 58 patients (median age 71) who completed 1-month surveys, global self-rated health was worse following COVID-19 (median score 3/5) compared to before (4/5), p<0.001; at 6-months (52 patients), overall health remained lower than baseline (3/5), p<0.001. Patients experienced a decline in physical (score 42.8 vs. 52.0, p<0.001) and mental health (46.0 vs. 52.7, p<0.001) at one month. At

6 months, physical (43.6) and mental health (46.8) were still worse than baseline, p<0.001 for both.

Among those with 6-month follow-up, dyspnea persisted in 46 patients (88.5%) at 1 month and 35 (67.3%) at 6 months. There was an increase in the intensity, frequency, and duration of dyspnea at 1 month (2/10, 2/10, and 2/10, respectively) compared to before (0/10 each), p<0.001 for all. Dyspnea at 6 months was improved but continued to be worse than baseline in intensity (0/10, p=0.02), frequency (1/10, p<0.001) and duration (1/10, p=0.006). 29 patients (50%) required oxygen 1 month following discharge, a new requirement for 27 (93.1%). At 6 months, 37 patients (71.2%) stated that their health had not returned to a pre-COVID state, with new onset memory changes being most common (64.9%).

Conclusions

Most older patients hospitalized for COVID-19 suffer a decline in mental and physical health for at least six months following discharge. Refining longitudinal care for these patients, including access to pulmonary rehabilitation, may help to improve quality of life.

D108 Student Presentation

Co-Prescribing of Anticholinergics and Cholinesterase Inhibitors: a Potential Deprescribing Cascade

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Background: A well-known and potentially harmful "prescribing cascade" results when anticholinergics are prescribed to manage the side effects of cholinesterase inhibitors (ChEIs). We investigated 1) factors associated with co-prescribing of anticholinergics and ChEIs and 2) whether deprescribing of ChEIs was associated with subsequent discontinuation of anticholinergics - a 'deprescribing cascade'.

Design: Analysis of linked Medicare Part A, B and D claims, Master Beneficiary Summary File, Minimum Data Set, Area Health Resource File, and Nursing Home Compare from 2015-16. We included non-skilled nursing home residents, ≥65 years old with severe dementia who were prescribed ChEIs. Cross-sectional analysis evaluated factors associated with co-prescribing of anticholinergics with ChEIs, defined by Beers Criteria. Cox proportional hazards regression examined whether deprescribing ChEIs was associated with subsequent discontinuation of anticholinergics.

Results: Few resident or facility-level factors were associated with the co-prescribing of anticholinergics. However, advancing age, minority populations, and clinical factors, including end-stage renal disease, heart failure, and poor appetite were associated with a decreased likelihood of co-prescribing of anticholinergics. Factors including female sex, polypharmacy, and non-geriatric providers were associated with a higher likelihood of prescribing anticholinergics. In longitudinal analyses, we observed that deprescribing of ChEIs was associated with a reduced likelihood (HR 0.58 [95% CI, 0.47-0.71]) of discontinuing any anticholinergic medications but was not associated (HR 1.32 [95% CI, 0.83-2.09]) with deprescribing antimuscarinic anticholinergics, specifically.

Conclusions: Factors associated with a reduced likelihood of prescribing anticholinergics were those that often signal a decline in health. Geriatric providers were also less likely to prescribe anticholinergics. Deprescribing, a solution to polypharmacy, was underutilized, likely due to under recognition of the prescribing cascade. Research of interventions to improve recognition of the prescribing cascade are needed.

D109 Student Presentation

Acculturation, Assimilation & the Healthy Aging Index in Mexican American SALSA Participants

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Mexican Americans (MA) are a growing minority population with lower SES and poor healthcare access, thus determinants of health and aging in MAs is of interest. Studies examining the effect of acculturation (acc.) on MA health have varied results, exacerbated by different definitions of acc. and assimilation (ass.). We aimed to examine the relationship between acc., ass. and healthy aging among 394 MA participants in the San Antonio Longitudinal Study of Aging (SALSA).

The Hazuda Acculturation and Assimilation Scales (HAAS) assessed 2 dimensions of acc. -- value placed on preserving Mexican cultural origin and attitude towards traditional family structure and sex-role organization – and structural ass. that measures functional integration (FI). i.e., English proficiency & usage with broader society. The Healthy Aging Index (HAI) incorporated systolic BP, blood glucose, MMSE, FVC and proteinuria to capture clinical and sub-clinical chronic disease burden. Multiple imputations replaced 1^{+} missing values for 82 participants.

Linear regression was used to examine cross-sectional associations between each scale and HAI. Model 1 adjusted for age, sex, household income and education. Model 2 also included BMI, smoking status, drinking status, physical activity level and the other HAAS as covariates. Both models demonstrated a significant negative relationship between the FI scale score and HAI score (p-value: model 1 0.002, model 2 0.003). This relationship indicates higher FI scores were associated with lower HAI scores. No significant relationship existed with acc. scales and HAI.

Our results indicate that, among aging MAs, FI, a measure of ass., is associated with lower clinical and sub-clinical disease burden. In contrast, acc. scales were not significantly associated with HAI score, underscoring the importance of recognizing the distinction between ass. and acc.. Causal factors determining specific disease processes in aging MAs and if the observed association between FI and lower HAI is a result of increased interaction with the US healthcare system require investigation.

D110 Student Presentation

Loneliness, Depressive Symptoms and 8-Year Incident Dementia: The Kuakini Honolulu-Asia Aging Study.

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Introduction: Recent studies show that depression and loneliness are each associated with cognitive impairment. There are no studies of the synergistic effect of both depression and loneliness on incident dementia.

Methods: The Kuakini Honolulu-Asia Aging Study (HAAS) is a longitudinal cohort study of dementia in Japanese-American men in Hawaii. At the 4th exam (1991-93), 3,741 men ages 71-93 years participated. Depressive symptoms were measured by the 11-item Centers for Epidemiologic Studies Depression (CES-D) scale, and loneliness was defined by a single question. We did separate analyses for depressive symptoms, loneliness, and a 4-level composite variable (neither, depression only, loneliness only, or both). Subjects were followed for 8 years for incident all-cause dementia (DEM),

Alzheimer's disease (AD) and vascular dementia (VaD), based on standard criteria. After excluding baseline prevalent dementia, those without valid CES-D score or those in nursing homes, our analytic sample included 2,651 men.

Results: Age-adjusted rates per 1,000 person-years follow-up increased across 4 groups of neither, depression only, loneliness only, and both, for incident DEM (9.23, 16.23, 18.07, 25.31, p<0.0001) and AD (5.40, 9.93, 13.18, 13.89, p=0.003). Using Cox regression, adjusting for age, education, APOE4, prevalent stroke, baseline cognition and marital status, we found increasing relative risks for incident DEM across the 4 groups using presence of neither symptom as reference (depression only RR=1.67, 95%CI=0.94-2.94, p=0.078; loneliness only RR=2.07, 95%CI=1.30-3.30, p=0.002; and both RR=2.87, 95%CI=1.80-4.57, p<0.001; p for trend <0.001). Similar increases in incident AD were seen across the 4 groups (depression only RR=1.80, 95%CI=0.87-3.73, p=0.111; loneliness only RR=2.51, 95% CI=1.43-4.41, p=0.001; and both RR=2.51, 95%CI=1.33-4.76, p=0.005; p for trend <0.001). There were no significant associations with VaD.

Conclusions: Loneliness and depressive symptoms are significant independent and additive predictors of incident DEM and AD, but not VaD, in older Japanese-American men. It is possible that these symptoms may be early manifestations of dementia. Addressing these factors early may help prevent dementia or its progression.

D111 Student Presentation

The Role of Assimilation and Acculturation in Frailty Incidence: The San Antonio Longitudinal Study of Aging (SALSA)

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Background: Frailty is widely reported to be more prevalent in older Mexican Americans (MAs) compared to European Americans and has been associated with age, diabetes, arthritis, and body mass index. This study examined the association of structural assimilation and acculturation with frailty and determined if these predict incident frailty in a population of older MAs.

Methods: 394 MA older adults participated in the baseline examination of the SALSA, 225 completed the follow-up examination an average of 6.5 years later. Frailty was classified using Fried criteria. Two acculturation dimensions were measured: Value Placed on Preserving Mexican Cultural Origins and Attitude Toward Traditional Family Structure and Sex-Role Organization. Structural assimilation was measured as Functional Integration into the society as reflected in English proficiency and usage to interact with the society. Baseline characteristics were summarized by frailty category using ANOVA. For characteristics that differed significantly by frailty category, logistic regression was used to examine the odds of incident frailty associated with these measures using both an unadjusted and adjusted model for covariates.

Results: At baseline, mean age was 69.3±3.2 years, 58% were female. Frail participants had lower mean assimilation score (2.31 vs 2.67, p=0.04), but did not differ significantly from non-frail participants on either acculturation scale. In an unadjusted model, structural assimilation was significantly associated with lower odds of incident frailty (odds ratio [OR]=0.49, 95% confidence interval [CI]: 0.35-0.69, p<0.001), but after covariate adjustment, the odds ratio was no longer statistically significant, (OR=0.62, 95% CI: 0.38-1.03, p=0.064). In the adjusted model, only BMI significantly predicted incident frailty (OR=1.13, 95% CI:1.04-1.22, p<0.01).

Conclusion: Structural assimilation is significantly associated with incident frailty in older MAs. This association is partly explained by obesity. Interventions which target obesity may help to decrease incident frailty in MAs with lower levels of structural assimilation.

D112 Student Presentation

Physical isolation and mental health among older adults over time during the COVID-19 pandemic

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Background: The longitudinal mental health implications of physical isolation during the COVID-19 pandemic among older adults are unknown. We aimed to investigate the relationships between physical isolation during the period when many US states had shelter-in-place orders (April-May 2020) and longitudinal trajectories of mental health in older adults over the subsequent six months.

Methods: Data were from monthly online surveys of 3,970 participants aged 55+ in a nation-wide cohort study, the COVID-19 Coping Study, from April to October 2020. Physical isolation was defined as number of days in the past week of not leaving home except for essential purposes (0 days, 1-3 days, 4-6 days, and 7 days). Outcomes were depressive symptoms (8-item Center for Epidemiological Studies Depression Scale), anxiety symptoms (5-item Beck Anxiety Inventory), and loneliness (3-item UCLA loneliness scale). We used linear mixed-effects models to assess the relationships between baseline physical isolation with baseline mental health and change in mental health over time. Models were population-weighted and adjusted for demographic characteristics, comorbid conditions, use of mobility aids, self-rated memory, self-rated health, US census region of residence, smoking, and the following pre-COVID-19 variables: social isolation, employment, alcohol use, and physical activity.

Results: Compared to 0 days/week of physical isolation, 7 days/week of physical isolation was associated with elevated depressive symptoms at baseline (β=1.01, 95% CI 0.19-1.84) and with increasing depressive symptoms over time (β=0.09, 95% CI 0.002-0.19). Any amount of physical isolation (vs. 0 days/week) was associated with elevated anxiety symptoms and loneliness at baseline, but not with change in anxiety symptoms or loneliness over time.

Conclusions: Physical isolation was associated with increased depressive, anxiety, and loneliness symptoms, and with increasing depressive symptoms over time. Strategies to promote well-being in older adults should prioritize opportunities for in-person connection when it is safe to do so.

D113 Student Presentation

The Role of Gender and Couple Status in Predicting Advance Care Planning Practices

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Background: Evidence indicates that patients, families, and the healthcare system may harness benefits from participating in advance care planning (ACP), but data show that completion of ACP is suboptimal even when death is expected. There are numerous gaps in understanding the ACP process. Past research, for example, has shown that independently marital status and gender significantly impact ACP. The purpose of this study was to examine the impact of couple status and gender on the likelihood that the person had completed written ACP directives, designated a durable power of attorney for healthcare (DPOAHC), and held ACP discussions.

Methods: This descriptive study analyzed data from a national cohort study, The Health and Retirement Study, conducted through the University of Michigan. Data were gathered in 2016 from family members of 1310 adults interviewed in 2014 that had recently died. The independent measures were gender and marital status. The dependent variables were written directives, DPOAHC, and ACP discussions. Weighted chi-square tests were used for bivariate associations and logistic regression models for multivariate analyses.

Results: Gender and couple status varied for men and women. More coupled men (66.1%) had discussed their wishes compared to single men (51.7%), (p=0.008). More single women (54.2%) had written ACP directives compared to coupled women (38.1%), (p=0.0006). Only 58.7% of coupled women had a DPOAHC compared to 71.08% of single women (p=0.03). In the logistic regression models there was a significant interaction between gender and couple status in predicting who had written directives (p=0.005), but not in predicting discussion of those wishes or designating DPOAHC (p>0.05).

Conclusion: Overall, both gender and couple status impacted ACP practices and suggest different provider approaches may be needed based on gender and marital status. The results also show the necessity of fully discussing with patients all aspects of ACP as there are numerous configurations of ACP activities. These differing activities may not be well understood by patients or family.

D114 Student Presentation

Hospital Falls Due to Less Supervision during the COVID-19 Pandemic

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BACKGROUND

Falls are a global public health problem for older adult and a dreaded occurrence during hospitalization.[1] In an effort to reduce spread of COVID-19 the World Health Organization published recommended policies that reduced staff number and type that enter a patient room and suggested alternatives to face-to-face interaction like phones and tablets.[2]

Our objective is to determine if this change in the standard of care has affected the incidence of falls of older hospitalized patients during the COVID-19 pandemic.

METHODS

This retrospective cross-sectional study will investigate patients 65 and older admitted to two medium sized community, teaching hospitals in Kalamazoo, Michigan. Patient data will be collected by chart review from 01/01/19 to 12/31/20 to include fall number, fall circumstance, comorbid conditions, length of stay, unit of admission, disposition, and total number of older patient hospitalized days. Also, hospital policies related to patient supervision will be reviewed.

RESULTS

A similar study was done in a Taiwan hospital where fall data from January to May 2019 was compared to that of January to May 2020. The fall incidence rate showed a statistically significant tripling in the number of falls.[1] We hope to provide comparable data.

CONCLUSION

Increased in-hospital falls during the COVID-19 pandemic should renew health care worker vigilance for patient safety. There is evidence that falls may be a symptom of COVID-19 implying fall susceptibility may be related to more than just lack of supervision.[3] Hospitals should develop policies and strategies that balance health care worker safety with the concomitant increased risk for patient falls.

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D115 Student Presentation

Age and Body Temperature Among Nursing Home Residents With and Without SARS-COV-2 Infection

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Background: Older adults are reported to have a lower baseline temperature and a blunted fever response to infection than younger adults. We had reported that 37.2°C is better for SARS-COV-2 (SARS) identification than 38°C in nursing home (NH) residents. We postulated this was due to residents' age, and here further describe this with SARS status.

Methods: All Veterans in the VA's 135 VA NHs were tested for SARS and had daily or more temperatures assessed from March - August 2020. We defined maximum temperature (Tmax) as the maximum recorded in the 2 weeks before and after a SARS test, baseline temperature (Tbl) as the mean of the last five temperatures prior to this period, and Tdev as temperature deviation from Tbl during this period.

Results: The mean Tbl declines with age for SARS negative (n=5978) residents; those <60 years old having the highest mean Tbl, lower for ages 70-79, 80-89 and over 90 at 36.58°C, 36.54°C and 35.51°C, respectively. Of those with SARS (n=1236), the mean Tmax also declined with age (38.20°C and 38.02°C), as did the Tdev from baseline (1.63°C and 1.48) for ages 70-79 and 80-89, respectively. A simple linear model did not find these decreases to be of notable significance (p=.45 and p=.95). Hypertension (p=.16), heart failure (p=.13), or pulmonary (p=.15) disease were not associated with greater likelihood of a Tmax <37.2°C.

Conclusion: We observed lower Tbls, and with SARS infection, Tmax and Tdev with advancing age in NH residents. While some observations were not statistically significant and do not provide clinical discriminatory advantage in how we currently track temperature, the trends were consistent and support the use of lower temperature thresholds in older adults for detecting SARS. There is potential for electronic clinical records that can track and flag outlier age-adjusted temperatures and temperature deviations.

D116 Student Presentation

Low Gait Speed is a Marker of Social Isolation in a Nationally-Representative Sample of Older Adults

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Background: Gait speed is a marker of physical function among older adults linked to fall risk, disability onset, and mortality. We determined if gait speed is similarly associated with social isolation and loneliness, key markers of social well-being.

Methods: We used 2015-16 National Social life Health and Aging Project data, including 4,680 community-dwelling older adults. Gait speed was measured via a 3-meter usual walk and categorized based on the Short Physical Performance Battery (unable to walk, ≥5.7 s, <5.7 s). Social connections were assessed using a 12-item scale evaluating three domains of social relationships (household/network size; social interaction with friends and relatives; community engagement in volunteering, community groups, and religious services). Social isolation was categorized based on the lowest quintile of the scale. Loneliness was assessed with the 3-item UCLA scale. We used logistic regression to determine the adjusted probability of each social

measure by gait speed categories, adjusting for age, gender, race, marital status, education, comorbidities, and depression.

Results: The sample was on average 63 years old (SD=11), 45% male, 12% Black, and 18% lived alone. The adjusted probability of social isolation was higher among individuals with a slower gait (unable to walk: 30%, ≥5.7s: 25%, <5.7s: 20%, p=0.03), but not loneliness (p=0.22). Slower gait speed was associated with reduced participation in community groups (unable to walk: 67%, ≥5.7s: 53%, <5.7s: 47%, p=0.003) and volunteer work (unable to walk: 76%, ≥5.7s: 65%, <5.7s: 60%, p=0.006), but not religious service participation (p=0.98), socializing with friends and relatives (p=0.16), visiting neighbors (p=0.31), or household/network size (p=0.25).

Conclusion: Gait speed is a strong marker for social isolation, particularly through reduced participation in community groups and volunteering. In contrast, older adults with slow gait maintained participation in religious services and socializing, and had similar rates of loneliness. Among those with slow gait, clinicians should consider a careful social history to identify and address the health risks of social isolation.

D117 Student Presentation
Outdoor Falls among Community-Dwelling Older Adults: A Scoping Review

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Background: Falls are the leading cause of fatal trauma and non-fatal injury among older adults. To date, the majority of falls research has focused on indoor falls. Less is known about outdoor falls and how to prevent them. Our objective was thus to conduct a scoping review of the literature to identify studies of risk factors for outdoor falls and determine whether any interventions have been found to reduce outdoor falls among community-dwelling older adults.

Methods: We searched two electronic databases (PubMed and Google Scholar), and studies were screened by two independent reviewers. Studies were included if they were indexed in either database, published in English, reported or synthesized primary research, evaluated risk factors or interventions for outdoor falls, and were conducted with community-dwelling adults 60 years of age or older. Studies that focused solely on condition-specific falls (e.g., Parkinson's, stroke) or falls from heights were excluded.

Results: Twenty-nine eligible studies were identified. Twenty-six described outdoor fall risk factors, and three tested interventions to prevent outdoor falls. The majority of studies describing outdoor fall risk factors were prospective studies (73%). Based on those, prior falls, walking outdoors more than 3 times per week, gait speed ≥1.3 m/sec, and multifocal lens use were the risk factors most strongly associated with outdoor falls. The intervention studies assessed the effectiveness of an anti-slip footwear device, single-lens distance glasses, and an in-person group didactic plus outdoor mobility training program. Two of the three interventions – single lens distance glasses worn by individuals with high outdoor activity level and an anti-slip footwear device – resulted in a statistically significant decrease in outdoor falls. The outdoor mobility training program study included a small sample and was thus underpowered to detect significant between-group differences in the falls outcome.

Conclusions: While a number of studies have identified risk factors for outdoor falls, few interventions aimed specifically at reducing outdoor falls have been tested. Optimizing walking safety and sensory inputs may reduce outdoor falls.

D118 Student Presentation
Comorbid Conditions and Sepsis-Related Mortality among Hospitalized Older Adults

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Introduction: Comorbidities have been known to influence infectious disease prognosis in older adults. The objective of this study was to examine the association between comorbid conditions and mortality among hospitalized older adults diagnosed with sepsis. We hypothesized that hospitalized patients age 75 and older who have chronic cardiorespiratory conditions would have higher sepsis mortality rates than other older patients with sepsis.

Methods: This is a retrospective secondary analysis of a database of 24,776 adults age ≥ 75 admitted to a community teaching hospital to a non-ICU bed from July 2015 to June 2017. Sepsis and comorbidities were identified by using ICD-10 discharge codes. Comorbidities in the study included: CHF, cerebrovascular disease, dementia, diabetes, mild anemia [{Hb}<10 g/dL], severe anemia [{Hb}<8 g/dL], cancer, chronic pulmonary disease, CKD [GFR<30 mL/min/1.73m^2], and hypoalbuminemia [<3.4 g/dL]. Charlson Comorbidity Index was used to assess comorbidity burden and scores less than 5 (low) were compared to those more than 8 (high). Chi-square test was used to determine statistical significance.

Results: A total of 951 patients had the diagnosis of sepsis and 100/951 (10.5%) died in the hospital. Sepsis-related mortality was not significantly different between patients with high (11.0%) or low (10.1%) Charlson Comorbidity Score (p-value = 0.812). Of the patients who had sepsis, mortality rates were significantly higher for patients with one of the following conditions when compared with other comorbidities studied: severe anemia (mortality w/ comorbidity: 47.4% vs. mortality w/o: 8.5%, p-value<0.001), CKD (mortality w/ comorbidity: 21.4% vs. mortality w/o: 4.0%, p-value<0.001), and hypoalbuminemia (mortality w/ comorbidity: 11.7% vs. mortality w/o: 0.0%, p-value=0.001). All other comorbidities investigated had a sepsis-related mortality rate less than 20% and were not statistically significantly different than other sepsis patients.

Conclusion: In our cohort, patients over 75 years old who had sepsis in addition to severe anemia, CKD, or hypoalbuminemia had higher sepsis-related mortality rates than patients with other major comorbidities. Our preliminary results call for further analysis of the interaction between sepsis and comorbid conditions and their influence in sepsis-related mortality, especially among those not initially admitted to the ICU.

D119 Student Presentation
The Association Between Self-Reported Cognitive Decline and Hearing Loss in Adults with Type 2 Diabetes Mellitus

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Background: Type 2 diabetes mellitus (T2DM), dementia, and hearing loss have a great impact worldwide and there are many questions regarding the inter-relationships among these diseases. It is unclear if hearing loss and T2DM increases the likelihood of development of dementia. It is important to clarify if older adults with T2DM and with hearing loss are at a greater likelihood of developing cognitive decline as this could provide opportunities for clinicians and researchers to recognize correlates of cognitive disorders and enable them to develop new interventions and preventative measures.

Methods: This study was a retrospective, observational, cross-sectional study that included 10,756 participants from the 2016 Behavioral Risk Factor Surveillance System (BRFSS). The participants were a minimum of 50 years old to be included in the study,

and self-reported a diabetes diagnosis when they were a minimum of 30 years old. Cognitive decline was evaluated based on reporting of participants and if they were experiencing confusion or memory loss that was happening more often or was getting worse during the past 12 months. Hearing loss was determined by participants reporting if they are deaf or having serious difficulty hearing. Primary analysis included odd ratios and 95% confidence intervals. Multivariate, logistic regression models were constructed to control for confounding variables.

Results: 46% of the participants were 50-64 years old; 34% were 65-74 years old, and 20% were over age 75. The majority of the participants were white (75%) with 14% reported hearing loss and 15% reporting cognitive decline. 3.4% had both conditions. T2DM participants with hearing loss were found to be 2.23 times more likely than those without hearing loss to self-report cognitive decline (95% CI: 1.82-2.73). Type 2 diabetic participants were more likely to self-report cognitive decline if: they did not exercise (OR = 1.44, 95% CI = 1.21–1.71), they were former smokers (OR = 1.42, 95% CI = 1.17–1.73), they were current smokers (OR = 2.39, 95% CI = 1.85–3.09).

Conclusions: Older adults with T2DM and with hearing loss have a higher likelihood of self-reporting cognitive decline compared to those with no hearing loss. These findings will allow clinicians to screen for cognitive decline earlier on in T2DM patients that present with hearing loss.

D120 Student Presentation

Social Isolation and Inflammatory Biomarkers in the National Health and Aging Trends Study

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Background:

Social isolation is a risk factor for morbidity and mortality comparable to well-established risk factors including smoking, hypertension, and a sedentary lifestyle. The specific biological mechanisms that connect social isolation to morbidity and mortality remain unclear. The primary objective of this study is to examine the cross-sectional relationship between social isolation and two inflammatory biomarkers: Interleukin-6 (IL-6) and high sensitivity C-Reactive Protein (CRP).

Methods:

Cross-sectional data were obtained from the National Health Aging Trends Study collected in 2017 in the contiguous United States. Participants were a nationally representative sample of approximately 4,648 community-dwelling Medicare beneficiaries 65 years and older who provided inflammatory biomarker samples. Inflammatory biomarkers (IL-6 and CRP) were collected and measured using dried blood spot sampling techniques. We defined social isolation utilizing a multi-domained classification that considers living arrangement, core discussion network, religious attendance, and social participation.

Results:

After adjusting for age, gender, race/ethnicity, income, tobacco use, body mass index, chronic conditions, we found that severe social isolation and social isolation were significantly associated with higher levels of IL-6 and CRP values among older adults.

Conclusion: Social isolation increases levels of inflammatory biomarkers. Our findings inform the pathway between social isolation and morbidity and mortality among older adults. Inflammatory markers could be a proximal outcome measure for future interventions that seek to alter the trajectory of social isolation and poor health outcomes.

D121 Student Presentation

Sex Differences in the Association Between Childhood Skeletal Aging and Later-Life Frailty

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Background: Frailty is multi-system impairment that is characterized as vulnerability to stressors. Accumulating evidence suggests aging-related outcomes are the result of lifespan inputs. Childhood growth phenomena, such as variation in skeletal aging, may contribute to frailty. Our group previously established a link between skeletal aging and sarcopenia, and now examines if there is an association between childhood skeletal aging and frailty.

Methods: Adult visit (50+ years old) data from N=276 participants of the Fels Longitudinal Study was used. Of the 276 participants, 118 had both child and adult visit data available. Childhood skeletal age was calculated from serial hand-wrist radiographs. Residual skeletal aging (RSA) was calculated as skeletal age minus chronological age at peak height growth velocity during adolescence. From the adult visit data, participants were categorized as non-frail, pre-frail, or frail according to the Fried model, which includes 5 modified factors: BMI <18, slow gait speed, grip strength weakness, low physical activity, and exhaustion. Separate logistic regression models were utilized to determine associations between childhood and adult predictors of a composite pre-frail and frail endpoint, and individual frailty factors.

Results: Participants were aged 63.1 ± 9.2 years, 60% were female and 40% were defined as prefrail or frail. Higher fat mass was associated with frailty in males (OR: 0.85; 95% CI: 0.78-0.94) and females (OR: 0.92; 95% CI: 0.87-0.97). Higher cholesterol was associated with frailty (OR: 1.02; 95% CI: 1.00-1.03) in men only. Independent of age and sex, accelerated RSA in adolescence was predictive of self-reported exhaustion (OR: 3.06; 95% CI: 1.09-8.58) and protective against low BMI (OR: 0.48; 95% CI: 0.25-0.93) in adulthood. In females, self-reported arthritis was borderline associated with 0.45 ± 0.68 years (p=0.066) of accelerated RSA.

Conclusion: This study establishes several important sex-specific links with RSA and fat mass in both sexes; and cholesterol in males only, to frailty and its individual factors. Of particular interest was that accelerated RSA in female adolescence was also associated with arthritis in adulthood, perhaps elucidating a disease model in which to examine skeletal aging, body composition, and exhaustion/fatigue in future studies.

D122 Student Presentation

Vitamin D Status and Obesity Markers in Old Adults: Results From WCHAT Study

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Background: To investigate the prevalence of low vitamin D status and evaluate the associations between vitamin D status and different obesity markers among old adults in west China. **Methods:** Data was based on the baseline of West China Health and Aging Trend (WCHAT). All of the participants were older than 60 years old in the present study. Vitamin D status were based on laboratory data, obesity markers were assessed by bioelectrical impedance analysis (BIA) using an Inbody 770 and trained investigators. Multiple linear regression was conducted to find the associations between vitamin D status and obesity markers. Multiple linear regression was conducted to find the associations between vitamin D status and different obesity markers. **Results:** 2661 participants (mean age: 67.7±6.0 years; male: 41%) were included in our study. The mean vitamin D level was 18.8±6.3 ng/ml (ranged from 5 to 59 ng/ml) in our study. 5.2% of participants had vitamin D sufficiency, 31.8% of participants had vitamin D

insufficiency, and 63.0% of participants had vitamin D deficiency. Our results showed that vitamin D status was negatively associated with fat mass index (FMI), visceral fat area (VFA) and waist-hip ratio (WHR) in both sexes and more obesity markers in female. Compared with other obesity markers included in our study, waist-hip ratio (WHR) had a stronger relationship with vitamin D status in both sexes ((β=-6.366, 95% CI=-12.319 - -0.413, P=0.036) in male, (β= -11.372, 95% CI=-16.492- -6.251, P<0.001) in female). No significant associations were found between vitamin D status and BMI. **Conclusions:** The prevalence of vitamin D insufficiency/deficiency was high in west China. Future studies related to vitamin D status should pay more attention to the participants with high WHR.

D123 Resident Presentation

Outcomes of the Oldest Old Admitted with COVID-19

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Background

Morbidity and mortality are higher in older adults with COVID-19. We hypothesized that the Oldest Old (OO, >=85) have worse outcomes of hospitalization compared to Middle Old (MO, 75-84) and Young Old (YO, 65-74). We aimed to characterize older patients' severity of disease, decisions about aggressive care, and outcomes.

Methods

This was a retrospective analysis using electronic health record data at 2 centers in New York City. Data were manually abstracted on patients aged >=65 admitted between 3/5/2020-5/15/2020 and stored in a secure REDCap database. Collected variables included Clinical Frailty Scale (CFS) score, residence prior to admission, dependence in ADLs, initial/changed code status, comfort care status, palliative care consultation, oxygen requirement within 3 hours of presentation (suggesting more severe disease), intubation, and death. Data analysis was performed using Chi square tests of independence and p-values were adjusted for multiple comparisons.

Results

Of the 579 patients included in the study, 157 were OO (27%), 175 MO (30%), and 247 YO (43%). On admission, 56% of the OO were dependent in ADLs, 12% resided in a long-term care facility, 5.1% in assisted living facility, and 4.5% in a sub-acute rehab. Median CFS on admission was 5 in the OO, compared to 4 and 3 in the MO and YO groups, respectively. Among those immediately requiring supplemental oxygen (n= 162 YO, 98 MO, and 91 OO), the OO were less likely to be intubated (18% vs 34% MO and 44% YO), more likely to have a palliative care consult, more likely to be DNR/DNI on admission (62% vs 22% MO and 7.4% YO), more likely to choose comfort care (44% vs 22% MO and 6.2% YO), and more likely to die during admission (65% vs 43% MO and 23% YO) (all p-values < 0.001). Of all 140 intubated patients, 71% (12/17) of OO died, vs 66% (29/44) of MO and 42% (33/79) of YO (p=0.011).

Conclusion

Adults age 85 and above admitted with COVID-19 were more likely to forego intubation and die with comfort-based care. Irrespective of intubation choice, patients 85 and older had a markedly poorer prognosis than other cohorts over 65.

D124 Resident Presentation

Trends in Cannabis Use Disorder among Geriatric Admissions with Prior History of Myocardial Infarction or Revascularization (Percutaneous Coronary Intervention or Coronary Artery Bypass Grafting)

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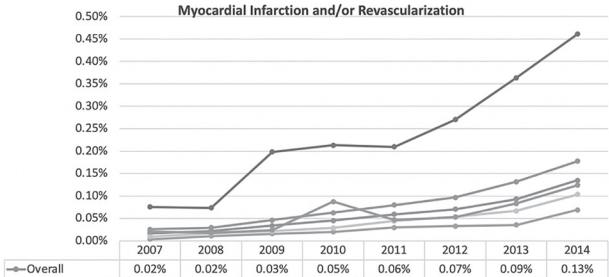
Background: Cannabis use has been linked to cardiovascular diseases in all age groups; however, there is no evidence regarding the frequency and trends in cannabis use disorder (CUD) among high-risk geriatric patients with established cardiovascular risk or coronary interventions.

Methods: We queried the National Inpatient Sample, which is a large publicly available all-payer inpatient healthcare database, from the year 2007-2014 to identify frequency and trends in CUD among geriatric hospitalizations with a prior history of myocardial infarction (MI) and/or revascularization [(percutaneous coronary intervention (PCI) or coronary artery bypass grafting (CABG)]. Trends were analyzed using the linear-by-linear association test. A p<0.05 was considered statistically significant.

Results: Of 19,163,970 geriatric admissions with prior history of MI/PCI/CABG, 0.1% (n=11460) had CUD. There was nearly 6-fold increase in the frequency of CUD from 2007 to 2014 (0.02% to 0.13%, p_{trend}<0.001). There were rising trends in CUD across all sex and racial groups; however, the most pronounced rate was noted among males and African Americans. (**Figure 1)**.

Conclusions: In this large-scale population-based analysis, although the overall rate of CUD was low, rising trends in the CUD remained alarming among high-risk geriatric patients with prior history of MI and/or coronary interventions.

Fig. 1. Trends in Cannabis Use Disorder Among Geriatric Admissions with Prior Myocardial Infarction and/or Revascularization



	2007	2008	2009	2010	2011	2012	2013	2014
Overall	0.02%	0.02%	0.03%	0.05%	0.06%	0.07%	0.09%	0.13%
Male	0.03%	0.03%	0.05%	0.06%	0.08%	0.10%	0.13%	0.18%
Female	0.003%	0.01%	0.02%	0.02%	0.03%	0.03%	0.04%	0.07%
White	0.01%	0.02%	0.02%	0.03%	0.04%	0.05%	0.07%	0.10%
African American	0.08%	0.07%	0.20%	0.21%	0.21%	0.27%	0.36%	0.46%
Hispanic	0.02%	0.02%	0.02%	0.09%	0.05%	0.05%	0.08%	0.12%

D125 Resident Presentation

Osteoarthritis Treatment in Older Adults

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BACKGROUND: Osteoarthritis (OA) is common in the aging population. Opioids and NSAIDs are often used for pain control, but with risks of confusion, falls, and bleeding. There is limited information on current treatment use in the older population (75+) especially the oldest (85+). We hypothesize that opioid use will decrease with age.

METHODS: Patients ≥75 years old with knee/hip OA with 2013-2014 orthopedic clinic initial visits were retrospectively studied, using electronic medical records and self-reported surveys. Chi square

and T-test for categorical and continuous variables assessed baseline demographics and treatments (opioids, NSAIDs, steroid injections, hyaluronic acid (HA) injections and total joint arthroplasty (TJA)) in three cohorts: age 75-79 (old), 80-84 (older), and 85-90 (oldest). A logistic regression assessed the effect of age on opioid use controlling for covariates.

RESULTS: 931 patients were analyzed. Among the old, older, oldest, there was a significant difference in baseline BMI (30.1 vs 28.8 vs 27.7 p<0.001) and dementia history (1.27% vs 2.72% vs 6.06% p=0.006). Falls were significantly higher in the oldest (36.9% vs 38.1% vs 49.7% p=0.012). NSAID use was significantly higher in the older (37.5% vs 46.9% vs 35.8% p=0.015). No significant difference was found for opioids (43.4% vs 45.9% vs 39.4% p=0.4), steroid injections (85.0% vs 85.0% vs 81.8% p=0.595), HA injections (56.4% vs 53.1% vs 53.3% p=0.618), and TJA (33.5% vs 34.0% vs 27.9% p=0.349) use. When controlling for sex, race, smoking, diabetes, depression, liver disease, cancer, dementia, kidney disease, CHF, and stroke, opioid use was not statistically significant between age groups (75-79 reference, 80-84 OR 1.18 CI 0.87-1.60 p=0.289, 85+ OR 0.89 CI 0.61-1.31 p=0.569).

CONCLUSION: NSAID use was the only treatment choice that changed with age, being the highest in the older group. There was no difference in opioid use between age groups despite higher rates of dementia and falls in the oldest patients. About 40% of the patients received opioid prescriptions suggesting it is still a widely prescribed treatment in those ≥ 75. Further research is needed to evaluate if safer treatment options are available for this age group.

D126 Resident Presentation

Vitamin D status is significantly associated with COVID-19 hospitalization, ICU transfer, and mortality.

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Background: The COVID-19 pandemic is the largest health crisis of this century despite deployment of vaccines and public health measures. Vitamin D (vitD) is protective against respiratory infections given its modulatory effects on the immune system, including IL-6 and TNF, which have been implemented in COVID-19 cytokine storm. Our aim is to characterize the link between vitD and both COVID-19 infection and outcomes.

Methods: In a retrospective cohort study, using the Veterans Affairs Informatics and Computing Infrastructure database, serum 25OH vitamin D (25OHD) levels were correlated with COVID-19 infection and severity: pneumonia, hospitalization, ICU, and mortality. 25OHD levels were stratified as <20, 20-29, ≥30, ng/ml using ≥30 as the reference category. Logistic regression analysis was performed and data interpreted as odds ratios with 95% confidence intervals.

Results: 56,041 individuals were assessed for COVID-19 and a serum 25OHD level within 90 days of the COVID PCR test. 44% were either vitD deficient or insufficient (17% <20 ng/ml and 27% 20-29 ng/ml). 4,549 patients were COVID-19 positive, and 1,662 were hospitalized. Across the vitD categories there was no significant difference in COVID-19 infection rate. However, vitD supplementation was associated with reduced COVID-19 infection rate for 25OHD <20 (OR 0.76, CI 0.64-0.91) and 20-29 (OR 0.82, CI 0.70-0.96). Greater risk for hospitalization was associated with poorer vitD status (<20: OR 1.67, CI 1.40-2.00; 20-29: OR 1.25, CI 1.06-1.46). Interestingly, while vitD was not associated with pneumonia, 25OHD levels <20 were associated with ICU (OR 1.34, CI 1.03-1.74) and mortality (OR 1.56, CI 1.13-2.14). There was no age interaction with the impacts of vitamin D status on COVID-19 outcomes.

Conclusion: Poor vitD status was significantly associated with COVID-19 hospitalization, ICU transfer, and mortality. Vit D supplementation was associated with less COVID-19 positivity. It is important to test for and treat Vit D deficiency during this pandemic. Supplementation with vitD may significantly reduce the risk of COVID-19 infection, and achieving serum 25OHD levels ≥30 may reduce illness severity.

D127 Resident Presentation, Encore Presentation

Examining the Impact of Fear of Falling on Reported Falls

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Background: Falls are a significant cause of morbidity and mortality in older adults and can result in injuries, loss of independence and function, psychological stress, and immense medical costs. Fear of falling (FOF) may have a serious impact on actual falls and has only previously been studied in small, limited populations. We examined the effects of FOF on reported falls among a large, inclusive sample of older adults.

Methods: We analyzed a nationally representative sample of community dwelling older adults aged 65+ that participated in 2018 and 2019 waves of the National Health & Aging Trends Study (NHATS). We excluded participants in nursing homes and that were missing data for falls. We assessed FOF in 2018 participants and covariates including demographic information (age, gender, race, rural/urban areas) and known risk factors for falls including limited physical strength, self-reported health, dementia, depression, anxiety, presence of pain that limited activity, NHATS short physical performance battery (SPPB), and living alone. SPPB is a validated tool to assess performance activity by summing balance, stand, walking speed, grip strength, and peak flow scores with higher scores indicative of higher physical performance. We assessed reported falls in the last year in the 2019 wave. Multivariable logistic regressions determined the effects of FOF and covariates in 2018 on actual falls in 2019. Covariates with p-values < 0.05 were considered independent risk factors for falls. Results were reported as odds ratios (OR) with 95% confidence intervals.

Results: Of 3,089 participants, 902 (29.3%) reported FOF in 2018 and 783 (25.4%) reported falls in the last year when surveyed in 2019. The presence of pain that limited activity and low SPPB scores were shown to be independent risk factors for falls. Our final model, adjusted for demographic factors and independent variables, showed participants with FOF were 1.65 times as likely to have reported an actual fall during the prior year, with significant p-value of <0.001. Those with at least one fall were 2.26 times more likely to have multiple falls if they reported FOF.

Conclusions: FOF increases the risk of future falls in older adults, especially in older adults who already reported falls. Further studying how to reduce FOF may lead to reduced falls and lower morbidity and mortality.

D128 Resident Presentation

Prevalence of frailty and its association with social factors in aging population across India: a secondary analysis from LASI-DAD

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Background: Frailty is a clinical syndrome characterized by an accumulation of deficits with decreased functional capacity and had been previously linked with adverse outcome, hospitalization and mortality. Prevalence of frailty in low- and middle-income countries and its association with socio-economic factors is not well characterized.

Method: Adult participants from The Harmonised Diagnostic Assessment of Dementia for the Longitudinal Aging Study in India (LASI-DAD) were included. Frailty was defined by Frailty index (FI) and calculated using a 32-variables deficit model and value of ≥0.25 were considered as frail. Composite health index of various states released by the government is based on various health performance indicators. Social factors included locality, years of education, religion and caste were collected during interview. Top six states were grouped as high-performing states followed by next six states as intermediate performing states and last six states as low-performing states on the basis of composite health index.

Results: In 3,953 participants, mean age was 69.9 ± 7.5 years and 51.8% were female. Prevalence of frailty was 42.34%. Participants who were frail were older, females, lived in rural area, and have less years of education. In comparison to higher performing states, participants living in lower performing states had higher proportion of frail individuals (49.71% vs 34.49%, P-value <0.001). In adjusted analysis, FI was positively associated with age, female gender, rural locality, and lower years of education. After adjusting for demographic profile, education status and locality, FI was inversely associated with composite health index of a state (-0.0010, P-value <0.001).

Conclusion: In older adults living in India, prevalence of frailty was 42.34%. Lower health composite score, higher age, female gender and rural locality were independent risk factors for frailty.

D129 Resident Presentation

Association of Literacy and Purpose in Life in Older Community-Dwelling African Americans

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Introduction: Purpose in life and literacy have been individually shown to promote successful aging. Studies have shown that higher purpose in life is associated with reduced risk of incident disability, and health and financial literacy have been known to have an impact on well-being. However, the association of literacy with purpose in life has not been explored, especially in the older African American population.

Methods: Data for these cross-sectional secondary analyses come from the Minority Aging Research Study (MARS), a longitudinal, volunteer cohort study of aging in older, community-dwelling African Americans without known clinical dementia at baseline. Literacy measures were added as an ancillary study in 2018. A linear regression model with terms for age, gender, and education was constructed to examine the association of health and financial literacy with a global measure of purpose in life as the outcome, derived from Ryff's scales of psychological well-being.

Results: Of the 275 participants without clinical dementia and with a valid purpose in life score and literacy scores (35% of the overall MARS participants), the mean age was 78.6 years (SD= 6.6), education was 15.5 years (SD= 3.2), and 82% were women. The mean total health literacy score was 58.2% (SD=17.7%, range = 0 to 100), the mean total financial literacy score was 63.7% (SD=14.8%, range = 0 to 100), and the mean purpose in life score was 3.9 (SD=0.43 range = 1 to 5). There was no association between health literacy and purpose in life (estimate= 0.042, SE= 0.027, p-value= 0.100). However, each SD increase in financial literacy was associated with higher purpose in life, estimate= 0.086 (SE= 0.028, p-value= 0.002). Further, the association was independent of income, global motor function, global cognitive function, depressive symptoms, and chronic medical conditions when added as individual covariates in the model.

Conclusions: In older community-dwelling African Americans, higher financial literacy scores, but not health literacy scores, were associated with a higher purpose in life. Further research is needed to understand the temporal relationship between financial literacy and purpose in life scores.

D130 Resident Presentation

Changes in the Prevalence and the Associated Hospital Burden in the Geriatric Population Diagnosed With Dysphagia: A National Inpatient Sample Study

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Background:

Dysphagia is an emerging geriatric syndrome that has had a significant impact on the health and quality of life in the geriatric population. Associated with many diseases such as strokes and Parkinson's disease, dysphagia typically indicates a poor prognosis. We hypothesize that as the United States population shifts to a predominately older generation, the occurrence of a primary diagnosis of dysphagia will increase, leading to higher hospital costs, length of stay, and mortality rate.

Methods:

The Nationwide Inpatient Sample (NIS) 2003-2013 database was queried for patients with a primary diagnosis of dysphagia using International Classification of Diseases, Ninth Revision (ICD-9) codes. Age was stratified using 65 years of age as the minimum cut off for the geriatric population. A one-way analysis of variance (ANOVA) test with linear trend analysis was used to compare the mean length of stay (LOS), mean hospitalization cost, and mortality. Patient data was graphed by occurrences per year to identify prevalence.

Results:

A one-way analysis of variance with linear trend was used to determine significance for the trends. The mean (M) mortality rate was 2.6%, the standard deviation (SD) was 15.7%, and the sample size (n) was 38,444. Mortality for these patients fluctuated from 2.0% to about 4.0% (p=0.810). For hospital charges M=$25,085, SD =$29,601. The average total charges of hospitalizations went up from $14,160 to $39,701 (p<0.001) from 2003 to 2013. Finally, the length of stay was found to have a M=5.3, SD = 5.3. The average length of stay for this patient population went up from 4.6 days to 5.8 days (p<0.001) from 2003 to 2013. The number of cases of dysphagia decreased from 4,947 to 1,860.

Conclusion:

Although the overall prevalence of a primary diagnosis of dysphagia has decreased over the past decade, it has been observed that the length of stay and hospital costs associated with dysphagia have been increasing significantly. As dysphagia is commonly identified and worked up outpatient, more attention to screening and management of dysphagia outpatient is needed to identify and medically optimize high risk patients. Given its high cost burden, prompt recognition of dysphagia and its implications is needed to allow for earlier goals of care conversations and to decrease inpatient complications of dysphagia.

D131 Student Presentation

"We're Walking Around Blindfolded": Diverse Caregiver Reflections on Dementia Diagnosis and Care

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Background/Objective

Prevalence of dementia is highest in African Americans and Hispanics. Yet, many minorities experience missed or delayed dementia diagnosis. The objective of this study was to understand racial and ethnic minority experiences of dementia diagnosis and how to improve these processes from their perspective.

Methods

Minority dementia caregivers in the Baltimore, Maryland region were recruited from specialty clinics, prior studies, and the Alzheimer's Association to participate in semi-structured, in-depth,

in person interviews. Interview topics included early dementia symptoms, diagnosis experiences, healthcare system interactions, and recommendations for clinicians. Interviews were coded and analyzed by three investigators using qualitative content analysis methods.

Results

Eighteen minority family caregivers (11 African American, 4 Asian and 3 Hispanic), largely adult children (n=15) of the person with dementia, participated. While caregivers generally appreciated the clinicians they encountered, several themes emerged around recommendations for clinicians and health systems throughout the diagnosis process. 1) *Involve family*: Issues surrounding family involvement included listening to family concerns, sharing patient information including diagnosis, recommending family counseling or meetings, and understanding family and culture specific care plans. 2) *Knowledge is power:* Information was felt to be essential. Caregivers desired clear or written diagnosis, guidance on what to expect (roadmap), and concrete resources. 3) *Proactive care*: Caregivers likened the need for cognitive screening to cancer screening. They also felt clinicians should vigilantly detect early signs, educate caregivers on potential challenges (safety, finances), and support both patients and caregivers.

Conclusion

Minority dementia caregivers shared recommendations for clinicians related to three themes, which included involving family, offering knowledge and information, and providing proactive care in the dementia detection, diagnosis, and early care processes. Caregiver perspectives should be considered in dementia care interventions and clinical practice improvement for diverse aging populations.

D132 Student Presentation

The Impact of Paid Caregivers in the Home on Individuals with Advanced Dementia and Their Families

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Background: Because of both individual preference and shifting long-term care policy, a growing number of individuals with dementia are being cared for at home. While family caregivers like spouses and children provide the bulk of needed care, paid caregivers (e.g., home health aides, personal care attendants) play an increasingly important yet understudied role in home-based dementia care. This study aims to explore family caregiver perspectives on how paid caregivers impact individuals with advanced dementia and their families.

Methods: We conducted one-on-one, semi-structured interviews (n = 15) lasting 45-60 min with family caregivers of older adults with advanced dementia receiving care at a large, academic home-based primary care program in New York City. Interviews were conducted by telephone or Zoom and were audio-recorded and transcribed. Using both inductive and deductive techniques, a codebook was iteratively developed and applied to all transcribed interviews. Coded data was analyzed by the full research team.

Results: Paid caregivers impacted patients and families in many ways, both positive and negative (e.g., patients eat better when fed by a familiar attentive aide, adult children are able to work and travel when they trust their family member's paid caregiver). Families described how individuals with dementia were particularly vulnerable to inadequate care from paid caregivers. Home care agencies provided little support. Family caregivers discussed the importance of stable, loving paid caregivers; the process of finding a good paid caregiver was often lengthy, yet once in place positive family/paid caregiver relationships improved everyone's experiences.

Conclusions: Paid caregivers impact the health and quality of life of both individuals with advanced dementia and their family caregivers. Home care agencies and providers should work to support collaboration between family and paid caregivers. In addition, those who work to improve the well-being of both individuals with dementia and their family caregivers should advocate more vocally around issues important ot the strength of the paid caregiver workforce (e.g., competency-based paid caregiver training, living wages). This is the first step towards maximizing the potentially positive impact of paid caregivers on the health of those with dementia and their families.

D133 Student Presentation

Technology-enabled home visits to understand the context of health for older adults with multiple chronic conditions

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Background: Understanding the context of patients' lives is vital to delivering person-centered care for older adults with multiple chronic conditions (MCC). Home visits can be an effective tool to provide personalized care accounting for the medical and social complexities of patients. As part of a broader study on the contextual factors (e.g., fall risk, medication use) of older adults with MCC, we report on the feasibility of technology-enabled home visits to explore the contextual factors relevant to self-management of MCC among diverse older adults.

Methods: From an urban academic general medicine practice during the COVID-19 pandemic, we recruited patients age 65+ with uncontrolled diabetes and at least one coexisting chronic condition who spoke English, Spanish, or Chinese to participate in a video conference or phone interview. We provided training to use video conferencing as requested. We conducted audio-recorded semi-structured interviews exploring patient self-management practices of MCC. After the interview, patients were provided a checklist to take photos in 5 domains: home environment and neighborhood, prior fall locations, medication use areas, diet/food experience, and sources of social support. Patients sent photos to the study team by email.

Results: Over a 6 month period, six older adults have been recruited with 83% male with a mean age 75+/-8 years. 83% identified as Asian or Latinx. Five video conferences and one phone interview have been completed. One participant requested video conferencing training. All except one interview was completed without caregiver assistance. Participants took on average 8+/-3 photos. Most participants shared photos from 3 out of 5 domains with few photos illustrating fall location and social support.

Conclusions: Technology-enabled home visits including photo-taking by patients were feasible among diverse older adults with MCC. Telehealth approaches with focused photo-taking by patients could support efforts for comprehensive geriatric assessment of vulnerable older adults.

D134 Student Presentation

Nursing Homes' Interprofessional Relationships in Hospitalizations

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Background: Interprofessional relationships in nursing homes (NH) have not been studied in depth, and could impact how decisions about hospitalizations are made. Our objective was to investigate specific features of these relationships and study their role in NH preventable hospitalizations.

Methods: 14 nurses and 13 providers were recruited from 2 UIC-affiliated NHs in the Chicagoland area. 2 nurse focus group sessions and 13 provider interviews were consolidated into a codebook using Grounded Theory.

Results: See table.

Conclusion: In these NHs, nurses seemed more emotionally-driven during hospitalization shared-decision making, while providers seemed more fact-driven by elements such as trustworthy nurses, facility's capacity to manage acute conditions, and history of previous liabilities. The NH's culture variability and structure challenges seemed to affect both groups the same. An analysis of our results yielded several ways to reduce preventable hospitalizations, expressed in the table, and indicated that additional research on interprofessional interactions could lead to improved patients' outcomes.

Comparison of Participant Responses Across Themes

Theme	Nurse Response	Provider Response	Identified Ways to Decrease Preventable Hospitalizations
Relationships	Saw their role as patient advocates and as providers' primary source of patient information, "eyes and ears." The support they received varied from different providers and in different patient contexts.	Saw their role as key decision makers. They relied on their previously built trust from the presenting nurse when evaluating evidence to make decisions.	Initiatives fostering/building trust between nurses'/providers' interprofessional relationships could support nurses in their role as the "eyes and ears" of providers and potentially decrease preventable hospitalizations.
Emotions	More emotional about their relationships with providers and about difficult hospitalizations.	Avoided talking about emotions and instead focused on how facts lead them to hospitalizations decisions.	Expressing emotions differently may cause communication conflicts. Addressing this may help improve interprofessional conversations about resident conditions preventing unnecessary hospitalizations.
Structural	Facility structural challenges (e.g. lack of staff, lack of equipment, delayed medical exams/lab results) served as barriers to efficiently treating patients at the facility leading to hospitalization decisions that then posed more work to nurses.	Reported how the shortage in staff, lack of equipment, lack of nurse familiarity with identification and treatment of common emergencies, and need for closer monitoring of patients, and delayed labs/images generated liability concerns for treating patients at the facility leading to hospitalization decisions. They also reported weak continuity of care between NHs and hospitals.	Standard protocol for hospital admission as well as hospital-to-NH readmission is needed. NHs also need to address lack of equipment, inefficient medical exams/labs, and inadequate staffing/training to use equipment and administer tests to improve preventable hospitalizations.
Cultural	Variability between nursing NHs administrations and "traditional ways, " the way things are done here," were different among participants of NHs.	Providers also reported variabilities among one NH to the other regarding lack of standardization in level of acuteness to be managed, skilled/trained personnel and the "ways things are managed" administratively.	NHs needs to have a uniform and standardized trained staff to manage certain acuteness at the facilities to avoid preventable hospitalization. Additionally, there is a need for improved continuity of care and dependable transfer of information between hospitals and NHs that doesn't vary with NH's culture.
Communication	Mentioned SBAR ("Situation, Background, Assessment, Recommendation") as a routine tool for assessing residents and communicating with providers, but did not always reference it explicitly, depending on whether they expected to be listened to or not.	Reported being dependent on nurses' assessments of residents. Although less familiar with SBAR, providers unknowingly listened for SBAR components and were explicit in their expectations of nurses: recognize acute symptoms, identify status changes, and communicate briefly and effectively. These expectations shaped their perceptions of nurses' competence.	NHs need a standard interprofessional communication protocol. Nurses should be trained to be prepared and brief with clinical information communication, and providers should be trained to be better listeners.

D135 Student Presentation
Diverse English and Spanish-speaking Surrogate Decision Makers Report Needing Better Preparation

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Background: Surrogate decision-makers are often required to make difficult end-of-life decisions for others with little preparation. Few advanced care planning (ACP) resources exist to prepare surrogates, and little is known about surrogates' needs, particularly among Spanish-speaking populations. Therefore, we explored surrogates' experiences and unmet needs to better understand how to prepare them for their role.

Methods: Sixty-nine English- and Spanish-speaking participants took part in 13 focus groups in San Francisco and were asked about their surrogate decision-making experiences for end-of-life care. Discussions were audio-recorded, transcribed, and, for Spanish, translated. Qualitative thematic content analysis was conducted by two coders independently.

Results: The majority of surrogates (69%) expressed the importance of ACP and the desire for guidance and resources. We identified five themes: 1) Lack of preparation ("*I didn't know I was going to be put in [the surrogate] position until the hospital called me*") and the importance of ACP ("*We had it all spelled out. It made it a lot easier*"); 2) Needing guidance to initiate ACP conversations ("*[my mother] didn't want to talk about it. It's hard when…they don't want to open up.*"); 3) Needing guidance to discuss patient's values and preferences ("*I, as a child, would feel better knowing…that I did the best I can with all the knowledge I could gather.*"); 4) Needing guidance to communicate with clinicians and advocate ("*Somebody needs to know…to say, "No, I don't think that's what she wants*"; and 5) Needing guidance about how to make surrogate decisions ("*I had to make medical decisions for my husband…I didn't know what to do.*").

Conclusion: Diverse English and Spanish-speaking individuals with surrogate decision-making experience reported the importance of ACP and needing guidance for how to initiate ACP conversations, advocate for patients, and make surrogate decisions. Future tools designed to prepare surrogate decision makers should include these topics to help ease surrogate burden and decrease disparities in surrogate decision making.

D136 Student Presentation
Connecting Older Adults and Medical Students During the COVID-19 Pandemic: What Motivates Students to Volunteer?

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Background: Increased isolation, due to the COVID-19 pandemic, serves as a risk factor for poor health outcomes amongst older adults (1). Simultaneously, medical students' clinical opportunities have been limited (2). The Caring Companions (CC) telephone initiative matched volunteer medical students with older adults to help both patients and students. Students' desires to volunteer may reflect a variety of motivations seen in past research (3). This IRB-approved study investigated medical students' motivations to engage with the elderly population through CC during the pandemic.

Methods: 72 medical students indicated their year in school and motivation to participate in CC using an open-ended questionnaire. Responses were deidentified and classified into 6 categories of volunteer motives. Further stratification of motivation was done for the "Values" category.

Results: 100 statements (39% of students gave multiple reasons) were coded and reported in Table 1. Further examination of the "Values" category revealed sub-themes of meeting the mental health needs of older adults or familial experience (e.g. losing a family member).

Conclusion: Medical students with a variety of professional interests volunteered to connect with older adults during the pandemic and were mostly motivated by personal values. This program can serve as a model for other institutions to create impactful geriatrics experiences using minimal resources and a values-based approach.

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2. Miller, David Gibbes, Leah Pierson, and Samuel Doernberg. "The role of medical students during the COVID-19 pandemic." (2020).

3. Clary, E. Gil, et al. "Understanding and assessing the motivations of volunteers: A functional approach." Journal of personality and social psychology 74.6 (1998): 1516.

Table 1

Volunteer Functions Inventory (3) and Examples	Percent of Responses
Values: Concern and compassion for older adults facing isolation during COVID-19.	62
Understanding: Desire to practice communication with older adults.	17
Enhancement: To feel needed.	17
Protective: Alleviate guilt about not participating in direct patient care.	17
Career: Gain experience to help as a future physician.	4
Social: Volunteering because others think it is important.	0

D137 Resident Presentation

Rapport or Re-try: Determining the Average Number of Goals of Care Discussions Needed to Influence Care Decisions in Terminally Ill Intubated Patients

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Early and frequent goals of Care (GOC) discussions have been shown to associated with increased quality of life, increased quality of dying, and reduced intensity of care at the end of life (Wright et. al). However, these conversations are often delayed until an acute hospitalization, which is associated with worse outcomes and often leads to plans of care that were inconsistent with the patient's previous wishes (Khandelwal et. al.). This study hopes to examine if having previous GOC discussions in the outpatient setting affects the course of ICU patients. Specifically, we examine whether prior formal documentation indicating end-of-life wishes leads to a decreased amount of GOC conversations while hospitalized. We also examine the average number of providers involved in these cases to examine whether more provider involvement led to an average increase in conversations. We performed a retrospective chart review using convenience sampling of all cases of palliative extubation performed in the ICU at Delaware hospitals. Our research showed that families of patients with a GOC document had statistically significant fewer conversations prior to palliative extubation. There was a significant positive association between the number of goals of care conversations and the number of providers recording the conversations. Multivariable regression looked at the 3 factors together. Having GOC documentation and the number of providers remain significantly associated with the number of GOC conversations ($p < 0.001$). This review demonstrates that having these GOC discussions earlier can lead to a positive impact on patients and families who are facing difficult decisions. By promoting these conversations in the optimized setting, we can work to reduce the confusion and burden placed on families at their loved one's final moments.

Wright AA, Zhang B, Ray A, et al. Associations Between End-of-Life Discussions, Patient Mental Health, Medical Care Near Death, and Caregiver Bereavement Adjustment. *JAMA*. 2008;300(14):1665–1673. doi:10.1001/jama.300.14.1665

Khandelwal N1, Curtis JR2,3, Freedman VA4, Kasper JD5, Gozalo P6, Engelberg RA2,3, Teno JM. How Often Is End-of-Life Care in the United States Inconsistent with Patients' Goals of Care? J Palliat Med. 2017 Dec;20(12):1400-1404. doi: 10.1089/jpm.2017.0065. Epub 2017 Jun 30.

D138 Resident Presentation

Use of the Patient Dignity Question in a Geriatric Outpatient Setting to Elicit What Matters Most to Older Adults

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Background: Older adults experience frequent life-changing events, which can threaten patient dignity. These experiences often coincide with multimorbidity and high medical complexity. The assessment of a patient's sense of dignity throughout aging is not often done. The Age Friendly Health System Initiative has introduced an effective approach to begin to address this problem, specifically with one of the 4M's included in their methodology: What Matters. 1 The Patient Dignity Question (PDQ) has been used in a variety of palliative care and end of life settings, however research in the use of this question in the primary care setting is limited. 2 The PDQ may help to elicit what matters to older adults as they and their caregivers navigate the health care system. The act of asking the PDQ has also been shown to improve health care worker empathy and job satisfaction. 3 Our project aims to study the response when asking patients, or their caregivers, the PDQ and to assess the impact on health care workers as older adults present for routine care in the Geriatric outpatient setting.

Methods: Patients at the Geriatric Care Centers (GCC) were asked the PDQ at the start of a patient encounter as part of the implementation of the Age Friendly Health System certification process. Responses were documented in the electronic health records by staff and providers. These were collected from July 1, 2020 to Sept 30, 2020. We will conduct a qualitative thematic analysis to describe the results. A survey on health care workers' job satisfaction was also distributed to all staff in the GCC who asked for and documented the PDQ.

Results: We anticipate multiple themes to emerge based on the PDQ implementation in the outpatient office based on the patient's interpretation of the question. We expect the health care workers' survey responses will reveal increased empathy and job satisfaction as the PDQ gives an avenue of increased knowledge of our patients' values and awareness of personhood.

Conclusions: We expect to find varied themes from our study of older adult patient responses to the Patient Dignity Question in the outpatient primary care setting which relay patient values and personhood and improve a sense of dignity in care. Asking the question will also improve health care workers' empathy and job satisfaction.

D139 Student Presentation

Frailty, Skilled Nursing Facility Residence, and the Microbiota of Older Adults

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Background: The microbiota - communities of bacteria, viruses, fungi, archaea, and protozoa that inhabit nearly every surface of the human body - are an emerging risk factor for aging-related diseases. Microbiota influence local and systemic health through metabolic and immunomodulatory processes, and can harbor, or protect against, pathogens. Despite this, older adults have often been excluded from systematic metagenome studies. We investigated the skin, oral, and gut microbiota of older adults living in both community and skilled nursing facility (SNF) settings, focusing on potential relationships with frailty and place of residence.

Methods: We conducted a longitudinal microbiome survey of 47 subjects age 65+ years of age; 22 SNF dwelling (SNFD) and 25 community dwelling (CD). We performed metagenomic whole genome shotgun sequencing on stool, oral, and skin samples from 8 sites, 1360 total. To correlate clinical and behavioral variables, we measured frailty, collected medical records, and interviewed subjects on diet and lifestyle. We also drew comparisons with our and others' previous younger cohorts.

Results: We observed prominent differences between the microbiomes of younger and older adults, particularly for SNFDs, at all body sites. Subject frailty was negatively correlated with the relative abundance of *Cutibacterium acnes* in skin communities, which itself was highly correlated with microbial community stability, diversity, heterogeneity, and biogeography, factors that may modulate pathogen colonization and disease risk. The skin was the primary reservoir for plasmid-borne antimicrobial resistance and clinically important pathobionts. Strain composition of important commensals such as *C. acnes* and *Staphylococcus epidermidis* in SNFDs further indicated a shift from healthy to pro-inflammatory or nosocomial pathogen strains.

Conclusions: Our results constitute the first holistic assessment of the older adult microbiome, raising new hypotheses about the relationship between the microbiota and aging, as well as how they could be leveraged to improve the health of older adults. These findings suggest skin aging may predispose resident microflora to perturbation and highlight the skin as a perhaps the major reservoir for pathogens and antibiotic resistance in older adults.

D140 Student Presentation

White Matter Structural Disturbances within Brains of Veterans with Blast-Related Repetitive Mild Traumatic Brain Injury

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Background: The long-term consequences of blast-related repetitive mild traumatic brain injury (mTBI) is a significant and growing health concern among military Veterans and Service members, particularly those deployed in Operations Enduring Freedom, Iraqi Freedom, and New Dawn (OEF/OIF/OND). Accumulating evidence suggests repetitive mTBIs increase the risk for degenerative white matter disruption, a topic that warrants further investigations.

Methods: Diffusion imaging data was collected from the brains of 66 deployed blast-related repetitive mTBI veterans (blast exposure capped range from 1-107 blasts) and 25 deployed controls using a 3.0T Philips Acheiva version 5.17 whole body scanner with a 32 channel headcoil. Male control and mTBI groups were matched for age and the deployed control group had no lifetime history of TBI. Diffusion tensor imaging (DTI) using a state-of-the-art Unscented Kalman Filter two-tensor Tractography model and a Neurite Orientation Dispersion and Density Imaging model (NODDI) was employed to identify areas of disrupted diffusion within axonal bundles. Effects of repetitive blast mTBI on two-tensor based measures of white matter integrity were compared to anatomical regions of interest within the brain.

Results: We found significantly reduced neurite fiber length within the occipital thalamus connection (mean (SD) = 102.52 mm (31.26) and 94.40 mm (33.47), control and mTBI groups, respectively; $p \leq 0.029$), and reduced mean diffusivity in the right periaqueductal gray (mean (SD)= 4.09×10^{-4} VOI (2.09×10^{-5}) and 3.96×10^{-4} VOI (2.42×10^{-5}) VOI average eigenvalue, control and mTBI groups, respectively; $p \leq 0.023$) within mTBI brains compared to that of deployed controls. NODDI analyses showed significantly increased mean neurite orientation dispersion within the occipital thalamus connection ($p \leq 0.012$) and posterior cerebellum ($p \leq 0.001$) within brains of blast-exposed mTBI veterans compared to controls, indicating increased white matter disruption.

Conclusions: Repetitive blast-related mTBI among veterans is associated with a constellation of chronic structural white matter disturbances in brain regions known to subserve sensorimotor function, pain, and the processing of sensory information.

D141 Student Presentation, Encore Presentation

Comprehensive bioinformatic analysis of genes associated with sarcopenia

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Background The pathogenesis of sarcopenia is still unclear. It is of central importance to investigate relevant genes associated with sarcopenia using various bioinformatic analysis tools. The aim of this study was to explore the relevant genes and signaling pathways of sarcopenia using bioinformatics method.

Methods The datasets GSE1428 and GSE1479 were downloaded from the Gene Expression Omnibus database. The identifications corresponding to probe names were converted into gene symbols and the datasets were merged using Perl software. The R software was used to screen for genes differentially expressed in skeletal muscle between young subjects and elderly patients with sarcopenia. Gene ontology and KEGG pathway enrichment was performed using the DAVID bioinformatics resources. The STRING database was used to construct the protein-protein interaction network.

Results Gene expression was based on log2 fold change ($\log2|FC| > 0.5$, with an adjusted P value < 0.05. A total of 121 differentially expressed genes (DEGs) were screened out, including 69 up-regulated genes and 52 down-regulated genes. The top six DEGs with the highest log |FC| value were SLPI (log FC=1.233), MYH8 (log FC=1.079), CDKN1A (log FC=1.075), GADD45G (log FC=-1.190), SLC38A1 (log FC=-1.168), and HOXB2 (log FC=-1.079, all $P<0.001$). DEGs were mainly enriched in glycolysis/glycogen metabolism and p53 signaling pathway. Four hub genes that contributed to these pathways included CYCS, CDKN1A, TPI1, and LDHA.

Conclusions The screened hub genes, CYCS, CDKN1A, TPI1 and LDHA, are likely to be critical for sarcopenia, and are enriched with two pathways, including the glycolysis / gluconeogenesis metabolism and p53 signaling pathways. Subsequent experimental studies are needed to validate their roles in sarcopenia.

D142 Resident Presentation

Lower Levels of Butyrate Producing Bacteria (*Lachnospiracae)* and Older Age Are Interactively Associated With Poorer Fluid Cognition Performance in People Living With HIV

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Background: The advent of combination antiretroviral therapy (cART), has led to an increased life expectancy for people living with HIV (PLWH). However, HIV associated gut dysbiosis and neurocognitive impairment are persistent. Gut microbiota produce key metabolites and are critical to the production of neurotransmitters, and play a key role in regulating inflammation and cognitive function. In particular, butyrate and other short chain fatty acids are key microbial metabolites, which have previously been associated with cognition and brain function, as well as neuroinflammation and neurodegenerative disorders. Our goal was to examine whether butyrate producing families are associated with cognitive function in PLWH and whether any of these significant families interact with age in their association with cognition. **Methods:** Twenty PLWH were enrolled from two clinical research studies supported by the Southern HIV Alcohol Research Consortium (SHARC), Florida. Cognition was measured using the NIH Toolbox. Stepwise regression analyses were conducted to examine the association of specific butyrate producing families with cognition. **Results:** Findings suggest that higher levels of *Lachnospiracae* were associated with 1) fluid cognition [Beta = .619, SE = .273, $p < .05$], 2) working memory [Beta = .768, SE = .289, $p < .001$], and 3) a trending association with processing speed [Beta = .402, SE = .477, $p = .08$]. Furthermore, post-hoc analyses suggest that older age (>55) and lower *Lachnospiracae* levels were associated with reduced fluid cognition compared to younger age and higher *Lachnospiracae* levels [$F(3,15) = 3.625$, Beta = -.677, $p < .05$]. **Conclusions**: Gut dysbiosis marked by loss of butyrate producing bacteria (*Lachnospiraceae*) is associated with poorer cognition in older adults living with HIV. Future research will examine longitudinal changes in *Lachnospiracae* and whether probiotic interventions may improve *Lachnospiracae* levels and enhance cognition.

D143 Resident Presentation

Association of preoperative levels of TNFR1 with postoperative delirium in older hip fracture repair patients

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Background: Delirium is an acute change in mental status that leads to disturbance in attention and cognition. This condition commonly occurs in older adults following acute illness, surgery, or hospitalization. It is associated with increased mortality, longer hospital stays, and worse cognitive and physical outcomes. Postoperative delirium after hip fracture repair is multifactorial in etiology; one of the more important risk factors is underlying neurodegenerative disease, including Alzheimer's disease (AD). A key pathophysiological link between delirium and AD is inflammation, and nuclear factor kappa B mediated pathway marker soluble tumor necrosis factor-α receptor-1 (TNFR1) has emerged as a promising biomarker. In this study we examine the association between preoperative levels of inflammatory marker TNFR1 with delirium incidence and severity. We also examine the association between TNFR1 and cognitive outcomes at 12 months.

Methods: Data were obtained by measuring CSF and plasma levels of TNFR1, previously obtained from patients enrolled in the randomized, two-group, parallel, superiority clinical trial "A Strategy to Reduce the Incidence of Postoperative Delirium in Elderly Patients". Patients with traumatic hip fractures undergoing repair surgery at Johns Hopkins Bayview Medical Center included in the study were ≥ 65 years old with preoperative MMSE ≥15. Participants underwent cognitive assessments prior to surgery, including MMSE and a modified clinical dementia rating (CDR). Blood and CSF were obtained prior to surgery. Patients were assessed for delirium, delirium severity, and cognition preoperatively and on postoperative days 1 to 5. The diagnosis of delirium was made by a multidisciplinary consensus panel based on Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition) criteria using a review of medical records, and family/nursing staff interviews. TNFR1 was assayed using Human TNFR1 Quantikine ELISA kit from R&D Systems.

Results: Data will be presented. Results of this study are pending but will increase our understanding of the association between inflammation and delirium risk.

Conclusions: In this study we assess the relationship between preoperative TNFR1 levels with in-hospital delirium incidence and severity in a well characterized hip fracture cohort.

D144 Student Presentation

The Creation of an Intergenerational Legacy Project through a Virtual Platform as a Tool to Deconstruct Ageist Attitudes among Pre-Clinical Medical Students

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Background: Medical students and their future patients will benefit from positive attitudes towards older adults. The study fosters the development of intergenerational relationships –which have been shown to challenge ageist stereotypes –between pre-clinical medical students and older adults through the co-creation of legacy projects. Legacy projects materialize poignant moments in a person's life. Co-creating a legacy project requires active listening and collaboration, and serves as an ideal setting for the development of a meaningful relationship. Furthermore, understanding the effect of virtual settings on intergenerational relationship-building is paramount during the COVID-19 era. We investigate the feasibility of a structured, online intervention to deconstruct ageist attitudes among pre-clinical medical students.

Methods: This study uses an interventional pre-post design questionnaire. Six pre-clinical medical students were randomly paired with six older adults (recruited from the Mount Sinai Department of Geriatrics and Palliative Medicine). Prior to meeting the older adults, the medical students attended three expert-led didactic sessions about ageism and intergenerational programs with access to concrete examples of legacy projects. The intergenerational dyads met six times with available guidance to create a legacy project together over the course of the meetings. Due to the COVID-19 pandemic, the dyads met over Zoom technology. Surveys addressing ageist beliefs were administered to pre-clinical medical students and older adult participants before and after the six sessions. Mid-intervention and post-intervention semi-structured interviews were also administered to participants from both age groups as an opportunity for them to debrief and reflect on their experience.

Results: Results will be available in March pending the completion of the six sessions.

Conclusions: Ageist attitudes represent a significant barrier to the provision of high quality medical care for older adults in the United States. Structured, zoom-based relationship-building through the creation of intergenerational legacy projects may serve as an opportunity to increase positive attitudes towards older adults among pre-clinical medical students.

D145 Student Presentation

Effect of a Dementia Friends Information Session on Health Professional Students' Attitudes and Knowledge Related to Dementia

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Background:

The Dementia Friends (DF) Initiative is part of a global movement that is changing the way people think, act, and talk about dementia.[1] The main objectives of a DF session are to inform participants on the five key messages about dementia, to understand what it is like to live with dementia, and to commit to a dementia-friendly action.[1] Over 90,000 Americans have completed activities to become a Dementia Friend, but only a small number of health trainees have participated. Our objective was to assess the impact of a DF Information Session on health professional students' knowledge and attitudes related to dementia.

Methods:

Health professional graduate students (medicine n=70, physical therapy n=30, pharmacy n=28) at the University of Minnesota participated in one of seven one-hour interactive DF sessions offered in-person or via videoconference. The Dementia Attitudes Scale (DAS),[2] a validated 20 item questionnaire, was administered immediately before and after each session. Pre and post session scores were compared using a paired t-test. Students' post-session dementia-friendly actions were analyzed qualitatively using grounded theory.

Results:

Among the 128 total health professional students, 102 (80%) completed both the pre and post DAS. The mean DAS score increased significantly from 105.56 (±12.41) to 120.25 (±10.63) ($p<0.001$) following the sessions. The students' dementia-friendly actions included plans to improve communication, promote quality of life, and learn more about dementia.

Conclusions:

A modest informational activity such as a DF information session significantly increased the knowledge and positive attitudes of health professional students toward those living with dementia. Each student committed to a dementia-friendly action at the end of the session that may benefit the care of patients living with dementia. Further study of this educational model is appropriate.

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D146 Student Presentation

Design and Implementation of a Church-Based Community Health Initiative for an Older Adult Population in the South Side of Chicago

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Background

Church-based health promotion interventions (CBHPI) can be effective in influencing health behaviors in African-American (AA) populations. United Against Inequities in Disease (UAID), an undergraduate student-run organization, partnered with Parkway Gardens Christian Church (PGCC) to develop and implement a CBHPI specific to the community's needs.

Methods

A two-step community health needs assessment (CHNA) was administered to 34 PGCC congregation members. First, participants were asked for demographic data and to use a checklist to identify components of their general health that they would like to improve. Based upon responses, a second survey assessed knowledge and behavior related to chronic disease self-management using a Likert scale, as well as perceived access to health resources. Results were used to inform the development of the CBHPI. To target the community's health concerns and achieve maximum participant engagement, a series of events was designed that alternated between a panel discussion with a health expert and UAID-hosted activities related to covered topics.

Results

CHNA surveys were completed exclusively by AA, South Side Chicago residents (n=34, 100% response rate). Diabetes, hypertension, and poor nutrition were the most common health concerns. Amongst participants age 66+ (n=14), 57% reported diabetes and hypertension, and 64% cited poor nutrition. Additionally, 29% of senior participants reported inadequate access to treatment. More than half of the seniors reported checking blood sugar and blood pressure yearly or less. Over 6 months, 8 events were held at PGCC with an average of 6 senior participants per session.

Conclusions

Partnerships between faith-based and community health organizations can inform design and implementation of community health interventions serving marginalized groups. Though long-term behavioral changes resulting from this CBHPI are yet to be evaluated, the structure of the UAID program can serve as a model for future health interventions in urban older adult populations with high burdens of chronic disease.

D147 Student Presentation

The Impact of Older Hispanics' Ethnic Identity on COVID-19 Vaccine Beliefs

K. Kricorian. *MiOra, Simi Valley, CA.*

BACKGROUND

COVID-19 has disproportionately impacted Hispanics and older Americans, making vaccine acceptance a key issue. Research shows ethnic identity is related to vaccine reluctance in African Americans, raising the question of how ethnic identity may affect older Hispanics' COVID-19 vaccine attitudes.

METHOD

Data collected by The COVID Collaborative, a non-profit research group, was leveraged. An August 2020 online survey was conducted among Hispanics, including N=54 US Hispanics respondents aged 60+. Comparisons were analyzed with chi-square tests.

RESULTS

Of older (60+) Hispanics surveyed, 61% reported high levels of Ethnic Identity (EI), with the rest reporting lower EI. Birthplace was correlated with EI: 42% of US-born older Hispanics and 70% non-US-born reported high EI ($p<0.05$). Among high-EI older Hispanics, nearly all (97%) worried earlier versions of the vaccine would be less effective vs. 75% of low-EI older Hispanics ($p<0.05$). In addition, 76% of high-EI older Hispanics were concerned their community would receive less safe versions of the vaccine, vs. 45% of low-EI older Hispanics ($p<.05$).

However, despite the correlation of EI and birthplace, birthplace was not significantly associated with vaccine concerns. US- and non-US-born older Hispanics reported similar concerns that early versions of the vaccine would be less effective (92% vs 84%, *ns*) and their communities would receive less effective versions of the vaccine (63% and 68%, *ns*).

CONCLUSIONS

EI appears associated with older Hispanics' COVID-19 vaccine beliefs. Nearly all high-EI older Hispanics felt early versions of the vaccine would be less effective, perhaps discouraging prompt vaccine uptake. Many, although fewer, low-EI older Hispanics shared the same belief. Most high-EI older Hispanics also feared their community would receive vaccines that are less safe. Findings suggest some high-EI older Hispanics may mistrust the COVID-19 vaccine and delay or forgo vaccination as a result. The research has implications for improved COVID-19 vaccine communications towards older Hispanics overall, especially those with high EI.

Gold JA, Rossen LM, Ahmad FB, et al. (2020) *Race, Ethnicity, and Age Trends in Persons Who Died from COVID-19 — United States, May–August 2020.* Morb Mortal Wkly Rep 2020; 69:1517–1521. http://dx.doi.org/10.15585/mmwr.mm6942e1

Sáenz, R, Garcia, MA (2020) *The Disproportionate Impact of COVID-19 on Older Latino Mortality*. Journals of Gerontology: Series B, gbaa158. https://doi.org/10.1093/geronb/gbaa158

D148 Student Presentation

The Evidence Supporting Educational Videos for Patients and Caregivers Receiving Hospice and Palliative Care: A Systematic Review

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Background

Patients receiving palliative care and their caregivers often struggle to understand the patient's disease and prognosis, make well-informed advance decisions and manage the emotional burden. Direct face-to-face time with palliative care providers may support these needs but are limited by the ability of providers. New approaches, such as video interventions, represent an opportunity to optimize care. The purpose of this study is to consider the evidence on the effectiveness of video interventions that are meant to educate and aid palliative care patients and their family caregivers. We began our research with these questions: 1. What is the evidence for video interventions? 2. What is the quality of the evidence behind video interventions? 3. What are the outcomes of video interventions?

Methods:

This study is a systematic review that follows Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) guidelines. Five databases were searched for studies, from peer-reviewed journals, that evaluate the experience and outcomes of hospice and palliative care patients and caregivers receiving educational video interventions. Inclusion criteria limited studies from inception to 2019.

Results:

Two researchers identified 31 relevant articles with moderate-high quality of evidence. Most of the selected studies were experimental (74%) and came from the United States (84%). Preferences of care

and ACP was the most common theme among video interventions. The outcome of most of these studies demonstrated a change in the participant's choice of treatment towards comfort care. Among other results, studies showed that video interventions provide emotional support, and serve as decision and information aids.

Conclusion:

Current data shows that video interventions are used as an educational and decision-making aid for palliative care patients and their caregivers. Most of the available evidence is supportive of these interventions, especially showing an impact on preferences of care. Further assessment of evidence is needed to ensure the effectiveness of these interventions.

D149 Student Presentation

Geriatric pharmacy education for undergraduate students: A scoping review

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Background: Pharmaceutical care for older adults is complex and requires specific knowledge and skill development. Pharmacy curricula should include appropriate strategies to prepare students for care of this diverse and sometimes vulnerable population. In Canada and in the United States, no specific requirements regarding geriatric pharmacy education are included in accreditation standards for PharmD programs. The objective of this scoping review was to identify how geriatric concepts are included in pharmacy curricula, and to map current literature on preferred teaching methods and assessment related to geriatric pharmacy education.

Methods: This scoping review followed standard procedures published by Joanna Briggs Institute for scoping reviews. Only articles published in English or French were included. Various types of articles were considered, such as qualitative and quantitative studies, peer-review articles, position/statement papers. The search strategy included four databases: Medline, Embase, CINAHL and ERIC searched from inception to July 10th 2020. The selection process took place with 2 reviewers, with a third acting on any disputes. Data extraction included details on participants, setting, teaching strategy and outcomes assessment. Analysis results are reported descriptively with identification of current gaps in literature.

Results: Following databases search and duplicates removal, 1407 articles were obtained. From the title/abstract screening of these articles, 206 were assessed for full text eligibility. 134 articles were selected for data extraction. There was diversity in the integration of geriatrics, with methods such as simulation, geriatric pharmacy practice experience, and interprofessional learning with case studies. The remainder of results will be presented.

Conclusion: Results of this scoping review will portray how geriatric concepts are included in pharmacy curricula and how these concepts are taught and assessed. This review may enhance current curricula and highlight areas for further scholarship of teaching and learning.

D150 Student Presentation

Starting Geriatrics Education Young to Better Serve the Old

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Background

America is aging, and more age-friendly healthcare providers are needed to meet the increasing demand. However, medical students' interest in geriatrics careers is low.[1]

One way to increase interest is through early exposure to geriatrics.[1,2] Previous studies on pre-medical and pre-clerkship geriatrics education emphasize non-clinical experiences.[1] We are exploring an alternative: providing clinical exposure to geriatrics during the undergraduate years to increase opportunities for student engagement.

Our educational program focuses on clinical volunteer experiences, augmented with lectures by geriatricians. The goal of this study is to assess the impacts of clinical exposure to geriatric patients before medical school on students' interest and attitudes toward geriatrics.

Methods

From 2019-2020, 23 college students received volunteer training and education about delirium prevention before visiting hospitalized elderly patients. Volunteers provided social companionship and implemented the following delirium interventions: using orienting communication, engaging in cognitively stimulating activities, and encouraging food/drink uptake. Volunteers also attended monthly lectures on aging topics, which were guided by a geriatrician.

Approximately one year after finishing the program, participants will complete a retrospective pre-and-then-post-test follow-up survey asking about their interest in geriatrics careers, attitudes toward the elderly, and knowledge regarding delirium in geriatric patients. A Wilcoxon signed-rank test will be used to analyze differences in the participants' retrospective pre-program and post-program scores.

Results

Results will be discussed.

Conclusions

Our program aims to contribute to greater student interest in geriatrics by providing participants with early clinical exposure to elderly patients. This program could be expanded to other healthcare student groups—such as pre-clerkship medical students, nursing students, and physician assistant students—to foster interest in geriatrics across the healthcare team.

References

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2. Meiboom AA, de Vries H, Hertogh CMPM, Scheele F. Why medical students do not choose a career in geriatrics: a systematic review. BMC Med Educ. 2015;15(1):101.

D151 Student Presentation

Older Adults Population Health Serious Game

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Background: Faced with a nationwide shortage of Geriatricians, health care professionals and health care systems need different ways to provide evidence-based geriatric care, yet many providers do not know the principles of older adult care. This knowledge gap is especially acute in senior population health (85 & over). To address this shortcoming, a serious game is being designed to allow trainees to explore the impact of a set of principles for providing geriatric care (the 4Ms+) on quality of life, health, longevity, and health care costs by applying them to a virtual older adult population.

Methods: A serious game is designed to introduce trainees to principles of population health and systems change that can achieve better health metrics for older adults. Trainees assume the role of a lead geriatrician who is asked by the health system manager to explore ways to optimize health outcomes and lower costs. They develop their population health plan around a framework of Geriatric 4Ms+ and apply it across the health care system in different populations (65-74; 75-84; 85+). As the game progresses, a dashboard helps trainees track the impact of their treatment decisions across the population. Several levels of play allow trainees to explore various issues intersecting

with aging such as gender, diversity, social determinants, and multiple chronic conditions. Gamers have opportunities to "replay" their choices to see the impact of alternative choices. Periodic debriefings and explanatory pop ups during the game allow trainees to further explore evidence–based Geriatrics.

Results: Through this game, players are expected to understand how application of the Geriatric 4Ms+ reduces overall healthcare costs and increases overall health of older adults. Project outcomes include number of trainees engaged in the game, post game knowledge, and accesses of on–line Geriatric resources linked to the game.

Conclusions: A Senior Population Health game engages health care trainees to strengthen their knowledge of Geriatrics through exploration of systems change. The game design replicates performance dashboards experienced in health care with emphasis on functional longevity. Future work examines whether the game transforms clinical practice such that trainees regularly apply the Geriatric 4Ms+ guided by evidence–based medicine.

D152 Student Presentation

Use of Social Media as an Educational Platform

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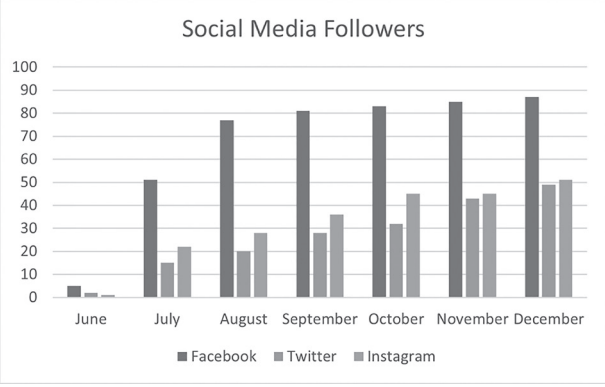
Background: Social media is being utilized as an educational tool for expanding learning in the medical field. The motivation for linking social media and geriatrics education is to potentially combine social networking with clinical pearls from evidence-based journal articles. Social media is a tool that can be utilized for peer-to-peer engagement, active learning, and interprofessional training. Regardless of these opportunities, retention of medical knowledge through social media platforms is unclear.

Methods: A team of medical students and an art history professor was assembled to gather evidence-based best practice journal articles in Geriatrics medicine and pair them with pre-existing artwork to provide visual reinforcement of a clinical pearl related to the article. Art and Aging utilized the social media platforms Facebook, Twitter, and Instagram allowing for a broad audience and posting methods.

Results: Art and Aging followers obtain access to evidence-based journal articles enhanced with pre-existing artwork. Project outcomes did include an increased number of trainees engaged with each social media platform initially. Facebook engagement slowed since launch, and Twitter and Instagram increased but only to 50% of Facebook engagement.

Conclusions: Despite evidence that imagery improves social media engagement, this pilot project did not meet expectations for rapidly increasing users or frequency of users. Unknown is whether the imagery improved Geriatrics knowledge, retention, or clinical application better than simple annotated references from the medical literature.



D153 Student Presentation

Impact of an Interprofessional Health Student Education Program on Older Adult Participants

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Background: The growing older adult population in the US heightens the need for health professionals (HP) trained to care for this demographic. Past studies that describe HP students learning to assist older adults tend to focus on student outcomes rather than those of older adults. This study presents a longitudinal, interprofessional (IP) program to teach and advocate for community-based older adults. We hypothesize that older adult participants will be educated on healthier lifestyle habits, make resulting behavioral changes, and have a sense of purpose from their engagement with HP students.

Methods: The program included students from dentistry, medicine, occupational therapy, pharmacy, physical therapy, physician assistants, psychology, and social work. Teams were created with a faculty mentor and paired with an older adult resident in a low-income housing site. Following the program, the older adults completed a survey asking about their experiences and whether changes were made as a result. Data from 2016 to 2020 were analyzed by using expanded versions of the Fisher's Exact Test and by calculating sums.

Results: 60% or more reported increasing physical activity, receiving information for health needs, making changes in dental care, or making changes to their diet as a result of the program. About 64% of responses indicated a positive attitude toward the program, the HP students, or medical engagement. Furthermore, comparing changes in physical activity and apartment safety among racial or ethnic groups and among speakers of different primary languages yielded significant results.

Conclusion: These data demonstrate the positive impact that HP students in an IP program can have by providing older adult participants appropriate education and encouraging basic lifestyle modifications. The increased health behavior changes made by certain demographic groups may suggest varying baseline health education, access to community services, or cultural approaches to medical services. This study highlights the importance of gathering perspectives from older adults to determine the health habits that are most easily changed, the sort of knowledge that they value, and the experiences that are meaningful in an IP HP student program.

D154 Student Presentation

Professionalism Plus: A novel curriculum on professionalism and related competencies for geriatric residents

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Background: With high rates of burnout, incivility among physicians and increasing evidence of poor quality of care for marginalized populations, there is a dire need to address professionalism in medical education. A needs assessment in our program identified little-to-no formal curricular time on professionalism, nor other CanMEDS roles including Communicator, Advocate, and Collaborator. We introduced a new longitudinal curriculum for Geriatric Medicine University of Toronto residents, "Professionalism Plus", addressing the non-medical expert CanMEDS roles, with a focus on professionalism.

Methods: The curriculum utilized workplace-based learning theory, ensuring that teaching was relevant to the residents' context and provided practical tools to implement immediately. The full curriculum contained ten sessions offered over two years. Experts from the offices of Resident Wellness and Person-Centred Care Education

collaborated with curriculum development and teaching. Thus far, six of ten sessions were implemented, addressing the following topics: resilience, professional identity, communication skills, leadership, and person-centred care.

Results: Immediate learner reactions have been positive, with an average teaching effectiveness score of 4.56/5. Medium-term outcomes were assessed via semi-structured interviews with 7 graduated residents. Interviews revealed three broad themes: 1) Content was relevant to clinical practice and a welcome addition to the formal curriculum, 2) Interactive format offered opportunity to learn from peers and build community, 3) Impact on Professional Development may be limited due to late integration into training.

Conclusions: These preliminary findings will be integrated into future iterations of the curriculum, as well as guide the adaptation of the curriculum to other residency programs.

D155 Student Presentation

Impact of Awareness of Osteoporosis on Receipt of Bone Mineral Density

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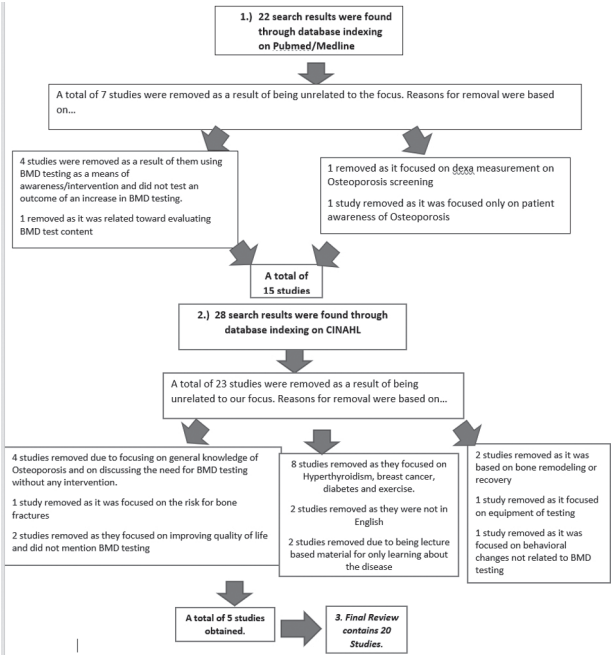
Background: Osteoporosis is a disease attributable to low bone mineral density (BMD). Creating awareness for the disease can increase the need for BMD testing among those who are vulnerable. The purpose of this study is to establish whether patient awareness of osteoporosis affect their BMD testing will.

Methods: Patients of predominantly older age of both genders were the focus of this study. A literature review involving a total of 50 studies that were found through database indexing via PubMed/Medline as well as CINAHL. After further review of these studies several were removed based on exclusion criteria; a total of 20 studies were used in this literature review.

Results: 20 studies, which satisfied the eligibility criteria, demonstrated that there is a positive relationship between patient awareness and BMD testing. The reviews confirmed that patient awareness of osteoporosis largely affects their receipt of BMD testing.

Conclusion: Awareness of Osteoporosis is essential for elderly patients. There is a need for further sensitization and education of the public about the vulnerability of osteoporosis among the elderly. The more knowledgeable patients are about this disease, the higher the chance they will receive a BMD test. Possible change in US Preventive Services Task Force recommendations and clinical guidelines that require elderly patients to get BMD tested should be altered in order to prevent increased risks of fractures that are associated with lack of diagnosis.



Study Selection

D156 Student Presentation

Measuring How an Arts-Based Educational Program Impacts Medical Students' Perceptions of People with Dementia

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Background: Humanities curricula in medical school are increasingly being offered to improve patient-physician experiences, attitudes, and relationships, and could have a role in impacting medical students' viewpoints of people with dementia (PWD).

Methods: Participants included preclinical medical students at an urban medical school in New York enrolled in an elective humanities course titled "Arts & Minds: Community-Based Dementia Care Through the Arts." The course consisted of three lectures and a museum-based art session with PWD and their caregivers curated by the non-profit Arts & Minds. The primary outcome was students' attitudinal shifts using the Dementia Attitudes Scale (DAS). The DAS was given prior to the first course lecture, after the museum experience, and on the last day of the course. Interpretative Phenomenological Analysis (IPA) was used to explore primary themes in pre-course and post-course focus groups.

Results: Nineteen students attended the course's introductory lecture and received the baseline DAS survey. Of these, 11 only attended the baseline session, 8 attended a museum session, and 5 completed the course. There was no significant difference between the initial DAS score of those who did v. did not attend a museum program. Of those who completed the museum session, DAS significantly increased (baseline mean= 109.4 vs post-museum session mean=125.2, p=0.001). Subsequent completion of the entire course led to a similar increase in DAS score (post-course DAS mean=127.4). Focus group IPA revealed five primary themes, including the role of such programs in humanizing dementia and undoing biases, and supported the measured statistical outcomes.

Conclusions: Museum-based art experiences are associated with a positive impact on students' dementia attitudes in this and other pilot studies. Incorporating a 90-minute museum-based program into medical curricula holds promise to translate into students' confidence and positive attitudes for interacting with PWD, and may have implications for clinical care and career choice if delivered early in a career.

D157 Student Presentation
Inclusion of Geriatric Learning Activities in Canadian Pharmacy Residency Programs
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Background: Pharmacy residencies are elective programs structured with a general year (PGY1), and a specialty year (PGY2). Despite the complexity and challenges of care in geriatrics, previous research has shown that a minority of US residency programs require geriatrics rotations, and less than half have elective geriatrics rotations. The purpose of this study was to describe the geriatric and pediatric training experiences across PGY1 and PGY2 Canadian Pharmacy Residency Programs, and here we will focus on the geriatrics content. The objectives of the study were to: determine the proportion of PGY1 and PGY2 residency programs in Canada that include geriatrics rotations, describe the way geriatrics is included in residency programs, identify barriers and facilitators for residency coordinators (RCs) to include geriatrics in residency programs, and identify gaps and opportunities in residency training related to geriatrics.

Methods: RCs from residency programs across Canada were surveyed through a semi-structured interview regarding the geriatric opportunities offered within their programs. The interview questions included details about the requirements for rotations, preceptors, resources, and future planning in regards to geriatrics and pediatrics. The study was approved by the University of Alberta Research Ethics Board.

Results: A total of 42 RC's were invited to participate, representing 44 programs. 36 out of 44 programs participated. Of the 36 programs, 29 were PGY1 and 7 were PGY2. Out of the 29 PGY1 programs that participated, 19 offered a rotation in geriatrics, with only 2 offering a mandatory rotation. Of the 7 PGY2 programs, 2 offered mandatory geriatrics rotations. Of the 10 programs that did not offer geriatrics rotations, 7 had no intentional learning objectives relating to geriatrics, 9 had no plans to expand geriatrics opportunities, and 7 indicated they did not have the capacity to support a rotation.

Conclusion: Geriatric rotations are commonly offered as elective learning opportunities for pharmacy residents. The incorporation of geriatrics was not strategic but passive during exposure in other rotations. There is a lack in urgency to incorporate learning objectives involving geriatric populations.

D158 Student Presentation
HATS: Health Ambassador Teams for Seniors and Population Health Training
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Background: Senior population health often is underrepresented in preclinical and clinical curricula for medical and allied health student trainees. Little training exists for interprofessional teams to address senior population health. Community service learning potentially offers the opportunity to engage medical and allied health students with a panel of older adults to assess health promotion metrics over time. Given the barriers of face-to-face encounters with older adults due to the pandemic, this educational project describes how telehealth is adapted to generate older adult encounters with interprofessional student teams tasked with monitoring cognitive, psychological, and physical function of their patients.

Methods: An interprofessional faculty and student task force was assembled to design and pilot telehealth visits with community-dwelling older adults focused on health promotion. The annual Medicare wellness exam was used as a template for patient encounters and modified to include key elements of Geriatric Assessment such as gait and balance, cognition, and functional evaluations. The objective was to have dyads of interprofessional students conduct televisits while the patient was at home and gather healthcare data to be used for serial encounters with their patients so as to track their functional trajectories.

Results: As a proof of concept, pilot telehealth encounters with medical, physical therapy, and occupational therapy students revealed that data on older adult functional performances such as Gait Speed, TUG, and MiniCog tests could be acquired through telehealth.

Conclusions: Population Health metrics focused on older adult function can be acquired by telehealth encounters of older adults with interprofessional student teams. Further project testing is needed to determine limitations if any, of functional performance testing in frail and pre-frail older adults via telehealth.

D159 Student Presentation
Mnemonics to Optimize Care of Chronic Pruritus in Geriatrics
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Background: Chronic pruritus (CP) is a common condition among older adults, yet it has always challenged providers due to a lack of established consensus on nomenclature, causes, and treatment algorithms. In general, itch that is not psychogenic or medication-induced is thought to be either from disrupted barrier function (xerosis), immunologic dysregulation, or neurologic changes. This schematic is further complicated in older adults, whose pruritus is typically multidimensional in etiology. Familiarity with these three main categories, however, is key in determining appropriate treatment for CP.

Methods: In order to help geriatricians remember the etiologies of CP, we have come up with a way to NIX Itch. The mnemonic NIX stands for the three main causes of CP: Neurologic (N), Immunologic (I), and Xerosis (X). We have also developed additional memory devices to help providers remember the specific causes within these etiologies. Neurologic causes can be remembered via NBD (Notalgia paresthetica, Brachioradial pruritus, Diabetic neuropathy) and immunologic causes via ABS (Atopic dermatitis, Bullous pemphigoid, Scabies).

We plan to implement these memory devices in teaching Internal Medicine and Dermatology trainees at the Geriatric Dermatology specialty clinic at the San Francisco VA. Surveys on the understanding of the causes and treatment of CP will be administered both before and after teaching to evaluate improved understanding and confidence in creating unique and targeted therapeutic strategies to manage older adults with CP.

Results: Data will be presented.

Conclusions: We believe that this educational tool can serve as a helpful mnemonic in triaging older adults with CP and directing their treatment. If the skin is dry and xerosis is suspect, then treatment should be with emollients. If a rash is present, then CP is likely secondary to immunologic causes and topical steroids should be used. If the CP is fixed or localized then a neuropathic etiology should be considered, with treatment via neurologic agents gabapentin or pregabalin. Through this series of memory devices, we aim to help demystify CP and provide geriatricians with a quick and easy way to stratify etiologies that contribute to CP in order to create targeted treatment approaches.

D160 Resident Presentation

Caring for Sexy Seniors- Using Standardized Patients to Teach Geriatric Fellows how to Address Patients' Sexual Health

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Introduction: Evaluation and management of sexual care in older patients is an important aspect of geriatric medicine. Sexual behavior among older patients is common. In a 2007 survey published in the NEJM, roughly half of patients between 65 and 74 reported being sexually active. Within this population about half of both men and women reported at least one bothersome sexual problem. Additionally, the CDC reported that between 2010-2014, the rates of chlamydia increased by 52%, gonorrhea by 75%, and syphilis by 64% among patients 65 and older. These factors highlight the importance of sexual health and STI screening among older patients. This sexual health and aging workshop was developed for Geriatric Fellows as part of a national lecture to practice provider-patient communication regarding sexual health. **Methods:** Two 20-minute standardized patient encounters that are designed for Geriatric Fellows to practice obtaining a sexual history and counseling patients on incidences, causes, and management of sexual care. The standardized cases include the following scenarios: (1) older male and female with multifactorial etiology of gradually decreasing intimacy, (2) consideration of PREP in older male who has sex with men, and (3) older female presenting with vaginal discharge after recently resuming intercourse. Each case is designed to require the learner to interact with the patient to obtain information about his or her sexual health. Physical exams are not included. Feedback to the learners is provided by facilitators who are geriatricians or internal medicine residents trained by geriatricians. Provided materials include standardized patient training materials, facilitator training materials, PowerPoint materials for a pre-session didactic lecture, and pre- and post-surveys to evaluate the learners and the workshop. **Results:** Results will be discussed. The workshop will train ten geriatric fellows. Pre- and posttests incorporating a Likert scale (1 = poor, 5 = excellent) will be used to evaluate the program for overall effectiveness, reality of the standardized patients, aggregate knowledge, and confidence scores from both pre- and posttest. **Discussion:** This curriculum provides an active learning environment with standardized patients to teach about sexual health in the elderly population.

D161 Resident Presentation

Identifying Barriers to Caring for Older Adults During the Coronavirus Pandemic: A Local Needs Assessment

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Introduction: The COVID-19 pandemic has disproportionately affected older adults. Older adults not only have worse coronavirus outcomes but also face significant disruptions in their medical and home care, and social support networks. The pandemic highlights the importance of geriatric and dementia services and the ongoing shortage of health professionals within these fields. We collaborated with Alzheimer's Association Connecticut to develop an e-curriculum to educate caregivers on how best to care for affected seniors during this public health crisis.

Methods: We set out to design a novel, blended-learning intervention to improve COVID-19-related geriatric and dementia education. Stakeholder discussions and semi-structured interviews with caregiver support staff and educators were carried out as part of a local needs assessment. Four central themes were identified during these interviews and are now being used to develop an interactive animation-based curriculum on the challenges of administering care for older adults during the pandemic.

Results: Our initial focus group with caregiver support staff and educators identified the following key challenges: 1) social isolation, 2) caregiver fatigue, 3) safety issues, and 4) difficulty navigating the healthcare system with COVID-19. We are developing 10 minute educational videos that focus on each of these four themes and incorporate 2-D vector animation and whiteboard style teaching. An additional video will discuss the biology of COVID and why elderly/cognitively impaired adults are at increased risk.

Conclusion: Through a local needs assessment, we identified four themes as barriers to providing care for older adults in the COVID-19 era. This information will be used to create an e-curriculum to increase caregivers' confidence and comfort with supporting older adults during the current health crisis. This content may also facilitate important discussions beyond COVID-19 as challenges like caregiver burden and social isolation are not unique to the pandemic.

D162 Resident Presentation

Intern's Guide to the Geriatrics Rotation

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Background: Historically, geriatrics practice has been grounded in face-to-face visits conducted in an office, long-term care or assisted living facility, or home-based setting. With the COVID-19 pandemic, the landscape has shifted with a stronger emphasis on telehealth. We present a resident-written guide for interns rotating in geriatrics including adaptations from in-person evaluation to remote use of pre-existing health assessments and management tools.

Methods: A pre-rotation needs assessment was conducted with first-year residents at the Kaiser Permanente Mid-Atlantic States Internal Medicine Residency Program to assess familiarity with in-person versus remote use of standard geriatrics tools. This survey assessment was completed by all current interns within the program and helped guide the development of a handbook featuring commonly used tools for in-person geriatrics health visits, and how to adapt them for use by phone or video. After implementation of this guide within the residency's educational program, a post-rotation assessment will be conducted to evaluate the overall effectiveness of the guide.

Results: The results of the pre-rotation assessment showed overall lack of familiarity with critical parts of a geriatrics assessment, including the use of standard cognitive assessment tools. This unfamiliarity was even more pronounced regarding adaptation of said tools to phone visits. Major topics covered in the resulting Intern's Guide include: obtaining a geriatric history, geriatric syndromes, geriatric cognitive disorders, validated tools, preventive health, and substance abuse considerations. This contains proposed adaptations for telemedicine, specifically regarding the mini-cognitive assessment, MOCA, and MMSE.

Conclusion: The guide resulting from this assessment focuses not only on core geriatric competencies, but also on telemedicine adaptations for residents to efficiently conduct remote visits with geriatrics patients. Evaluation of its utility, ease of use, and efficacy is ongoing. While there are obvious limitations to the geriatric telemedicine assessment, more validated adaptations are necessary. Having a guide to geriatrics that includes adapting cognitive assessments to telemedicine can help improve the value and experience of the visit for both the resident physician and patient.

D163 Resident Presentation

Ageism and Attitudes Towards Aging Amongst Internal Medicine and Medicine-Pediatrics Residents

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Background: It has been shown that physicians-in-training can develop negative attitudes towards caring for older patients based on ageist assumptions reinforced by their training environment. Little is known about how these negative attitudes develop throughout training or if these can be modified through educational initiatives.

Methods: Internal Medicine (IM) and Medicine-Pediatric (MP) residents were invited to complete a 12 item survey on expectations regarding aging (ERA-12). This validated instrument assesses the respondents' attitude toward physical health, mental health, and cognitive function in older adults. Surveys were electronically sent to residents prior to hearing a lecture about ageism.

Results: Of the 86 IM and MP residents invited to participate, 41 residents (48%) completed the ERA-12 survey. Responses were obtained from all training levels including 12 PGY-1 (29%), 12 PGY-2 (29%), 14 PGY-3 (34%) and 3 (8%) PGY-4 (MP residents only). Amongst IM residents, interns (PGY-1) had lower expectations regarding mental health of older adults compared to PGY-2 residents (70 vs 86, $p = 0.012$). No statistically significant differences were found between PGY-2 and PGY-3 trainees. Interns also had lower expectations regarding cognitive function of older adults and lower total overall scores, though these trends did not reach statistical significance. Conversely, amongst MP residents, interns had higher expectations regarding mental health (96 vs. 75, $p = 0.006$) and cognitive health (75 vs. 61, $p = 0.030$) compared to more senior trainees and no differences were found between all other training levels (PGY-2 through PGY-4). MP interns also had higher total overall scores, though again this trend did not reach statistical significance. There were no significant differences in expectations regarding physical health amongst all training years (both IM and MP). Female trainees had lower overall expectations regarding aging compared to male trainees (56 vs. 68, $p = 0.008$).

Conclusions: Significant differences in expectations regarding ageing were found amongst physicians in training, with trends suggesting differences based on training year, training program, and gender. Raising awareness of these biases is the first step to overcoming them, and more research is needed to assess if these trends are impacted by educational initiatives.

D164 Resident Presentation

Why aren't medical students considering a career in Geriatrics?

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Background:

Geriatricians are a critical asset to society as they not only provide quality health care to the aging population but are also integral in reducing hospital readmission rates.

Recent estimates however show that although 20,000 Geriatricians are needed, there are less than 7,300 certified Geriatricians currently practicing nationwide.

With the need for Geriatricians projected to increase to as many as 30,000 by 2030, it is crucial that efforts are focused on recruitment to the specialty.

Objectives:

The purpose of this study is to assess the attitudes of medical students towards the field of Geriatrics and identify barriers to the pursuit of a career in Geriatrics.

Methodology:

Medical students from the Florida State University School of Medicine and from the Alabama College of Osteopathic Medicine were invited to complete a survey which included a validated assessment tool: the UCLA Geriatrics Attitudes Scale. A sample of this scale can be found under Images.

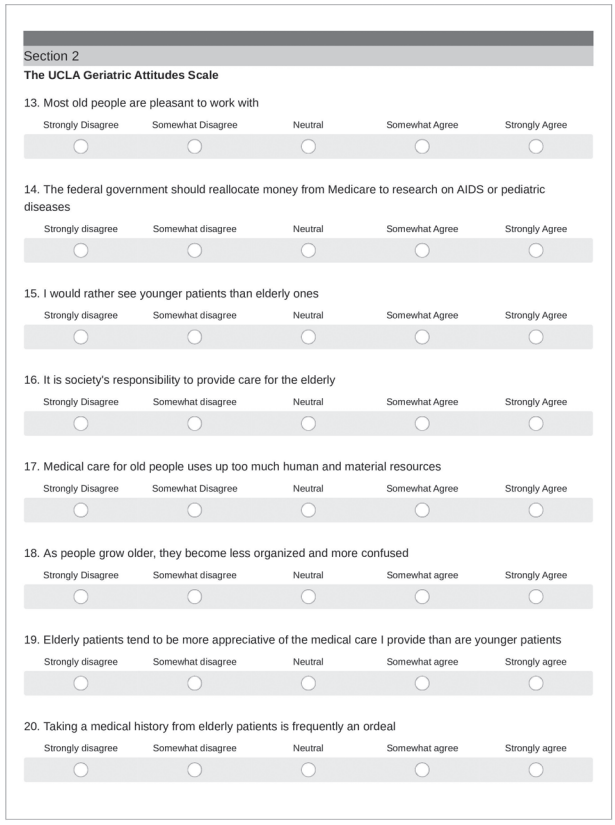
For ease of data distribution, the survey was administered via an online survey software.

Participation in the survey was strictly voluntary and participants were not required to enter their name or contact information.

Results will be discussed and reported.

Conclusion:

Identification of barriers to the pursuit of a career in Geriatrics will hopefully assist in the development of a medical student curriculum that not only adequately addresses these barriers but also encourages early recruitment to the Specialty.



Section 2

The UCLA Geriatric Attitudes Scale

13. Most old people are pleasant to work with

Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree

14. The federal government should reallocate money from Medicare to research on AIDS or pediatric diseases

Strongly disagree | Somewhat disagree | Neutral | Somewhat Agree | Strongly Agree

15. I would rather see younger patients than elderly ones

Strongly disagree | Somewhat disagree | Neutral | Somewhat Agree | Strongly Agree

16. It is society's responsibility to provide care for the elderly

Strongly Disagree | Somewhat disagree | Neutral | Somewhat Agree | Strongly Agree

17. Medical care for old people uses up too much human and material resources

Strongly Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Strongly Agree

18. As people grow older, they become less organized and more confused

Strongly Disagree | Somewhat disagree | Neutral | Somewhat agree | Strongly Agree

19. Elderly patients tend to be more appreciative of the medical care I provide than are younger patients

Strongly disagree | Somewhat disagree | Neutral | Somewhat agree | Strongly agree

20. Taking a medical history from elderly patients is frequently an ordeal

Strongly disagree | Somewhat disagree | Neutral | Somewhat agree | Strongly agree

D165 Resident Presentation

Continuing Patient Care In Geriatric Education During COVID-19: Development of a Third-Year Medical Student Curriculum Using Telehealth

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Background

In spring 2020, many medical schools temporarily put medical student participation in direct patient contact on hiatus due to the National Health Emergency. Academic medical centers faced simultaneous dilemmas: how to continue vital patient care and trainee education. Geriatrician educators felt this especially keenly, as older adults are disproportionately affected by public health emergencies.

Methods

Geriatricians developed a structured telehealth curriculum for third-year medical students during their Geriatrics rotation. Students were trained in principles of telehealth and completed learning

modules on core Geriatrics topics, including polypharmacy, social isolation, functional status, social isolation, falls, neglect and abuse. Trainees subsequently performed telephone encounters using a composite 28-item screening tool, called the Geriatrics Emergency Needs Assessment (GENA). This tool was developed by Geriatricians based on the previously-validated Camberwell Assessment of Need for the Elderly and Elder Abuse Suspicion Index. Themes of each learning module were incorporated into these telephone encounters. Following patient encounters, trainees discussed experiences with encounters as a group.

At the end of the remote Geriatrics rotation, students were asked to complete a survey evaluating the experience.

Results

Twenty-one medical students completed 8 learning modules on the following topics: polypharmacy, functional status, social isolation, memory, abuse/neglect, advance care planning, delirium, and mobility. Surveyed upon completion of the telehealth geriatrics clerkship, students expressed insight and demonstrated the use of telehealth to both identify care needs and supplement in person care (100%). Students had mixed opinions on the utility of telehealth as a live clinical alternative (appropriate substitute (52%, 11/21). All students recognized the increasing role of telehealth in clincal care.

Future Direction

This experimental curricum opens the door for educators to supplement in person learning with flexible telehealth experiences. Trainees may develop telehealth skills to preserve direct patient care without compromising the directives of quarantine and home isolation.

D166 Resident Presentation

"Polypharmacy and Deprescribing: When does less mean more?" a virtual educational workshop to improve medical resident self-efficacy and knowledge.

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Background: Polypharmacy has negative impacts on quality of life, increased risk of drug-drug interactions, and medication related adverse events. Deprescribing is the process of systematically reducing or removing medications that are inappropriate or pose a greater risk than benefit to an individual. Educating medical trainees and providers may help to reduce polypharmacy and support evidence based deprescribing. We designed a 30-minute deprescribing educational workshop for incoming medical resident and plan to evaluate provider self-efficacy and knowledge.

Methods: We developed a 30-minute didactic and case-based presentation on polypharmacy and deprescribing for medical residents rotating through primary care clinic at the VA Boston Healthcare System. The workshop included 3 primary objectives: 1) Identify when a patient has problematic pharmacy, 2) Select and use an appropriate tool to determine a deprescribing plan, 3) Create a short-term and long-term plan to optimize patients' medication safety. We will evaluate learner self-efficacy (via 5-point Likert scales) and knowledge (via multiple choice questions). Attendees will be asked to complete a matched pre-survey, immediate post-survey and 8-week delayed post survey. A paired t-test will be used to determine if there was a statistical change in attendee self-efficacy and knowledge. Additional data gathered, including the deprescribing barriers and percentage of providers who have implemented deprescribing practices, will be shown as a list and a percent respectively.

Results: This educational workshop was piloted with a group of healthcare trainees. Feedback was received from these trainees and will be used to adapt and improve the presentation accordingly.

Conclusions: Will be discussed at a future date.

D167 Resident Presentation

Older Adults' Knowledge about Dry Mouth: Evaluating an Educational Intervention

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Background: Xerostomia is quite common among older adults. It severely affects their' quality of life. The objectivese were (a) to assess whether adults over 54 years of age knew what dry mouth is, how they had learned about it, and how much it affected their lives; (b) to collect evaluations about the educational intervention they received; (c) to assess their knowledge about dry mouth after the educational intervention.

Methods: 321 adults between 55-90 years of age received a brochure as an attachment to an email plus responded to a survey. The brochure informed them about the definition of dry mouth, its causes, consequences and treatment.

Results: Before having received the brochure, 73.1% knew what dry mouth is and 40.2% reported that they had dry mouth. 30.4% reported that dry mouth affected their life somewhat, 10.1% much, and 2.9% very much. They were most likely to have heard about dry mouth from their health care professionals (43.6%), especially their dental hygienists (27.7%), dentists (27.1%) and physicians (24.3%). About two thirds of the respondents had read the brochure (69.8%). The time spent on reading this material ranged from 5-60 minutes (Mean=5.33 minutes). 65.6% would share it with others such as their spouse (18%), friends (17.8%) and family members (14.3%). The majority (85.6%) reported that they had liked some content and 49.2% that they had liked the presentation of the material. At the end, nearly everybody knew what dry mouth is (93.1%), and that taking many medications (95.6%) and having diabetes (86.9%) was related to dry mouth. 80.7% knew that persons with dry mouth should increase the frequency of dental visits.

Conclusions: Dry mouth is a serious problem for older adults. An informational brochure about dry mouth was developed and can be used by healthcare providers to inform older adults about xerostomia. Older adults appreciate receiving this information in the form of a digitally provided brochure and were interested in sharing this information with others. They improved their knowledge about dry mouth.

D168 Student Presentation

The Role of Age in the Proteomic Effects of Spine Surgery

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Background: Surgical trauma results in an inflammatory response that is important for recovery but can also have adverse effects and result in poor outcomes. Age is a leading predictor of these poorer outcomes. The primary purpose of this study was to investigate the proteomic effects of surgery on cardiovascular, inflammatory, and neurological systems. Our secondary aim was to assess the role of age in the proteomic changes.

Methods: The Partners Institutional Review Board approved this prospective observational study. 82 patients undergoing elective spinal surgery were enrolled in two categories: 'younger' from 45-60 years

of age (n=37), and 'older' from 70 years or older (n=45). Blood was collected preoperatively and on postoperative day 1. A totally of 276 proteins were quantified by proximity extension assay (OLINK®). Those that were differentially expressed were used to performed gene set enrichment analysis (GSEA) and a protein-protein interaction analysis (PPI).

Results: 38 proteins were significantly differentially expressed between the pre- and postoperative period (FDR < 0.05, logFC > 0.5). Seventeen proteins were upregulated with surgery and significantly enriched 8 REACTOME gene sets (FDR < 0.05), and had a resulting PPI network with 17 nodes and 30 edges (p < 4.44e-16). 21 proteins were downregulated with surgery and significantly enriched 14 REACTOME gene sets (FDR < 0.05), and had a resulting PPI network with 21 nodes and 44 edges (p < 1.0e-16).

When the age groups were analyzed separately, we found 43 proteins that were significantly differentially expressed as a result of surgery in the older cohort (FDR < 0.05, logFC > 0.5) and 40 proteins that were differentially expressed as a result of surgery in the younger cohorts (FDR < 0.05, logFC > 0.5).

Conclusion: Our data supports prior studies demonstrating that elective spine surgery has a profound effect on inflammatory pathways. Furthermore, when comparing old and young cohorts, there are differences in proteomic changes between the young and old cohorts.

D169 Student Presentation, Encore Presentation
Effects of Aging on Clinical Outcomes in Patients Receiving Genotype-Guided P2Y12 Inhibitor Selection after Percutaneous Coronary Intervention

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Background: *CYP2C19* genotype-guided selection of P2Y12 inhibitor therapy is associated with improved clinical outcomes for percutaneous coronary intervention (PCI) patients, but clinical utility in older populations is unknown.

Methods: Single-center, retrospective cohort study of 1469 PCI patients who underwent *CYP2C19* genotyping from 2012-2016. Alternative P2Y12 inhibitors (prasugrel or ticagrelor) were recommended for patients with *CYP2C19* loss of function (LOF) alleles. Major adverse cardiovascular or cerebrovascular events (MACCE), defined as stent thrombosis, ischemic stroke, transient ischemic attack, non-fatal acute coronary syndrome, or cardiovascular death were compared over 12 months after PCI by covariate adjusted proportional hazards regression.

Results: The study population included 1066 patients <70 years (mean age of 57±8 yrs) and 403 patients ≥70 years (mean age of 77±5 yrs). Alternative P2Y12 inhibitors were used more often in the younger than the older group in patients without a LOF allele (35% vs. 10%, p<0.001) and those with a LOF allele (67% vs. 55%; p=0.020). For patients treated with clopidogrel, MACCE risk was significantly higher with a LOF allele compared to without LOF alleles in the younger group (17.4% vs. 10.4%; adjusted HR 2.01; 95% CI 1.17-3.46; p=0.012) and older group (19.2% vs. 12.7%; HR 2.32; 95% CI 1.07-5.05; p=0.034). In LOF allele carriers, MACCE risk was significantly higher for patients treated with clopidogrel compared to prasugrel or ticagrelor in the younger group (17.1% vs. 8.1%; HR 2.25; 95% CI 1.26-4.04; p=0.006), but not in the older group (19.2% vs. 9.8%; HR 2.30; 95% CI 0.86-6.14, p=0.098). In patients without a LOF allele, MACCE risk was similar with clopidogrel compared to prasugrel or ticagrelor in the younger group (10.4% vs. 8.1%; HR: 1.12; 95% CI 0.72-1.74; p=0.614) and older group (12.7% vs. 9.8%; HR: 0.99; 95% CI 0.44-2.21; p=0.98).

Conclusion: This study suggests important clinical benefits of *CYP2C19* genotype-guided antiplatelet therapy after PCI in younger and older patients. Validation in a multicenter study is needed.

D170 Student Presentation
Comparison of Safety and Early Functional Outcomes of Sequential Simultaneous Bilateral (SSBTKA) and Unilateral Total Knee Arthroplasty (UTKA) in Patients Younger and Older than 70 Years of Age

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BACKGROUND

The safety and benefits of SSBTKA among elderly patients as compared to UTKA remains controversial. This study aims to compare complications and early (6-week) outcomes for SSBTKA and UTKA in patients >70 and ≤70 years of age.

METHODS

This prospective study compared postoperative complications and early patient-reported outcomes of 116 UTKA patients (60 ≤age 70, 56 >age 70) and 76 SSBTKA patients (41 ≤age 70, 35 >age 70). Patients completed the Knee Injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS Jr) and Patient Reported Outcome Measurement Information Global mental and physical health surveys. Knee Society Scores (KSS) were completed in the clinic. Comparisons of UTKA and BTKA outcomes and complications for patients >70 and ≤70 were made with independent t-tests or Chi-Square tests.

RESULTS

There were no significant differences in complications between age groups within their respective procedure groups. For UTKA patients, preoperative KSS Function was significantly higher in patients ≤70 and remained so in postoperative measurements (p<0.01). For SSBTKA patients, preoperative global mental health, postoperative KSS Knee and KOOS Jr scores, and patient satisfaction were all significantly higher in patients >70 (p<0.05). Furthermore, improvement in KSS Knee and KOOS Jr scores was significantly greater for SSBTKA patients >70 compared to those ≤70. However, at 6 weeks, patients >70 reported a slight decrease in KSS Function postoperatively that was not seen in SSBTKA patients ≤70. Comparisons between UTKA and SSBTKA outcomes for patients >70 suggests only preoperative KSS Function and postoperative Knee Flexion scores are significantly different, with both scores being higher in SSBTKA patients (p<0.05).

CONCLUSIONS

The safety of SSBTKA in elderly patients remains controversial and understudied in the current literature. However, this study found no major differences in outcomes or complications between patients >70 and ≤70. The use of SSBTKA should not be discouraged for elderly patients, as they report significant improvement in KOOS Jr and KSS Knee scores compared to younger patients and do not appear to have significantly greater complications.

D171 Student Presentation
Association Between Cancer and Aging Research Group Score and Short-Term Mortality in Older Adults with Cancer

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Background

As older adults with cancer increase in prevalence, quantifying the risk of short-term cancer-related mortality rates can help guide patient-centered shared decision making. The Cancer and Aging

Research Group (CARG) score is validated to estimate the risk of grade 3-5 chemotherapy toxicity in older adults (0-5=low, 6-9=medium, 10-19=high), yet its association with mortality is unknown. We conducted a retrospective analysis to 1) characterize patients in a geriatric oncology clinic, and 2) evaluate the association of CARG score with 30-, 60-, and 90-day mortality in this cohort.

Methods

We abstracted demographic and clinical data from electronic medical records for consecutive patients at the Senior Adult Oncology Center at Sidney Kimmel Cancer Center, Thomas Jefferson University Hospital between January 1, 2018 and September 18, 2020. We used mortality rates with exact 95% confidence intervals and receiver operating characteristic curves to characterize the relationship of CARG score with 30-, 60-, and 90-day mortality.

Results

262 patients were included. 57% were female, 67% were white, 92% were non-Hispanic, and the mean age was 77 (SD 8.8). Hematologic malignancies (43%) and breast cancer (19%) were the most common cancer types. The average CARG score was 10 (SD 3.9). Mortality rates were 1.5% at 30 days, 5.1% at 60 days, and 8.1% at 90 days. Short-term mortality increased with increasing CARG score (Table 1). The CARG score area under the curve was 0.74 (95% CI 0.52-0.97) for 30-day, 0.74 (95% CI 0.64-0.85) for 60-day, and 0.76 (95% CI 0.63-0.86) for 90-day mortality.

Conclusions

The CARG score trends with and has acceptable discrimination ability for 30-, 60-, and 90-day mortality in older adults with cancer. As such, it may contribute to prognostication, treatment planning, and referrals for geriatric assessment. Further study in a larger cohort is needed to give more precise estimates of short-term mortality risk.

CARG Score versus Short-Term Mortality

CARG Score Category	30-day Mortality, % (95% CI)	60-day Mortality, % (95% CI)	90-day Mortality, % (95% CI)
Low (0 - 5)	0.0 (0.0-14)	0.0 (0.0-14)	0.0 (0.0-14)
Medium (6 - 9)	0.9 (0.0-4.9)	2.7 (0.6-7.7)	4.5 (1.5-10)
High (10 - 19)	2.4 (0.5-6.7)	8.7 (4.4-15)	13 (8.0-21)

CI=Confidence Interval

D172 Student Presentation

Depression and Rehabilitation: Older Adults with Depression Are Less Likely to Go Home after Chronic Limb-threatening Ischemia Revascularization

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Background: Depression in those treated for PAD is associated with adverse post-surgical outcomes and discharge to a rehabilitation or nursing facility (NH). It remains unclear whether active treatment for depression impacts PAD outcomes. This study evaluated the association between depression, depression treatment, and adverse 30-day post-operative outcomes including adverse limb events, discharge to a NH and readmissions after chronic limb threatening ischemia (CLTI) revascularization.

Methods: This was a single-center retrospective analysis of open and endovascular CLTI revascularizations from 2013-2019. Depression was defined using preoperative diagnoses and treatment based on admission medication list. NH discharge included discharge to acute rehab or nursing facility. A multivariable logistic regression assessed the association of depression and depression treatment with primary outcomes of adverse limb events, readmission, and NH discharge.

Results: Within 413 cases, 28% had depression, 34% required NH discharge, 9% had adverse limb events and 23% experienced readmission. Those with depression were younger (67.6 vs 70.9, p<0.01) and more likely anticoagulated (21% vs 12%, p= 0.02) with a partial ambulatory deficit (72% vs 62%, p=0.03). Depression was associated with increased NH discharge (46% vs. 29%, p<0.01), which was sustained on multivariable analysis (OR:2.7 CI: 1.6-4.6). On multivariable analysis, treated depression was associated with both readmission and adverse limb events compared to those without depression.

Conclusions: Depression is a major risk factor for poor outcomes after CLTI revascularization including adverse limb events, 30-day readmissions, and NH discharge. Treated depression remained associated with adverse limb events. This study suggests depression screening should be included in pre-operative assessment in those with CLTI.

Table. Association of Preoperative Depression with Adverse Outcomes

	NH Discharge*		Adverse Limb Events*		30-day Readmission*	
Variable	AOR (CI)	p-value	AOR (CI)	p-value	AOR (CI)	p-value
Depression†	2.7 (1.6-4.6)	**<0.01**	1.4 (0.7-3.0)	0.34	1.5 (0.9-2.6)	0.10
Untreated Depression‡	2.6 (1.2-4.7)	**<0.01**	0.4 (0.1-1.6)	0.17	1.1 (0.5-2.2)	0.83
Treated Depression‡	2.8 (1.5-5.3)	**<0.01**	2.7 (1.2-6.0)	**0.02**	2.0 (1.1-3.8)	**0.03**

* Adjusted for: Age ≥ 80, Ambulatory deficit, Aspirin, CABG, Diabetes Mellitus, Dialysis, Open Revascularization, Plavix, Tibial Revascularization, WIfI stage ≥ 3

† Depression expressed as binary

‡ Compared to reference group without Depression

D173 Student Presentation

Does Post-Operative Radiotherapy and Chemotherapy in Older Adults with Head and Neck Cancer Correlate with Frailty?

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Background: The management of head and neck cancer (HNC) in older patients is complicated by comorbidities, frailty, and treatment toxicity. Decisions to utilize chemotherapy and/or radiation therapy in older HNC patients should be guided by patients' health status rather than age alone. Geriatric assessment (GA) can assess health status in older patients and help to guide treatment. We examined if frailty correlates with post-operative radiotherapy and chemotherapy in older adults with HNC.

Methods: We conducted a retrospective review of post-operative treatment received by older patients (≥75 years old) with HNC who completed a GA prior to HNC surgery at Memorial Sloan Kettering Cancer Center from 2015-2019. The GA used was the Electronic Rapid Fitness Assessment (eRFA), which in conjunction with a domain related to comorbidities yields an accumulated geriatric deficit (AGD) score. Higher scores indicate greater frailty. Age served as a comparator. Kruskall-Wallis test was used to compare differences in the AGD score and age of those who did and did not receive post-operative adjuvant therapy within 6 months of surgery.

Results: The sample includes 77 patients with cancers of the oral cavity (60), larynx (7), hypopharynx (5), and oropharynx (5). A statistically significant difference existed in the AGD scores of those who did and did not receive chemotherapy among all HNC patients and the oral cavity cancer (OCC) subset, (HNC: 3 [2.5;3] vs 6 [4;8], p = 0.029; OCC: 3 [2.75;3] vs 7 [4;8.25], p = 0.024). There was not a statistically significant difference in the AGD scores of patients who did and did not receive radiation therapy in either group. There was not a statistically significant difference in the age of patients who did and did not receive for chemotherapy or radiation therapy. Neither AGD score or age was statistically different for each type of radiation therapy.

Conclusions: Lower AGD score is associated with the receipt of post-operative chemotherapy in older patients with HNC. GA may help guide the delivery of post-operative chemotherapy.

D174 Student Presentation

Machine learning assisted screening for cognitive impairment in the emergency department

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Background: Cognitive impairment (CI) is common among older adults presenting to the emergency department. Although CI is associated with poor outcomes, including mortality, screening for CI in the emergency department is uncommon and unstandardized. Time and resource limitations have been reported as the major reason for failure to screen for CI. We developed and evaluated an automated screening tool to assist in the detection of CI in the emergency department by predicting which patients may benefit from in-person screening.

Methods: We developed a machine-learning model to predict how likely a patient presenting to the ED would be to have CI, using only variables available in a patient's electronic medical record (EMR) as predictors. CI was determined based on the Blessed orientation memory concentration (BOMC) test. A nested cross validation framework was used to evaluate a series of machine-learning algorithms, comparing area-under-the receiver-operator curve (AUC) as the primary metric of performance. Sensitivity, specificity, positive predictive value, and negative predictive value were also compared.

Results: 121 of 1736 participants in this dataset (7%) screened positive for potential CI according to the BOMC. The best performing machine-learning algorithm, the Xgboost model, predicted BOMC positivity with an AUC of 0.73. With a classification threshold of 0.4, this model had a sensitivity of 0.74, a specificity of 0.64, a negative predictive value of 0.97, and a positive predictive value of 0.13. In a hypothetical ED with 200 older adult visits per week, this would translate to decreasing the in-person screening burden from 200 to 76 individuals in order to detect 10.4 patients who would fail a BOMC, at the cost of excluding screening for 3.6 patients with CI.

Conclusion: This study demonstrates the ability to predict CI based on data in a patient's EMR with promising performance. These results indicate the potential utility of using automated, EMR-based algorithms by focusing in-person screening efforts for CI only on those patients in whom positive screens are more likely.

D175 Student Presentation

Care Trajectories of Older Adults with Alzheimer Disease in the Emergency Setting

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Background

Older adults with Alzheimer disease (AD) have high rates of emergency department (ED) visits, hospital admissions, and revisits to the ED, which are associated with poor clinical outcomes. ED providers are in a unique role to impact the care trajectories of older adults with AD since they are at the crossroads of inpatient and ambulatory care. Few studies have used administrative data to describe care trajectories of older adults with AD from the ED perspective. Our study aims to use Medicare claims data to 1) identify and characterize older adults with AD presenting to the ED, and 2) describe their post-ED visit outcomes including ED disposition, healthcare utilization and survival in the 12 months following an index ED visit.

Methods

We identified older adults aged 66+ years with AD who presented to 33 EDs across the United States between January 1, 2014 and June 30, 2019 using Medicare claims by selecting patients with two AD diagnoses, at least one of which is associated with an office visit, at least 7 days apart. Descriptive statistics were used to characterize demographics and post-ED visit outcomes.

Results

Of the 74,543 patients meeting inclusion criteria with an index ED visit during the study period, 62.6% were male, 75.7% were white, and the mean age was 83.2 years. The majority were admitted from home with (10.3%) or without (73.2%) home health, while 16.6% were admitted from a nursing facility. More than half of the patients were admitted to the hospital (54.6%), and few were discharged to a nursing home (2.9%), hospice (0.3%), or home health (1.4%). In the 12 months following the index ED visit, 42.7% of patients had at least one ED revisit, 44.6% were later admitted to the hospital, 12.7% were admitted to hospice, and 29.2% died.

Conclusions

This study highlights the utility of Medicare claims data to identify older adults with AD presenting to the ED and describe their care trajectories. It confirms older adults with AD who visit the ED have high rates of inpatient admissions, ED revisits, and subsequent hospital admissions despite high one-year mortality. This data is foundational for future interventions addressing the role of emergency providers in balancing the benefits and harms of hospitalization for older adults with AD and connecting these high-utilizers with appropriate outpatient services.

D176 Student Presentation

Comparative Perspectives on Geriatrics-Surgery Co-Management Program by Specialty and Staff Role

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Background:

Co-management programs between geriatrics and surgical specialties have gained popularity in the last few years. While studies have examined patient outcomes of geriatric co-management programs, little is known about how these programs are perceived across surgical specialties and staff roles, which has implications for their effectiveness and growth.

Methods:

We conducted a mixed methods study to assess perspectives on a geriatrics-surgery co-management program at a large, academic hospital where geriatricians co-manage patients 65 or older admitted to Orthopedic Trauma, General Trauma, and Neurosurgery services. We used semi-structured interviews (n = 11) and online surveys (n = 45) to explore program value, facilitators, use, understanding, and impact by specialty and staff roles (physicians, advanced practice providers, nurses, case managers, social workers). Interview transcripts were analyzed using qualitative thematic analysis with constant comparative method, and survey data were analyzed using Kruskal-Wallis, ANOVA, and Fisher's exact tests.

Results:

Interviews revealed three main themes: 1) geriatric co-management is valued because of geriatricians' expertise in older adults (especially cognitive issues and medication management), relationship with patients and their families, and skill in addressing social determinants of health; 2) key program facilitators include consistent availability of co-managing geriatricians, clear communication, and collaboration via shared data-driven goals; and 3) program use varies by surgical specialty and role depending on expertise and patient complexity. Survey data analysis affirmed interview themes and

showed significant differences (p-values < 0.05) between perspectives of surgical specialties and roles on aspects of program use, understanding, impact, and which specialty is most appropriate to manage specific clinical issues (e.g. deep vein thrombosis, urinary tract infection, and post-operative blood loss anemia).

Conclusions:

Our findings suggest that while there are similarities in perspectives across surgical specialties and roles regarding the value of, and facilitators for, a geriatrics-surgery co-management program, there are significant differences in its use, understanding, and impact. Understanding these differences provides insight on possible improvements to this intervention and its generalizability to other specialties and settings.

D177 Student Presentation

End of Life (EOL) Metrics in Older Patients with Acute Myeloid Leukemia (AML) and Myelodysplastic Syndromes (MDS)

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Background: Patients with AML and MDS experience high rates of hospitalization, intensive care unit (ICU) admissions, and in-hospital deaths at the EOL. This study aimed to better understand EOL experience in patients ≥60 years with AML and MDS and evaluate the association of medical orders for life-sustaining treatment (MOLST) with EOL outcomes.

Methods: We conducted a retrospective study of patients aged ≥60 years with AML or MDS who were evaluated at Wilmot Cancer Institute and died between 1/1/2014 and 12/31/2019. We collected the following EOL metrics (Figure 1): 1) Place of death, 2) Transfusion, 3) Utilization of life-sustaining treatment (LST), 3) Hospitalization, emergency department visits, and ICU admission, 4) Chemotherapy administration, and 5) Hospice enrollment. We used multivariate logistic regression to evaluate the association of MOLST completion (>30 days before death vs. ≤30 days before death or never) with EOL metrics, adjusting for covariates.

Results: We included 279 patients; 61.3% had AML and 38.7% had MDS. The median age was 73 years; 88.9% were white. Approximately 36% of patients completed a MOLST >30 days before death (early), 51% completed a MOLST ≤30 days before death (late), and 13% never completed a MOLST. On multivariate analyses, early MOLST completion (relative to late or never) was associated with a decreased risk of inpatient death [Adjusted Odds Ratio (AOR) 0.51, p=0.03], transfusion in the last 7 days of life (AOR 0.50, p=0.01), chemotherapy administration in the last 14 days of life, as well as decreased utilization of LST (AOR 0.33, p=0.002), hospitalization (AOR 0.45, p=0.03), and ICU admission (AOR 0.34, p=0.003) in the last 30 days of life. Early MOLST completion was associated with higher hospice enrollment (AOR 2.11, p=0.007).

Conclusion: Early MOLST completion was associated with less healthcare utilization and greater hospice enrollment. Interventions to promote timely completion of MOLST may promote more out-of-hospital care in older patients with AML and MDS.

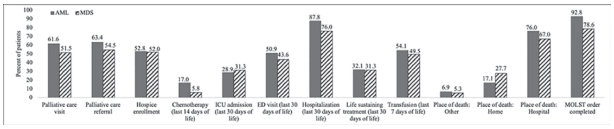

Figure 1: EOL Metrics in AML and MDS

D178 Student Presentation

Rehabilitation Intensity in COVID-19 Patients in a Skilled Nursing Facility

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Background: The objective of this study was to examine the intensity of rehabilitation services in COVID-19 patients at a skilled nursing facility (SNF). Potential associations between dementia and depression and rehab intensity were also explored.

Methods: Data were abstracted from electronic medical records at a SNF in NYC. Residents with a positive COVID-19 PCR test from March to May 2020 were included and followed for 30 days. Rehab intensity was defined by number of minutes. Chi-squared tests examined associations in rehab intensity with patient characteristics.

Results: Of 300 COVID-19 patients, 203 received rehab services in the 30 days following COVID-19 onset; 184 (61.3%) and 185 (61.7%) received PT and OT, respectively. 115 (38.3%) received rehab pre-COVID-19, and 185 (61.7%) did not. 32 (27.8%) residents receiving rehab pre-COVID did not receive rehab in the 30 days after COVID-19 diagnosis. Residents receiving PT after COVID-19 attended an average of 9.80±6.1 sessions averaging 416.5±253.7 total minutes over 30 days. Those with OT sessions averaged 9.5±6.0 sessions and 415.2±255.7 total minutes over 30 days. Of patients receiving rehab post-COVID, 149 (73.4%) received a moderate (>400 min) or high (>800 min) intensity rehab.

Post-acute care residents (n=98) were more likely to receive moderate/high intensity rehab than individuals in long-term care (n=105, p<.001). Patients with dementia (n=56) received less moderate/high intensity rehab than those without dementia (n=77; p=.019). Depression diagnosis did not affect rehab intensity (p=.457).

Conclusion: At a SNF, almost ¾ of COVID-19 residents eligible for rehab were able to tolerate moderate-high rehab intensity. Patients in post-acute care and without dementia received rehab at higher intensities than long-term care patients and those with dementia. Rehab should be offered to eligible SNF residents with COVID-19 if it is consistent with goals of care.

D179 Student Presentation

Approach to Management of Pelvic Organ Prolapse in Women with Cognitive Impairment

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Background: As the aging population expands, the number of women with pelvic organ prolapse (POP) will increase. Management of POP in those with cognitive impairment is challenging due to the risks of poor outcomes associated with neglected pessary use and post-operative complications in this population. We aimed to evaluate the approach to POP management in women with cognitive impairment in a large health system. We hypothesized that women with cognitive impairment would more often be managed expectantly compared to management with pessary or surgery.

Methods: We performed a retrospective cohort study of women aged ≥ 50 years with a diagnosis of cognitive impairment (including MCI, Alzheimer's disease, vascular dementia, unspecified dementia) who received a new diagnosis of POP (based on ICD-9/10 codes) at a large medical center between 2015 and 2017. Demographics, co-morbidities, and POP care management plans were abstracted from the electronic medical record. POP care (including expectant management, pessary, pelvic floor physical therapy (PFPT), surgery) and referrals to subspecialists were assessed by provider specialty.

Results: Of the 5295 women ≥50 years with a new diagnosis of POP, 90 women had a diagnosis of cognitive impairment. Median (IQR) age was 83 (76-89) years. Women were mostly white (88.9%, n=80). Advanced stage POP was documented for 36.7% (n=33), and 32.2% (n=29) resided in assisted living facilities. There were 73 (81.1%) with hypertension, 31 (34.4%) with coronary artery disease, and 14 (15.6%) with history of stroke/TIA. Most women were diagnosed with POP by ob/gyn (n=27, 30%), primary care (n=18, 20%), and in ED/urgent care (n=12, 13.3%). Five (5.6%) were offered PFPT and 28 (31.1%) were offered pessaries. Pessary trials were accepted at similar rates between ob/gyn and urogynecology providers. 42 (46.7%) were referred for specialty care to ob/gyn (n=22), urogynecology (n=17), and urology (n=3). Eleven (12.2%) women underwent surgery for POP, most underwent obliterative surgical repairs (n=9) and general anesthesia (n=8) primarily with urogynecologists (n=8). There were 2 falls and 2 ER visits within 12 months postoperatively.

Conclusions: Women with cognitive impairment most often have POP managed conservatively. Given the risks of POP management and the limited understanding of the impact of POP treatment on quality of life, primary care and subspecialist providers should collaborate to optimize care for women.

D180 Student Presentation

Prescriptions for Medications from the Beers Criteria Among Older Adults Hospitalized for Heart Failure

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Background: Potentially inappropriate medications (PIMs) are common in older adults. However, their prevalence among older adults hospitalized for heart failure (HF)—a population that universally contends with polypharmacy—is unknown. To identify a potentially modifiable factor contributing to worse outcomes, we sought to examine determinants of PIM use among this population.

Methods: We examined participants aged ≥65 years with expert-adjudicated hospitalization for HF between 2003-2017, derived from the geographically diverse REasons for Geographic and Racial Differences in Stroke (REGARDS) cohort. We abstracted data about PIM use (based on the 2019 American Geriatrics Society's Beers Criteria) from medical records at hospital admission and discharge. We conducted a multivariable regression analysis to identify the determinants of potentially harmful prescribing patterns, defined as the initiation or continuation of PIMs between admission and discharge.

Results: Among 648 participants, the median age was 77 (IQR 70-84), 45.7% were female, and 33.6% were Black. The prevalence of PIMs was 61.1% at admission and 64.0% at discharge. Between admission and discharge, 19.1% of patients experienced an increase in the number of PIMs, 15.1% experienced a decrease, and 37.0% remained on the same number. The medications with the greatest increase from admission to discharge were proton pump inhibitors (32.6% to 38.6%) and amiodarone (6.2% to 12.2%). The strongest determinant of potentially harmful prescribing patterns was polypharmacy (OR: 2.27, 95% CI: 1.31-3.95, p-value = 0.003). Geriatric conditions, including cognitive and functional impairment, were not associated.

Conclusion: PIM use is common among older adults hospitalized for HF and may be an important target to improve outcomes in this vulnerable population.

D181 Student Presentation

Prognostic factors of 90-day mortality in older people with healthcare-associated pneumonia

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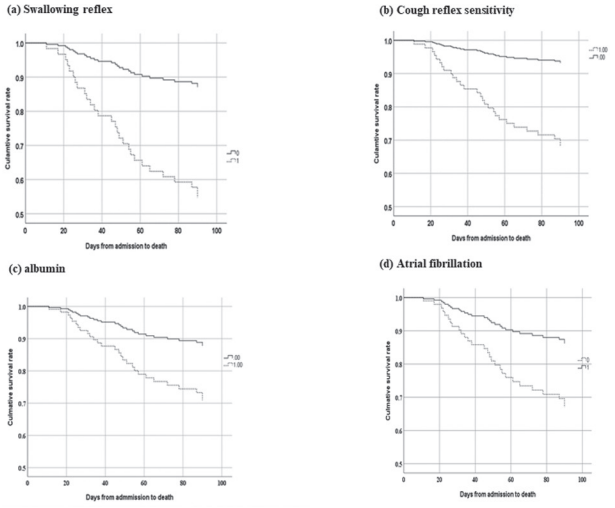
Purpose: The qSOFA and CURB-65 scores have been used as prognostic factors of mortality related to healthcare-associated pneumonia(HCAP). However, aspiration pneumonia remains unclear.

Methods: A cross-sectional, prospective cohort study was conducted with 130 inpatients aged ≥75 years in Japan. We investigated the utility of aspiration pneumonia-related factors, latency of swallowing reflex and cough reflex sensitivity, serum albumin levels, the neutrophil-to-lymphocyte ratio, and conventional scores of pneumonia severity, for predicting 90-day HCAP mortality. Patient demographics, cognition, physical activity, eating ability, dementia clinical stage, current medications and comorbidities were collected. Pneumonia severity was evaluated using the qSOFA, CURB-65 and SIRS scores.

Results: Age, cognitive and physical activity, eating ability were significantly associated with mortality, whereas the conventional scores were not. The Kaplan–Meier method with the log–rank test using Cox proportional hazards analysis showed that low serum albumin levels and the comorbidity of atrial fibrillation were associated with a lower survival rate in deceased versus surviving individuals at 90 days. Additionally, a deteriorated upper respiratory protective reflexes were associated with 90-day mortality.

Conclusions: Hypoalbuminemia, atrial fibrillation, deteriorated upper respiratory protective reflexes were better predictors of 90-day mortality in older individuals with HCAP.



Kaplan–Meier survival analysis of 90-day mortality. (a) Swallowing reflex latency ≥3.4 s (dotted line) vs. <3.4 s (solid line). (b) Cough reflex sensitivity ≥1.35 log mg/mL (dotted) vs. <1.35 log mg/mL (solid). (c) Serum albumin ≤2.75 g/dL (dotted) vs. >2.75 g/dL (solid). (d) Atrial fibrillation with (dotted vs. without (solid).

D182 Student Presentation

Characteristics of exercise intervention in reducing fear of falling among community-dwelling older adults: A systematic review and a meta-analysis

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Background: Fear of Falling (FOF) is a major public health concern among older adults, demanding effective solutions; exercise interventions might be the most promising single intervention to reduce FOF. A growing number of studies have shown the effectiveness of exercise intervention in reducing FOF among older adults, yet the characteristics of effective FOF exercise interventions are not clear. The aims of this study are to describe the characteristics of effective exercise interventions on reducing FOF among community-dwelling older adults and to quantify the effect of these interventions on reducing FOF.

Method: We identified Randomized Controlled Trials (RCTs) of FOF exercise interventions in older adults (≥65 years) from MEDLINE, EMBASE, PsycINFO, and CINAHL databases. We computed the pooled standard mean difference (SMD) using random-effects models. Subgroup analyses were performed to explore the exercise characteristics that might affect the magnitude of the effect size.

Results: Subjective analyses of 75 included RCTs revealed that most of the trials that reported statistically significant improvement in FOF used multi-component exercises, group-based interventions, moderate-intensity (RPE 12-14), three times per week, and 30 to 60 minutes for each exercise session, and evaluated FOF as a primary outcome measure. The pooled effect of exercise interventions on reducing FOF among 50 RCTs included in the meta-analysis was SMD -0.34 (95% confidence interval -0.44, -0.23). In the subgroup analyses, the pooled effect sizes of balance and group-based exercise were larger than the effect sizes of other types and individual-based exercise interventions.

Conclusion: Exercise interventions in previous RCTs that used multi-component and balance exercise intervention and implemented in group settings were effective in reducing FOF in community-dwelling old adults. However, the optimal formula of FOF exercise prescription for older adults remains unclear. To address this gap, future research involving exercise interventions should report the characteristics of exercise interventions more explicitly.

D183 Student Presentation

Older adults with frailty can successfully undergo major thoracic surgery with geriatric collaborative care

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Background: Frailty assessment is advocated in older surgical candidates. The purpose of this study was to assess the prevalence of frailty among older adults who undergo major thoracic surgery and the association between frailty and post-operative outcomes.

Methods: Patients age ≥ 65 years presenting to a thoracic surgery clinic with an embedded geriatrician at the Brigham and Women's Hospital between June 2016 and May 2020 were included. Patients who neither underwent surgery nor had a pre-operative geriatric consult were excluded. Baseline characteristics, comprehensive geriatric assessment (CGA) variables, and post-operative outcomes were collected. Frailty was defined by a CGA-frailty index (FI-CGA)>0.2, and we defined in our population "occult frailty" as a frailty level often missed by our surgical colleagues (0.2<FI-CGA≤0.4).

Results: Seventy-three patients were included: 45 (62%) were non-frail and 28 (38%) frail (FI-CGA range: 0.2-0.5). "Occult frailty" was present in 23/73 (32%). Lobectomy was the most common procedure (41%) performed, followed by wedge resection (36%), segmentectomy (12%), and pleurectomy (11%). Frail patients (versus non-frail) received significantly higher rates of sub-lobar resection (61% vs. 40%) compared to lobectomy (25% vs. 51%; p = 0.025). In a univariable logistic regression analysis, frail patients did not have a statistically significant higher odds of post-operative complications (odds ratio [OR] = 2.38, 95% confidence interval [CI] 0.89-6.56), and most complications were Grade II (62% vs. 67%). Grade III or greater complications (OR 2.23, 95% CI 0.54-9.80) and discharge disposition (OR 2.80, 95% CI 0.72-11.95) were also not significantly different. In a linear regression model, frailty was associated with increased LOS of 1.3 days more than the non-frail group, a difference that did not reach statistical significance.

Conclusion: In an academic center, frailty was prevalent in older adults referred to a surgical clinic. However, with geriatric collaborative care, it was not associated with worse surgical outcomes.

D184 Student Presentation

Risk Assessment for Head and Neck Microvascular Reconstruction in Adults over 80: A Case Series and Literature Review

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Background:

Due to increasing life expectancy worldwide, a larger number of older adults are being evaluated for operative treatment of head and neck (H&N) cancer. Limited data exists regarding safety and success of microvascular free tissue transfer (FTT) in patients ≥80. No guidelines exist for preoperative assessment of older patients requiring FTT. Proper decision making, referral, and risk stratification of these patients remains challenging. This study evaluates FTT in adults ≥80 with a case series and discussion of relevant literature related to risk factors and assessment in this population.

Methods:

A retrospective study was performed on all patients ≥80 who underwent primary FTT for H&N cancer between 2015-2018 at one institution. Surgical time, length of stay (LOS), 90-day mortality, medical and surgical complications, 30-day readmission, 90-day functional outcomes, preoperative ASA and MFI score, and type of resection were considered. Descriptive statistics were used to examine the data, which were compared with existing literature.

Results:

Nineteen patients met inclusion criteria. Mean age was 83; 9 were male and 10 were female. Mean ASA and MFI scores were 2.6 and 1.8, respectively. 90-day all-cause mortality was zero. There were 7 (37%) postoperative medical complications and 1 (5%) flap failure. Surgical time, LOS, and rate of surgical complications were similar to the general H&N population, but the rate of medical complications was higher, consistent with existing literature. The group requiring bony resection had a higher rate of complications. Review of literature showed that the presence of medical comorbidities, rather than chronological age, is the main contributing factor. The use of geriatric assessment, frailty and comorbidity scores have been used to predict H&N postoperative outcomes, but there is no established preoperative standard-of-care.

Conclusions:

Consistent with previous literature, age alone is not a contraindication for FTT in patients ≥80. The presence of comorbidities and need for bony resection may predict postoperative medical complications which can be minimized with careful patient selection and optimization. Preoperative risk assessment using biological age can be improved via multidisciplinary collaboration between geriatricians and otolaryngologists.

D185 Student Presentation

Characteristics of Treated Glaucoma Suspect and Ocular Hypertensives in an Academic Center

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Background- Glaucoma is one of the leading causes of blindness in individuals over 60, yet there is a lack of a consensus in the definition of glaucoma. This results in variability in practice, which poses a serious problem for glaucoma suspect patients who possess clinical findings or risk factors that indicate an increased likelihood of developing glaucoma, such as elevated intraocular pressure (IOP), suspicious-appearing optic nerves, and/or abnormal visual fields. This retrospective cohort study aimed to determine what factors play a role in treating glaucoma suspect and ocular hypertensive patients in clinical ophthalmology practice.

Methods- A list of patients with a diagnosis code of glaucoma suspect or ocular hypertension was acquired and 600 patient charts were randomly selected for review. From these, patients meeting inclusion criteria with 3 or more sets of IOP values and no diagnosis of glaucoma were reviewed for age, living status, race, ethnicity, family history, IOP, central corneal thickness (CCT), retinal nerve fiber layer (RNFL) thickness, RNFL symmetry, and visual field mean deviation (MD).

Results- Average IOP was significantly higher in treated patients (p= 0.0145 OD, p=0.0146 OS). Average RNFL thickness was significantly lower in the treated group (p= 0.00562 OD, p= 0.0.0171 OS) as was RNFL symmetry (p=0.016). There was no statistical difference in age, current living status, race, ethnicity, family history of glaucoma, CCT, and MD on 24-2 between treated and non-treated patients.

Discussion and conclusions- Treated glaucoma suspect and ocular hypertension patients had significantly higher IOP, thinner RNFL, and reduced RNFL symmetry compared to untreated patients.

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D186 Student Presentation

Outcomes following Head and Neck Cancer Surgery among Fit and Frail Older Adults as Determined by an Electronic Geriatric Assessment

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Background: Older adults with head and neck cancer (HNC) have longer hospital stays and higher rates of mortality. Geriatric assessment (GA) provides a measure of overall health status and is preferable to using age alone for assessing fitness. We sought to determine whether a patient's frailty determined by a novel electronic GA is associated with outcomes after surgery.

Methods: We conducted a retrospective review of 159 patients aged 75 and older referred to the Memorial Sloan Kettering (MSK) for pre-op evaluation prior to a modified radical neck dissection between 2015-19. All patients completed the Electronic Rapid Fitness Assessment (eRFA) within 60-days prior to surgery. Patients received a point for each of the domains in which there is a deficit and these are summed to compute an accumulated geriatric deficit (AGD) score. The median AGD score of 5 was used to define fit vs frail patients. Three other metrics were utilized as comparators: age, KPS and MSK-Frailty Index (MSK-FI). We utilized a t-test as well as multivariable linear regression to determine whether frailty is associated with longer length of hospital stay, while adjusting for age, marital status, BMI, recurrent disease, and operating room time. Univariable Cox regression was used to assess association with all cause mortality.

Results: Frail patients, as defined by the AGD, had a longer length of stay (14.5 vs 8.1; p=0.02) and worse overall survival than fit patients (HR: 1.82 ; p=.03). KPS score of ≤80 was also associated with significantly longer length of stay (15.5 vs 8.61; p=0.04), while age and MSK-FI were not. AGD remained associated with longer length of stay on multivariable analysis (p=.03). Increasing age was also associated with worse survival (HR: 1.08; p=.001), however KPS and MSK-FI were not statistically associated with survival.

Conclusions: AGD is associated with increased length of hospital stay in older adults with HNC undergoing surgery. GA can be used to counsel patients on prognosis and may help guide treatment decisions.

D187 Student Presentation

Characteristics and Mortality Outcomes in Homebound HFpEF Patients

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Background: In homebound patients, heart failure continues to be a leading diagnosis and a prominent percentage of these cases have heart failure with preserved ejection fraction (HFpEF). We aim to analyze gender differences in a population of homebound HFpEF patients including mortality outcomes from January 2016 through March 2020.

Methods: A total of 422 men and women with HFpEF in a homebound population were compared regarding gender differences and all-cause mortality. Other characteristics analyzed included age, body mass index (BMI), blood pressure, and ejection fraction via electronic medical record. HFpEF diagnosis was determined by a baseline ejection fraction of ≥50% and signs and symptoms of heart failure. Key comorbidities including renal disease, pulmonary disease, hypertension, and diabetes were also noted. Mean characteristics were analyzed via t-tests and chi-squared tests.

Results (Table 1): Among the group, 39.3% were men and 60.7% were women. Mean age for men: 74.8±11.0 years; for women: 81.0±10.9 years (p<0.0001). Mean systolic blood pressure was 134.8±20.7 mmHg for men and 129.7±22.3 mmHg for women (p=0.0184). Other parameters including BMI and ejection fraction were not significantly different between the two groups. Hypertension, renal and pulmonary disease, and diabetes also did not differ between men and women. Mortality analysis revealed 50 deaths in men (30.1%) and 106 deaths in women (41.4%) (p=0.0190).

Conclusions: In a group of elderly homebound patients with HFpEF, key comorbidities were similar for men and women. There were more women than men, and women were significantly older. Mortality rates and systolic blood pressure in women during the study period were significantly higher.

Table 1. Baseline Characteristics of Men and Women with Heart Failure with Preserved Ejection Fraction in a Home Bound Population

Characteristics	Males (n=166, 39.3%)	Females (n=256, 60.7%)	P-Value
Mean Age ± SD (years)	74.8±11.0	81.0±10.9	P<0.0001
Race	White: 133 (80.1%) Non-White: 33 (19.9%)	White: 200 (78.1%) Non-White: 56 (21.9%)	P=0.6235
BMI ± SD	26.3±4.9	26.5±7.2	P=0.7341
Systolic Blood Pressure ± SD (mmHg)	134.8±20.7	129.7±22.3	P=0.0184
Diastolic Blood Pressure ± SD (mmHg)	80.0±14.2	77.2±15.3	P=0.0565
Ejection Fraction ± SD (%)	62.4±5.6	62.9±6.2	P=0.4771
Mortality (%)	50 (30.1%)	106 (41.4%)	P=0.0190
Hypertension (%)	134 (80.7%)	193 (75.4%)	P=0.2001
Diabetes (%)	66 (39.8%)	86 (33.6%)	P=0.1970
COPD (%)	39 (23.5%)	47 (18.4%)	P=0.2010
CKD (%)	21 (12.7%)	29 (11.3%)	P=0.6810

MedEx Health Network, Inc.

D188 Student Presentation

Patient Attitudes Towards Deprescribing Among Adults with Heart Failure with Preserved Ejection Fraction

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Background: Polypharmacy is nearly universal in patients with heart failure with preserved ejection fraction (HFpEF). Deprescribing is a potential strategy to improve outcomes in this vulnerable population. While patient attitudes towards deprescribing have been explored broadly, attitudes could differ across subpopulations. Accordingly, we sought to understand attitudes toward deprescribing among adults with HFpEF to guide future strategies for medication management.

Methods: We conducted a retrospective cohort study of 134 patients with HFpEF seen in July 2018 -December 2019 in the Weill Cornell HFpEF Program. We evaluated data from the revised Patient Attitudes Toward Deprescribing (rPATD), a validated 22-question Likert-scale survey, and examined bivariate associations between patient desire to have their medicines deprescribed and factors such as demographics and vulnerabilities across multiple domains.

Results: Among 134 patients, median age was 75 years (IQR 69-82) and almost all had polypharmacy (94.0%). Overall, 90.3% were willing to stop ≥1 medicines if told it was possible by their doctors; 26.9% wanted to try stopping ≥1 medicines to see how they feel without it; and 91.8% reported that they would like to be involved in decisions about their medicines. In bivariate logistic regression, non-white participants were less likely to want to try stopping ≥1 medicines to see how they feel without it (OR 0.25, 95% CI 0.09-0.62, p-value=0.005).

Conclusions: Most patients with HFpEF were amenable to deprescribing and would like to be actively involved in their medication management. Race may be an important factor that impacts patient attitudes toward deprescribing.

D189 Student Presentation, Encore Presentation

Does Age-Related Macular Degeneration (AMD) Treatment Influence Patient Falls and Mobility? A Systematic Review

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Background: Age-related macular degeneration (AMD), which impairs central vision and, therefore, increases fall risk, is the most common cause of blindness in the US. AMD treatments may improve patients' falls risk, as they aim to slow disease progression, reduce vision loss, and, perhaps, improve vision. This systematic review (ID #: 172623) synthesized the current understanding of wet and dry AMD treatments' impact on patient falls and mobility, connecting these two important and costly public health issues. **Methods:** On April 17, 2020, PubMed, Scopus, CINAHL, and the Cochrane Library Clinical Trials Database were queried. A full text search for pre-determined keywords replaced the standard abstract review. Eligible articles for inclusion were clinical trials and observational studies. Non-English and non-primary studies were excluded. Two authors (HG, JH) screened, extracted data, and assessed bias using RoB-2 and ROBINS-I. A third author (PL) served as a tie breaker. Authors identified patterns in the extracted data. **Results:** This database search resulted in 3,525 studies, with an additional 112 identified through bibliography review. Eleven articles met eligibility criteria. Most studies featured the outcome of interest as a secondary outcome (n=5) and as patient-volunteered adverse events (n=5). Nine out of the 12 outcomes had a moderate to serious risk of bias. No two studies used the same instrument to measure falls or mobility. **Conclusion:** Current studies' lack of quality data on how AMD treatments influence patient falls and mobility, limit our ability to remark on their relationship. This work underscores the need to broaden ophthalmologic research outcomes beyond visual parameters to include more patient-centered, functional measures. Falls comprise a costly public health issue in our aging population. Incorporating standardized assessment methods to screen for and track falls, as well as evaluate difficulty with walking and balance, would enable evaluation of AMD treatments on important functional outcomes and may help guide disease management in older adults with AMD.

D190 Student Presentation

DSPP is a serum marker for disease progression and patient survival in non-small cell lung cancer

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Background: Dentin sialophosphoprotein (DSPP) was previously shown to correlate with disease stage in oral and prostate cancer. Here, we set to investigate whether DSPP is ectopically expressed in non-small cell lung cancers and whether serum DSPP levels have prognostic value in predicting cancer recurrence and post-treatment survival.

Methods: DSPP levels were quantified by ELISA in serum obtained from the Lung Cancer Biospecimen Resource Network (LCBRN). Baseline serum from LCBRN enrollees was obtained pre-operatively from consented patients undergoing surgical resection for known or suspected lung cancer. Patient follow-up occurred every 6 months. Serum samples from 135 patients with benign, adenocarcinoma or squamous cell carcinoma and 77 individuals free of any disease were analyzed. The associations between DSPP and non-small cell lung cancers were assessed by multiple logistic regression and Kaplan-Meier methods.

Results: Serum DSPP levels in adenocarcinoma and squamous cell carcinoma patients were significantly higher than non-cancer control individuals and patients with benign tumors. In the multiple logistic regression model, DSPP levels were significantly and positively correlated with non-small lung cancers, with every 1 ng/ml increase in DSPP increased the cancer risk by 10.1%, adjusting for age, race, sex, BMI, smoking history, and cigarette pack years. Serum DSPP was also positively correlated with postoperative cancer recurrence and inversely with overall patient survival. Every 10 ng/ml increase in DSPP was associated with a 59% increase in cancer recurrence and a 52% increase in mortality. Kaplan-Meier survival curves indicated a DSPP cut-off level of 25 ng/ml was predictive for both cancer-free survival and overall survival. Patients with DSPP below 25 ng/ml had an average of cancer-free survival of 1609 days and total survival of 1687 days, compared to 1060 days and 1385 days, respectively, for patients with DSPP higher than 25 ng/ml.

Conclusion: Serum DSPP is significantly elevated in non-small cell lung cancer patients, particularly adenocarcinoma and squamous cell carcinoma. A DSPP level of 25 ng/ml can serve as a prognostic serum marker for non-small cell lung cancer recurrence as well as overall patient survival.

D191 Student Presentation

Epidemiology of allergic contact dermatitis in aging adults

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Background: Pruritic skin conditions are ubiquitous among aging adults, but workup and management remain a challenge. Allergic contact dermatitis (ACD) may play a major role in these pruritic eruptions. There are conflicting data regarding the prevalence of ACD in older adults, likely reflecting the complex relationship between age and the pathophysiology of ACD. Patch testing is essential for the definitive identification of contact allergens and has been shown to lead to an improvement in quality of life. The appropriate use of patch testing panels can hasten diagnosis, but the dearth of epidemiological data on ACD in the aging population complicates the management of pruritus. Our objective is to characterize the demographic and comorbid elements of ACD in the older population.

Methods: We conducted a retrospective chart review of 130 patients over 60 years of age who presented to the UCSF Dermatology Clinic for patch testing between October 2013 and January 2019. We recorded demographic information, allergen series tested, location and duration of symptoms, history of atopic dermatitis, immunosuppressive therapy at the time of testing, and positive patch test results for each patient.

Results: Of the 130 patients who underwent patch testing, 98 (75%) had at least one positive reaction; 31 had a history of atopic dermatitis; and 15 were on systemic immunosuppression. Gender and racial identities were as follows: 86 patients identified as female, 44 as male, 94 as White/Caucasian, 15 as Asian, 5 as Black/African American, 3 as Native Hawaiian/Other Pacific Islander, 1 as Native American/Alaskan Native, and 9 as Other. Further data analysis will reveal rates of reaction to individual allergens and differences between the younger and older populations.

Conclusions: There is a high rate of contact sensitization among aging adults referred for patch testing, suggesting that patch testing is an important diagnostic step in older adults with refractory pruritic eruptions. As the older population continues to grow, it is increasingly important that clinicians be familiar with the characteristics and epidemiology of ACD in aging adults. Our data may help inform the workup and management of persistent pruritic eruptions in this population and should serve as clinical support for choosing which patients to consider for patch testing and which allergens to test.

D192 Student Presentation

Comparison of Frailty Risk Scores Between Heart and Lung Transplant Populations

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Background: Frailty is a decline of physiological reserve associated with increased vulnerability to health stressors such as transplant surgery. Although frail patients are at greater risk for adverse outcomes post-transplant, there is no standard method to assess frailty in transplant candidates. This study elucidates the use of chart-review frailty assessment in heart and lung transplant patients and compares the prevalence of individual frailty risk factors across these two populations.

Methods: In this single-center, observational study, 25 heart and 84 lung candidates listed for transplant were assessed for frailty using the Frailty Risk Score (FRS), a chart-review based frailty assessment. In the heart and lung populations, FRS was measured using 15 different biopsychosocial and functional components, including biomarkers, social support, depression, cognitive impairment and nutrition. T-tests and linear regressions were performed with the JMP Pro 14 (SAS software) to compare FRS between heart and lung populations and the association between FRS and age. We then determined how prevalent each of the 15 components were in both cohorts by percentage and qualitatively compared them across the two populations.

Results: Of 25 heart transplant candidates, mean age was 58 years and mean FRS was 4.4 out of 15. Of 84 lung transplant candidates, mean age was 58 and mean FRS was 3.9 out of 15. There was no significant difference in FRS between lung and heart cohorts (p=0.279). FRS did not correlate with age in either cohort. The heart cohort had a higher prevalence of weakness (28%), cognitive dysfunction (32%), low albumin (44%) and low hemoglobin (76%) compared to the lung cohort (7%, 12%, 15%, 26% respectively). The lung cohort had a higher prevalence of chronic pain (40%), social support issues (15%) and abnormal white blood count (40%) than the heart cohort (24%, 4%, 8% respectively). Both cohorts had a majority of dyspnea and fatigue.

Conclusions: FRS does not differ in heart and lung patients listed for transplant, but prevalence of the individual components may vary. With ongoing work, we will further elucidate the potential of FRS as a versatile method to measure frailty in solid organ transplant populations.

D193 Resident Presentation

Review of Patient Reported Outcomes in Periprosthetic Distal Femur Fractures after Total Knee Arthroplasty: Plate or Intramedullary Nail?

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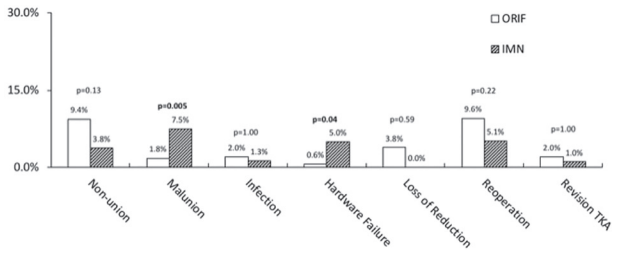
BACKGROUND: Periprosthetic fractures (PPF) after total knee arthroplasty (TKA) are increasing in frequency globally. There is no consensus in the literature for the most effective and safest treatment option, particularly with regard to patient reported outcomes. We performed a review to examine the patient reported outcomes following fixation of the PPF using either a plate (ORIF), or an intramedullary nail (IMN).

METHODS: A comprehensive review was performed to identify all published studies over the past 20 years that included the outcome measures of the Knee Society Score (KSS) or the Western Ontario and McMaster Universities osteoarthritis index (WOMAC). We also analyzed other outcomes such as the knee range of motion (KROM) along with complications: non-union, malunion, infection, revision, and overall reoperation.

RESULTS: Thirteen studies met inclusion criteria. The mean follow-up was 3.6 years for both groups. The mean KSS was 83.1 and 84.2, respectively for the ORIF and the IMN groups. The mean post-operative KROM was 99.3° and 100°, respectively for ORIF and IMN groups. The complication rates respectively for the ORIF and IMN groups were: non-union 9.4% and 3.8% (p=0.13), malunion 1.8% and 7.5% (p=0.005), infection 2.0% and 1.3% (p=1.00), hardware failure 0.6% and 5.0% (p=0.04), reoperation rate 9.6% and 5.1% (p=0.22), and revision TKA 2.0% and 1.0% (p=1.00).

CONCLUSION: Both treatment options (ORIF, IMN) are commonly utilized to treat PPFs around a TKA. There remains a paucity of patient reported outcomes in the published studies to date. Our review of the available evidence over the past 20 years demonstrated no difference in the outcomes between the two treatments. There were however some differences in the complications between the groups, in particular with higher rate of malunion in the IMN group.

Figure 1: Complications



D194 Resident Presentation

Will to Live in Nursing Home Residents: A Cross-Sectional Study with Short-Term Follow-Up in Switzerland

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Background: The will to live (WTL) is an important indicator of subjective well-being. This resource-oriented indicator may enable a deeper understanding of nursing home residents. No previous data about residents' WTL was available. We evaluated the intensity of WTL, various factors associated with WTL, as well as its evolution and proxy assessment of WTL among residents ≥65 years.

Methods: A cross-sectional study was conducted in January 2020 and August–October 2020 in four Swiss nursing homes. Residents unable to give consent were excluded. WTL was assessed using a single-item numerical rating scale ranging from 0 to 10. Other variables assessed included age (years), gender (1=women), physical mobility (range 1–9), duration of daily care (minutes), and prognosis (1=good). Follow-up was assessed among a sub-sample of 17 participants after 3 and 6 weeks. WTL was also assessed by residents' professional caregivers and next of kin, and inter-rater agreement was calculated.

Results: Data from 103 participants (75.7% women, 87.3 ± 8.0 years) was analyzed. The median intensity of WTL was 8 (interquartile range 6–10, mean 7.6). WTL was significantly associated with better physical mobility (β=-0.45, *p*=0.02). However, no significant association was found between WTL and age (β=-0.01, *p*=0.79), gender (β=-0.30, *p*=0.62), duration of daily care (β=-0.01, *p*=0.13), or prognosis (β=0.34, *p*=0.55). Multivariate analysis revealed that physical mobility is a significant independent predictor of WTL (β=-0.54, *p*=0.05). In the follow-up assessment, WTL remained highly stable. Intra-class correlation coefficients were moderate for residents' next of kin (0.59, 95% CI 0.41–0.73), nurse assistants (0.57, 95% CI 0.43–0.69) and physicians (0.53, 95% CI 0.36–0.68), but poor for nurses (0.39, 95% CI 0.23–0.54); and these proxy assessments underestimated the resident's WTL.

Conclusions: WTL is high among nursing home residents and remains stable. Mobility is a key determinant. Proxy assessment is insufficient to fully understand residents' WTL, emphasizing the importance of openly communicating with residents about their WTL.

D195 Resident Presentation

The Trauma Dyad: Understanding the Caregiving Needs of Injured Older Adults

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Background

Older adults account for 40% of all trauma admissions and numbers are rising. Injured older adults experience high rates of functional decline and disability after hospitalization. However, little is known about informal caregiving post-discharge, nor how to proactively identify patients who will have high care needs post-discharge. We hypothesized that higher injury severity would be associated with increased caregiving needs after injury.

Methods

We used the National Health and Aging Trends Study (NHATS, 2011-2017) to identify adults ≥65 who had a hospital admission due to traumatic injury and had an NHATS interview within 12 months pre and post injury. Injury severity was assessed using the injury severity score (ISS, scored 0-75, higher worse, categorized as low 0-9; moderate 10-15, severe 16-75). Patients were asked about the types and amount (in hours) of help received (self-care, mobility, household), from whom they received help, and if they had unmet needs in these categories. A multivariable logistic regression model examined the association between ISS (continuous and ISS≥9) and positive increase in caregiving hours received.

Results

We identified 412 trauma patients. Most were female (67.6%) and White (83.2%); half were frail. The most common mechanism of injury was fall and median injury severity was low (ISS=9). Those reporting receiving help with any activity increased post-injury (49% to 72.4%, p<0.01), and unmet needs nearly doubled (23% to 43%, p<0.01). On average, patients had two caregivers, the majority of whom (75%) were informal and often family members; weekly hours of care received increased from 26 to 36 (p<0.01). In multivariable analysis, ISS did not independently predict positive increase in caregiving hours received.

Conclusions:

Higher injury severity does not independently predict increased caregiving hours after injury, suggesting that older patients with low injury severity also have high caregiving needs. These results can help set expectations for caregivers and facilitate care transitions after hospitalization.

D196 Resident Presentation

Development and implementation of an age-appropriate agitation management algorithm in the emergency department

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Purpose:

Delirium is defined as an acute, fluctuating syndrome of altered consciousness and cognition common in hospitalized older adults, often accompanied by agitation. Treatment of older adults presenting with delirium to the emergency department can be challenging due

to their increased sensitivity to traditionally used agents. Providing age-appropriate treatment in the emergency department creates an opportunity to optimize medication management and decrease the worsening of delirium or subsequent negative patient outcomes. The purpose of this study was to develop, implement, and evaluate an age-appropriate treatment algorithm that guided management of treatment in patients who presented to the emergency department with agitation.

Methods:

This single center, cohort study evaluated agitation medication management in the emergency department pre and post development and implementation of a treatment-guided algorithm. The algorithm was developed with an interprofessional group of local thought leaders and hospital stakeholders to help optimize medication administration practices with a clear distinction in medication options for geriatric patients. Participants included all patients 70 years of age or older who were in the emergency department between January 1, 2020 and April 1, 2021 with agitation orders of medications such as: lorazepam, haloperidol, quetiapine, risperidone, olanzapine, or ketamine. Patients who were intubated, hospice, taking higher doses of antipsychotics and/or benzodiazepines at home, experiencing alcohol withdrawal or have history of seizures were excluded.

The primary outcome was the percentage of age-appropriate dosing per the treatment algorithm in the setting of agitation pre and post algorithm implementation. The following secondary outcomes were performed for pre and post study groups: average length of stay, percentage of patients with a sitter, percentage of patients with restraints, discharge disposition, readmission rate, mortality rate, episodes of reported workplace violence, and adverse drug reactions. In addition, a secondary analysis was performed for the aforementioned outcomes by comparing all patients who received inappropriate and appropriate doses of medications within the pre and post groups.

Results:

The results will be discussed.

Conclusion:

The results will be discussed.

D197 Resident Presentation

A National Study of US Hospital Visitor Policies during the COVID-19 Pandemic

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Background: The objective of this study was to examine the prevalence and scope of hospital and emergency department (ED) visitor polices during the COVID-19 pandemic, and the presence of exceptions for adults with cognitive impairment (CI), physical limitations or receiving end-of-life care.

Methods: This was a cross sectional analysis of US hospital and ED visitor policies between 6/1/2020 and 9/1/2020. Data were obtained via web-based query on hospital and ED websites. We randomly selected both academic and non-academic EDs and their affiliated hospitals across the US. Each site was geographically classified by US Census Bureau region and as urban or rural using Urban Influence Codes. Data were obtained on the presence of a COVID-specific hospital and/or ED visitor policy and specified exceptions to that policy. Data for each site were independently abstracted by at least two investigators. We compared the presence of visitor policies by academic and regional categories using Fisher's Exact test.

Results: Of the 352 hospitals included in our study, most (326, 93%) had a COVID-19 hospital visitor policy. COVID hospital visitor polices were more likely to be found at academic vs. non-academic sites (96% vs. 90%; $p<0.05$) and at urban vs. rural sites (95% vs. 84%; $p<0.001$). There were 164 sites that also had an ED visitor policy. For ED visitor policies there was no significant difference between academic and non-academic sites (48% vs. 46%; p=0.7) or urban and rural sites (48% vs. 42%; p=0.3). US Census region was not associated with presence of hospital or ED visitor policies. Of the sites with hospital visitor policies, 126 (39%) had exceptions for persons with CI, 107 (33%) had exceptions for physical limitations, and 190 (58%) had exceptions for end of life care. Of the 164 sites with ED visitor policies, 48 (29%) had exceptions for persons with CI, 40 (24%) had exceptions for physical limitations, and 43 (26%) had exceptions for end of life care.

Conclusion: Hospitals with an academic affiliation and those located in more urban areas were significantly more likely to have a COVID-19 specific hospital visitor policy. There was significant variation in policy exceptions for individuals with cognitive impairment, physical limitations, and receiving end of life care.

D198 Resident Presentation

Systematic review of decision aids in hematologic malignancies

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BACKGROUND: Patient decision aids (PDAs) are tools designed to facilitate decision-making for patients and their caregivers. In this systematic review, we summarized existing studies on the development and evaluation of PDAs for patients with hematologic malignancies and their caregivers, with a special focus on older adults.

METHODS: Using PRISMA guidelines, we identified articles from five databases. We included studies, abstracts, and clinical trial protocols available in English involving PDAs for patients age ≥18 diagnosed with a hematologic malignancy and/or their caregivers. Two independent investigators screened articles for inclusion. We did not perform meta-analysis given the heterogeneity in studies.

RESULTS: Of the 5,281 titles/abstracts and 27 full texts we screened, 15 were included: two protocols, seven abstracts, and six full-texts. Common cancers included multiple myeloma (n=4), acute myeloid leukemia (n=3), and chronic lymphocytic leukemia (n=3). Six were PDA developmental studies, six were pilot studies, and three were randomized trials. PDA formats included electronic with web content, videos, and/or audio (n=11), questionnaires (n=2), bedside instruments (n=1), and a combination of various formats (n=1). Mean participant age ranged from 36.0 to 62.4 years. Important factors in treatment and supportive care decision-making as identified by patients and caregivers in developmental studies were efficacy, adverse effects, cost, and quality of life. PDAs were associated with increased knowledge (n=4) and patient satisfaction (n=3) as well as decreased decisional conflict (n=2), anxiety/distress (n=1), and attitudinal barriers (n=1). No study specifically addressed older adults. One study found those aged>75 and non-computer users reported less interest in the use of video as a PDA.

CONCLUSION: There are limited studies on the development and evaluation of PDAs for patients with hematologic malignancies and their caregivers, and none specifically for older adults. PDAs may improve patient-centered outcomes but need to be further studied.

D199 Resident Presentation

Pre-Lung Transplant Frailty as a Predictive Measure of Poor Outcomes in Older Adults

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Background

Frailty is associated with pre-lung transplant delisting and post-transplant mortality in older adults with chronic lung disease. The Fried Frailty Phenotype (FFP), a well-studied frailty measure in this population, does not incorporate cognitive screening or polypharmacy review to delineate post-operative delirium risk. Limited data exists on which frailty assessment is most predictive of adverse outcomes after transplant. We developed an algorithm to include a comprehensive geriatrics assessment (CGA) for all patients ≥ age 65 being considered for lung transplantation. The goals of this program are (1) to assess cognitive status, functional status, and frailty in pre-transplant stage, (2) determine post-transplant delirium and 1-year mortality rates, and (3) compare the predictive value of alternative frailty assessments.

Methods

A geriatric PA and geriatrician completed a CGA for 13 patients ≥ age 65 undergoing lung transplant evaluation from 6/2020 – 11/2020. Patients were excluded if age < 65 or deemed inappropriate for transplantation by the Medical Review Board (MRB). The CGA incorporates cognitive screening, nutritional evaluation, grip strength, gait speed, time to complete 5 chair stands, polypharmacy review, and frailty measures using the frailty deficit index (FI, frailty defined as >0.25) and FFP. These findings were incorporated into the MRB's final decision regarding listing.

Results

We provide a descriptive analysis of our ongoing collaboration. Average age was 69.5 years with 38% female patients. Average FI score was 0.28 (5 were pre-frail, 4 were mildly frail, 4 were moderately frail). Of note, there were 0 patients with severe frailty, likely due to sample bias. Six were deemed frail per the FFP. Patients deemed moderately frailty per FI or frail per FFP were either denied transplant or listed for single-lung transplant only. Of the 6 that were listed, 3 patients have received a transplant, with 1 death within 30-days complicated by post-operative delirium. During pre-operative assessment, this patient was pre-frail per FFP, mildly frail per FI, but had abnormal cognitive screening.

Conclusion

Advanced age is no longer an absolute contradiction to lung transplantation. A CGA with cognitive and frailty assessments provides a more nuanced risk stratification which may help lung transplant committees select candidates with acceptable predicted functional recovery and survival rates after transplant.

D200 Resident Presentation

Evaluation of psychoactive medications in Veterans admitted for elective surgery in the Perioperative Optimization of Senior Health (POSH) program

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Background: Older adults have increased risk of postoperative complications related to slower recovery, longer hospital stay, increased readmission rates, and increased mortality. Use of high-risk medications during inpatient admissions are associated with increased risk of sedation, delirium, and neurological effects in older adults. The Perioperative Optimization of Senior Health (POSH) program facilitates interdisciplinary team management for older adults pursuing elective surgery. The purpose of this project is to describe the differences in prescribed psychoactive medications during elective inpatient surgeries in a POSH cohort compared to a control cohort.

Methods: This quality improvement project was conducted at the Durham Veterans Affairs Health Care System. Veteran's included in the analysis were patients requiring an inpatient admission for an elective surgery, including General, Neurologic, Vascular, and Urologic surgeries from 2015 to 2019. Criteria to be evaluated by the POSH program includes patients age > 85 years or > 65 years with impaired cognition, weight loss or frailty, multiple comorbidities, or polypharmacy. The control cohort consisted of propensity-matched patients during the same time period. The endpoints were stratified based on psychoactive medication classes that were prescribed during the inpatient admission and included anticholinergics, antidepressants, antipsychotics, and benzodiazepines. The primary endpoint was the difference in scheduled medications in the POSH cohort compared the control cohort. Secondary endpoints include the differences in new medications, as needed medications, and discharge medications in the POSH cohort compared to the control cohort.

Results: The results will be discussed.

Conclusions: The results will be discussed.

D201 Resident Presentation

Elderly Ground Level Falls at a Level I Trauma Center: Have Another Beer

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Background: Ground level falls(GLFs) comprise the most common injury pattern in elderly trauma. Dr. Beers and The American Geriatric Society published criteria for Potentially Inappropriate Medications(PIMs) in 1991, with >100 listed in the 2019 updated guidelines. Many elderly trauma patients who have a GLF take PIMs; we evaluated the PIMs trends in our geriatric GLFs.

Methods: Retrospective review of patients >65 years old with a GLF at a level 1 trauma center from January 2017-December 2017 yielded 1147 patients. We recorded anticoagulants, opioids, antihypertensives, antiarrhythmics, and hypogylcemics in addition to PIMs, creating a category of extensive PIMs(EPIMs). The primary outcomes were hospital length of stay(HLOS) and ICU LOS(ILOS); secondary outcomes were Injury Severity Score(ISS), Charlson Comorbidity Index(CCI), and discharge disposition, specifically Skilled Nursing Facilities(SNF). Medications with usage in ≤50 patients were excluded. We used Stata for t-test analyses and logistic regressions.

Results: Of 1147 patients, 921 had home EPIMs, with a mean of 5.04 EPIMs(SD 2.77). HLOS was higher in warfarin, apixaban, carvedilol, and diltiazem usage(4.51 vs 5.34, p=0.01; 4.54 vs 5.36, p=0.038; 4.51 vs 5.24, p=0.017; and 4.53 vs 5.41, p=0.018). Plavix, nitroglycerin, and metformin usage had longer ILOS(1.56 vs 2.01, p=0.033; 1.55 vs 2.30, p=0.002; and 1.55 vs 2, p=0.016). The total EPIMs and antihypertensives correlated with ILOS(OR 1.23, CI 1.148-1.306, p<0.001 and OR 1.42, CI 1.244-1.624, p<0.001). Controlling for age, sex, ILOS, CCI, and ISS, the OR for SNF discharge for EPIMs was 1.088(CI 1.032-1.147, p = 0.002) and 1.201(CI 1.074-1.342, p=0.001) for antihypertensives. Furosemide(OR 1.792, CI 1.27-2.526, p=0.001), lisinopril(OR 1.462, CI 1.029-2.077, p=0.034), and alprazolam(OR 1.0374, CI 1.018-1.057, p<0.001) were associated with SNF discharge.

Conclusion: Increased number of EPIM usage in GLFs strongly correlates with ILOS and discharge to SNF, especially any antihypertensive EPIMs. In addition to PCPs, traumatologists can help evaluate EPIM usage with Screening Tool of Older Persons' potentially inappropriate Prescriptions (STOPP) to reduce the rate of GLFs and its burden on the healthcare system.

D202 Resident Presentation

Clinical Care Redesign of the Geriatric Hip Fracture Pathway

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Background:

Geriatric hip fractures are associated with significant morbidity, mortality, and economic burden, yet treatment remains variable. Our goal is to create and implement a high-value, evidence-based clinical care pathway for geriatric patients sustaining hip fractures.

Methods

We began by creating a current-state process map of our institution's pathway for geriatric hip fracture management. We identified quality measures and CPGs from literature review and applied those to the map to identify areas where we could add value. Using the IHI Age friendly Health Systems framework as a reference, we prioritized an initial mobility assessment within 24 hours post-op, added documentation of DPOA/family caregiver as well as What Matters Most within 24 hours of admission, and utilized a multidisciplinary team from geriatric medicine, orthopaedics, nursing and anesthesia to redesign our medication regimens. We also started a dedicated fracture liaison service to capture patients in need of ongoing osteoporosis care post-discharge.

Following our pathway launch in February 2021, we will compare outcomes between a pre- and post-implementation cohort of patients with geriatric hip fractures. Primary outcome will be length of stay and AM-PAC mobility score at 48 hours postop. Secondary outcomes include time to surgery, time to medicine evaluation, time to pain consult, location of discharge, use of regional and/or multimodal anesthesia, completion of osteoporosis work up, subsequent fragility fracture, cost, and variability.

Results

Length of stay over the four years prior to implementation (n = 475 patients) averaged 5.38 days, with a mean time to surgery of 29.1 hours. 7.4% of patients required ICU level of care and mortality rate was 2.5%. 81.1% of patients were discharged to skilled nursing facilities. AM-PAC scores and post-implementation data with comparative statistics will be reported in the spring of 2021.

Conclusions

We hope that our Geriatric Hip Fracture Pathway will improve reliable and consistent implementation of standard geriatric processes in this high-risk cohort, thus increasing the quality and efficiency of care, while improving outcomes that matter to the patients and family like discharge home and earlier mobility.

D203 Resident Presentation

Medication Complexity and Heart Failure among Older Adults

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Introduction: Medication-related problems among older adults with heart failure (HF) are significant public health issues. While polypharmacy and adherence are frequent causes of geriatric complications, medication complexity (MC) may also play a substantial role in complications experienced with HF patients. MC describes the difficulty of a patient's drug regimen due to the way the therapies are prescribed and may even prove to be a better predictor of morbidity and mortality. This review aims to explore the literature on how MC has been assessed among HF patients and summarize the association between MC and clinical outcomes among older adults.

Methods: We conducted a narrative review of the literature. We searched the PubMed database using search term combinations of 'medication regimen complexity' and 'heart failure.' We included studies addressing MC and clinical outcomes in HF patients conducted between 1998 and 2020. We excluded studies if the full text was not available.

Results: We found over 9000 studies, and after applying inclusion and exclusion criteria, we finalized 7 studies. Five articles assessed MC with a tool, medication regimen complexity index (MRCI), while 2 addressed MC with various definitions and characterizations, including polypharmacy, therapeutic competitions, adherence, costs, count/dosing. MRCI weighs drug route/form, frequency, and special instructions to calculate a score correlating with MC with the higher scores indicating higher complexity of a patient's prescribed regimen. While all the studies contended that general MC is high and continues to increase, differing conclusions were drawn regarding the association MC and clinical outcomes. It was noted that MRCI scores differed based on HF etiology, and comorbidities created greater MC due to competition of drug mechanisms. One study assessed that QoL did not decrease with an increase in MRCI. Only 3 articles directly addressed MC within the geriatric population.

Conclusion: MC has been used in the literature to assess the association with the clinical outcomes, but their results were heterogeneous, and few studies focused on older adults. Further studies to define valid and appropriate tools to define MC in HF among older adults and assess its clinical implications in this population are warranted.

D204 Resident Presentation

Assessing the impact of current standard-of-care on drug-associated fall risk at discharge: a retrospective review

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Background: Each year, approximately 3 million geriatric patients are treated in the emergency department for fall injuries. Falls can often be multifactorial, with medications as a potential modifiable risk factor. The objective of this study is to determine the impact of current standard-of-care on drug-associated fall risk at discharge and compare drug-associated fall risk on admission and discharge.

Methods: The electronic medical record system will identify patients who are ≥ 65 years of age and were admitted to the trauma unit between January 2018- December 2019. The following data will be collected: patient age, gender, medications on admission and discharge. The reviewers will assess each patient encounter to determine drug burden index and medication regimen complexity.

Results: The results are in progress and will be discussed.

Conclusion: The results of this intensive review will provide information regarding what methods will be appropriate to utilize to assess patients for falls risk in relation to medications. This will also provide information on current practice and identify areas of improvement in regard to medication-related interventions. This study will likely strengthen the support for an interprofessional protocol in the CAMC Trauma Service.

D205 Student Presentation

Urinary 8-oxo-7,8-dihydroguanosine as a predictor of worsening frailty state in older adults

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Background: Urinary 8-oxo-7,8-dihydroguanosine (8-oxo-Gsn) is an oxidative stress biomarker of RNA and is associated with frailty. However, the ability of 8-oxo-Gsn to predict frailty transitions is unknown. This study evaluated the predictive value of 8-oxo-Gsn for frailty transitions in older adults.

Method: Prospective cohort study with a 1-year follow-up. We studied 230 community-dwelling older adults aged ≥ 75 years in Beijing, China. The frailty state was assessed using FRAIL both at baseline and during the 1-year follow-up. Urinary 8-oxo-Gsn was measured using ultraperformance liquid chromatography and mass spectrometry at baseline. The predictive value of 8-oxo-Gsn for frailty transitions was evaluated using univariable and multivariable analyses. A prognostic scoring system for frailty transition was also developed.

Results: Among the 230 eligible older adults, 181 (age, 75–94 years; mean age, 83.9 ± 4.4 years; 59.1% women) completed follow-up. Most of the participants remained in the same frailty state (48.6%) or transitioned to a worse frailty state (30.4%) during follow-up. In non-frail participants, higher 8-oxo-Gsn was significantly associated with a worsening frailty state (odds ratio 1.76; 95% confidence interval 1.07–2.89, p=0.026) and the prognostic scoring system developed using 8-oxo-Gsn, age, and walking speed for worsening frailty state showed good performance (AUC=0.84). For frail participants, we did not observe a correlation between 8-oxo-Gsn and frailty state improvement.

Conclusion: Frailty is a dynamic and reversible states in older adults. Urinary 8-oxo-Gsn is a predictive factor for worsening frailty state in non-frail older adults.

D206 Student Presentation

Complicating Glaucoma Diagnostics and Management in Neurodegenerative Disease

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Background: With glaucoma being the leading cause of vision loss worldwide, there is much importance in properly diagnosing and managing it. Glaucoma is defined as an intraocular pressure (IOP)-related optic neuropathy that results in characteristic atrophy and vision loss. The typical tests used to monitor open angle glaucoma (OAG) include intraocular pressure (IOP), optical coherence tomography (OCT), humphrey visual field (HVF) testing. However, the results of some of these tests can be confounded by many conditions, including concurrent dementia or neurodegenerative disease (NDD). Reports of OCT and HVF changes associated with NDDs have been reported, such as in Parkinson's disease, Alzheimer's disease, and multiple sclerosis. Therefore, OAG patients with concurrent NDD will have a higher incidence of unreliable testing when compared to primary open angle glaucoma (POAG) patients, and providers will be forced to rely on more objective, but imperfect measures such as IOP.

Objective: To highlight the increased unreliable and confounded data in OAG patients with concurrent dementia or NDD compared to non-diseased primary open angle glaucoma patients.

Methods:

Design: Retrospective Case Control Study

Setting: Kittner Eye Center, University of North Carolina at Chapel Hill

Population: A total of 310 patients in the diseased group who have OAG with concurrent dementia or NDD. Over 253 of these patients are 65 or older. Patient data, from January 1, 2014 to January 1, 2020, was requested through the North Carolina Translational and Clinical Sciences (NCTraCs) Institute from the Carolina Data Warehouse for Health (CDWH) using the i2b2 interface.

Measures: Age, race, sex, weight, medical record numbers

Analytic procedures: A biostatistician will perform statistical analyses on the data.

Results: Preliminary data indicates a significant majority of OAG patients having concurrent NDD with incomplete or unreliable HVF testing. Other data will be presented.

Conclusion: Our preliminary findings show that even if OAG patients with concurrent NDD follow up with an ophthalmologist for monitoring their glaucoma progression, the unreliability of some current monitoring tests make it difficult, if not impossible, to accurately assess a patient's progression.

D207 Student Presentation

A better strategy for depression screening in Chinese elderly inpatient

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Background: To estimate the effectiveness of commonly used depression scales and develop an improved strategy for depression screening among Chinese elderly patients for non-psychiatric geriatricians.

Methods: A cross-sectional study of 458 elderly inpatients aged 65 to 95 years was conducted in a geriatric ward from Beijing. Whooley questions, Zung Self-rating Depression Scale (SDS), and Geriatric Depression Scale-15 (GDS-15) were performed by trained geriatricians. Diagnosis of depressive disorders was made by a psychiatrist in accordance with Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5) criteria. We calculated the sensitivity, specificity, positive and negative predictive value (PPV, NPV), and consistency rates of three depression scales when implemented alone, and in combination.

Results: The GDS-15 common cutoff point was 5, with sensitivity of 77.5%, specificity of 64.4%, PPV of 83.2%, and NPV of 55.8%. The Zung SDS yielded sensitivity of 63.7%, specificity of 68.9%, PPV of 82.3%, and NPV of 45.6% at the standard cutoff index value of 50. At least one positive answer to Whooley questions achieved sensitivity of 57.8%, specificity of 64.4%, PPV of 78.7%, and NPV of 40.3%. PPV for a two-step approach (combining Whooley questions and GDS-15: 88.5%; combining Whooley questions and Zung SDS: 85.5%) was higher compared with single screening.

Conclusions: GDS-15 is a routine tool for screening depression among Chinese elderly inpatients. A two-step approach using Whooley questions and GDS-15 can improve the recognition of depressed patients for non-psychiatric geriatricians.

D208 Student Presentation

Correlation of components of the comprehensive geriatric assessment (CGA) and survival in older adults (OA) with gastrointestinal (GI) malignancies at a Hispanic-rich NCI-designated cancer center.

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Background: Hispanics as well as OA are underrepresented in clinical trials. CGA predicts toxicity and survival in OA but there is limited data in GI malignancies, specifically in Hispanics. Therefore, we evaluated the relationship of components of the CGA and survival in OA with GI cancers, including Hispanics.

Methods: Retrospective analysis of 100 OA with GI cancers, receiving baseline CGA in GI clinic from 1/2017-4/2019. Cancer type, stage, ECOG, first treatment modality, consultations were documented. CGA components: falls, weight loss, comorbidities, Charlson comorbidity index (CCI), activities of daily living (ADLs), instrumental activities of daily living (IADLs), geriatric depression scale (GDS), Medical outcome study social support (MOS-ss). Median overall survival (mOS) estimated from Kaplan-Meier curves and hazard ratios (HR) were estimated for demographics, clinical characteristics and CGA factors with Cox proportional hazard models.

Results: Median age 71.1 years (65-90), Male (55%), Hispanics (56%). Cancer types: Colorectal (18%), Liver (22%), Pancreatic (37%), Biliary (12%), Anal Cancer (1%), GEJ (1%), NET (2%),

Other (2%). Comorbidities: Diabetes (39%), HTN (1%), HLD (28%), CAD (17%), CKD (11%), Other (72%). ECOG 0 (49%), 1 (28%), 2 (21, 21%), 3 (2%). Survival by demographics: BMI <25 vs >25 (HR 0.48, P 0.09), Gender (HR 0.93, P 0.83), race- Hispanic vs Non-Hispanic white (HR 1.06, P 0.88). Survival by geriatric assessment: ADL <5 vs 5 (HR 0.91, P 0.55), GDS <7 vs 7 (HR 1.31, P 0.59), MOS <4 vs 4 (HR 1.75 P 0.25), falls- no vs yes (HR 0.91, P 0.89), weight loss- no vs yes (1.27, 0.69). Survival by clinical characteristics: Albumin <3 vs 3+ (HR 0.61, P 0.18), hemoglobin <10 vs 10 (HR 0.79, P 0.66), polypharmacy 1-9 vs 10+ (HR 4.06, P 0.17). Hepatobiliary & pancreatic cancers and ECOG 2 correlated with worse survivals in OA. Subgroup analysis of Hispanics vs. non-Hispanics did not show statistically significant differences.

Conclusion: In OA with GI malignancies, age >75, CCI 4+, ECOG 1-2, and hepatobiliary cancers were significantly associated with worse survival. Differences in Hispanics versus non-Hispanic OA were not observed. Future studies in GI cancers should include these variables prospectively to risk stratify OA in clinical trials.

D209 Student Presentation

Practice guideline for pharmacists: the management of late onset hypogonadism in men

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Background: Late onset hypogonadism (LOH) is a medical condition that affects middle aged and older men due to a decline in testosterone levels as men age. Treatment of LOH and management of the risk factors involve activities that are within the scope of practice of pharmacists. However, the current guidelines on LOH provide differing recommendations that are primarily physician centric. The purpose of this project was to develop a guide for pharmacists in assessing and managing LOH.

Methods: A literature search of databases (Medline, Embase, Scopus, Dynamed and Clinical Key) was performed by two researchers in May 2020, identifying 12 guidelines and 24 review articles that were relevant to assessment and management of LOH. The guidelines were appraised using the AGREE II tool and were prioritized based on the domain scores. The 5 highest ranked guidelines were used to inform the majority of the text and the algorithms in the guide.

Results: Twelve clinical practice guidelines were identified. The top 5 guidelines were integrated into an algorithm for assessment and another for treatment. The primary therapeutic intervention was testosterone supplementation, although alternatives were provided for men concerned about fertility. Guidance was provided for monitoring, and management of comorbidities often accompanying LOH.

Conclusion: Assessment and management of LOH requires careful consideration of an individual's medical conditions and medications. It is essential that pharmacists are aware of how LOH is diagnosed, which testosterone preparations to recommend and how to counsel and monitor patients on testosterone therapy (TT).

D210 Resident Presentation

Prevalence and risk factors of sarcopenia in middle-aged and elderly Asian patients with type 2 diabetes: A meta-analysis

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Background: The prevalence of sarcopenia shows large variations across different countries. The aim of this study was to determine the prevalence and risk factors of sarcopenia in middle-aged and elderly Asian patients with type 2 diabetes mellitus (T2DM).

Methods: A meta-analysis of published studies in PubMed, Embase, Cochrane Library, Web of Science, Chinese National Knowledge Infrastructure, China Wanfang Database, China Biomedical Literature Database, and Chinese Scientific Journal Database. This meta-analysis was performed and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis. The RevMan and Stata software were used for statistical analysis of the extracted data. The odds ratio (OR) and its 95% confidence interval (CI) were used to express the combined effect of each study. A $P<0.05$ was considered as statistically significant. Sarcopenia was defined according to the Asian Working Group for Sarcopenia criteria.

Results: Twenty studies with 6911 participants aged ≥50 years were included in the meta-analysis. The pooled prevalence of sarcopenia was 20% (95% CI: 17.0-23.0) among the middle-aged and elderly patients with T2DM in Asia. Meta-analysis showed that risk factors for sarcopenia included age (OR 1.22, 95% CI: 1.10-1.35), duration of diabetes (OR 1.79, 95% CI: 1.04-3.07), hemoglobin A_{1c} (OR 3.52, 95% CI: 1.92-6.44), body mass index (OR 3.32, 95% CI: 1.83-5.99), and physical activity (OR 2.42, 95% CI: 1.51-3.86).

Conclusions: Sarcopenia is highly prevalent among middle-aged and elderly patients with T2DM in Asia. Advanced age, prolonged diabetes, low body mass index, low physical activity, and high hemoglobin A_{1c} are risk factors for the development of sarcopenia. Prompt screening and intervention should be conducted in patients with T2DM to reduce the occurrence of sarcopenia.

D211 Resident Presentation

Does the Diagnosis of Dysphagia Predict Outcomes of Complications in Geriatric Patients Admitted for Aspiration Pneumonia?

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Background:

Aspiration pneumonia is very common in the elderly admitted for community acquired pneumonia and is associated with significant morbidity and mortality. Risk factors for aspiration pneumonia in the elderly include cognitive impairment, oropharyngeal dysfunction, and dysphagia. This study aimed to determine whether a concurrent diagnosis of dysphagia conferred a higher risk of complications in the geriatric population admitted for aspiration pneumonia.

Methods:

The National Inpatient Sample 2001-2013 database was queried for patients with a diagnosis of Aspiration Pneumonia using International Classification of Diseases, Ninth Revision (ICD-9) codes. Sepsis, Urinary Tract Infections, Myocardial Infarction, Respiratory Failure, and Intubation were identified with their respective ICD-9 codes. Age was stratified using 65 years of age as the minimum cut off for the geriatric population. A chi-square analysis was performed to determine variables to be included in a multivariable analysis. A binary logistic regression analysis was used to examine demographic and other important variables, with a significance level of $p<0.001$.

Results:

A total of 1,097,325 patients were identified admitted for Aspiration Pneumonia, of which 349,861 (24.2%) also had dysphagia. After incorporating demographic variables and social variables, such as biological sex, the dysphagia population had a significantly lower likelihood of having sepsis (OR=0.72), urinary tract infection (OR=0.86), myocardial infarction (OR=0.70), respiratory failure (OR=0.92), and intubation (OR=0.52). Patients with dysphagia had a significantly higher likelihood of a length of stay greater than 5 days (OR=1.24).

Conclusion:

We found that elderly patients admitted with aspiration pneumonia and a history of dysphagia were less likely to have severe complications as compared to their counterparts. This may be a result of full speech therapy evaluation and workup in those patients with dysphagia, which may allow for better chronic control of their symptoms and therefore less complications, compared to those with undiagnosed dysphagia. Those presenting with dysphagia may also present earlier

due to caregiver awareness, leading to less severe but prolonged hospital course. Further research into the protective factor of dysphagia may lead to improved outcomes in patients with aspiration pneumonia.

D212 Resident Presentation
Retrospective calculation of Clinical Frailty Scale score in hospitalized older adults

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Introduction: The Clinical Frailty Scale (CFS) is a well validated tool for performing retrospective frailty assessments, yet methods used to assign CFS score vary across studies. We examined the feasibility of extracting CFS score from routinely collected data in a retrospective cohort of hospitalized older adults who had received cardiopulmonary resuscitation (CPR).

Methods: We identified patients ≥65 years who had undergone CPR during an inpatient admission from Jan 2018-Jan 2020. Using extracted patient characteristics, five clinician reviewers independently assigned CFS score to patients (n=5) in an iterative process to refine a CFS classification tree (Figure 1) until we had strong reproducibility and inter-rater reliability. Three reviewers divided the remaining patient records to assign CFS score; a fourth reviewer simultaneously assigned scores to a random sample of 10% of patient records. Patients with insufficient data for CFS score calculation within three months of CPR were excluded.

Results: 370 patients were included. The results will be discussed.

Conclusions: Retrospective calculation of CFS score is a reliable and accurate method of determining frailty status using information readily available through provider documentation.

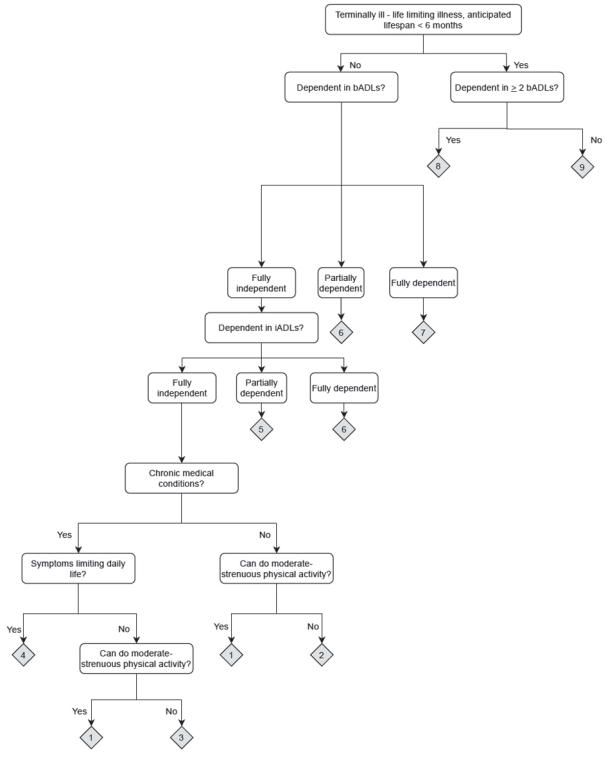

Figure 1: Chart abstraction methodology for Clinical Frailty Scale score

D213 Resident Presentation
The Impact of a COVID-19 Positive Diagnosis on the Risk of Polypharmacy on Community-Dwelling Adults Aged 65 Years and Older.

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Background: Polypharmacy is known to increase with age and is a known risk factor for worsening geriatric syndromes. Emerging literature has shown post-COVID-19 infection complications involving pulmonary, cardiac, renal, dermatologic, thrombotic, and psychiatric disorders. It is expected that these would be treated with additional medications, which could increase an older adult's risk of polypharmacy, including an increase in total number of medications and high risk medications particularly, and, thus, worsening geriatric syndromes.

Methods: This is an IRB-approved pilot study to evaluate if a long-term study of the assessment of polypharmacy risk in older adults after a positive COVID-19 diagnosis is warranted. This study will be conducted at the University of California, Irvine Senior Health Center, a primary care clinic for older adults with an interdiscinplinary healthcare team. Medication lists and changes to medications, diagnosis lists, and pertinent vitals and labs will be collected through chart review, along with treatment(s) used for COVID-19. These will be analyzed to determine if additional medications have been started after a COVID-19 diagnosis, and particularly, if these medications are high risk medications for older adults or could increase the individual's risk for worsening geriatric syndromes.

Results: The data collection will occur through March 2021. Data will be analyzed on an on-going basis. Results are expected by March 2021. There will be data and results to present at the time of the meeting.

Conclusions: Conclusions will be presented after results are obtained and analyzed. The results are expected to inform the feasibility of a continued, larger study to illustrate the long-term effects of a COVID-19 positive diagnosis the risk of polypharmacy in older adults.

D214 Resident Presentation
Dysphagia as First Symptom of Late Onset Myasthenia Gravis (LOMG)

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Background: Myasthenia gravis (MG) is a neuromuscular disorder that typically affects the bulbar, ocular, neck, proximal limbs, and respiratory muscles. Late onset MG (LOMG) has been defined as disease starting after age of 50 years. In the older age group, the diagnosis of MG could be missed or delayed when presenting only with dysphagia as various age related conditions can present with dysphagia.

Case: A 71-year female presented with chest discomfort. She discloses ongoing dysphagia for both solids and liquids for several months. Associated symptoms include hoarseness, fatigue, significant weight loss. Barium swallow revealed cricopharyngeal dysphagia and possible upper esophageal stricture. Esophagogram showed cricopharyngeal achalasia. Manometry showed normal upper and lower esophageal sphincter pressure.

She underwent esophageal dilation, but due to worsening condition she developed respiratory failure requiring ventilatory support. Anti-acetylcholine receptor antibody test was undetectable. Nerve conduction study revealed decremental response. She was diagnosed with seronegative myasthenia gravis and started on steroids

and pyridostigmine. Swallowing and phonation improved. IVIG and mycophenolate was started for persistant respiratory symptoms. Strength and vocal quality markedly improved. Patient was discharged on mycophenolate mofetil and pyridostigmine.

Discussion: LOMG has been described and is not uncommon but as in our case the diagnosis is commonly missed due to variety of diseases presenting with similar symptoms. This may also cause increased chances of Myasthenic crisis in LOMG. In contrast to the early onset MG, generalized symptoms are more common in LOMG. Though AchR antibodies are usually present in LOMG but usually have lower titers as compared to early onset MG, interestingly they were absent in our case. Other differentiating feature is the presence of antibodies to striated muscle antigens, particularly antibodies to titin in LOMG. EMG still remains very useful in establishing the diagnosis of MG.

Conclusion: Dysphagia can be the only presenting symptom leading to extensive gastrointestinal workup. Neuromuscular disorders should be considered early in elderly patients presenting with dysphagia. Timely diagnosis and initiation of treatment may reduce the morbidity and mortality associated with myasthenic crisis.

D215 Student Presentation
Type of HCBS Support Predictive of Frailty Status Change Among Older Participants

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Background: Frailty is a state of physical vulnerability associated with greater disability and increased healthcare utilization among older adults. Understanding the prevalence of frailty and how it varies could assist with more precise identification of individuals at risk for institutionalization and allow for enhanced care planning.

Methods: The Frailty Index (FI) was calculated using data from Connecticut's Universal Assessment Tool for older adults enrolled in Medicaid HCBS programs between 11/1/2017 and 7/15/2020 (N=14,111). Frail was defined as FI of >0.30; pre-frail 0.21-0.30; and non-frail <0.21. We compared predictors of clinically meaningful changes (demographics, living arrangement, physical activity, and types of services used) in the FI from baseline to follow up (minimum 8 month follow up) using multivariate logistic regression.

Results: 58.0% of Connecticut's older HCBS population meet the frail definition and 21.9% meet the pre-frail definition. 42.9% experienced a clinically meaningful decline and 12.1% experienced a clinically meaningful improvement. Older adults with home nurse services were more likely to decline in FI (OR=2.258, $p<0.01$ for non-frail; OR=1.112, $p<0.05$ for frail) than those who did not have home nurse services. Frail older adults with physical therapy (PT) services were 1.4 times as likely to improve in FI (OR=1.407, $p<0.01$). By contrast, frail individuals with in-home care services were 36% less likely to improve ($p<0.001$). Older adults living alone were more likely to improve (OR=1.423, $p<0.001$).

Conclusions: Frailty changes are dynamic, even in a considerably frail population. The nature of HCBS support provided may be important in the trajectory of frailty status change among older adults. Factors such as living alone or not having in-home care services may promote functional independence. Use of skilled nursing services among non-frail older adults may be an early predictor of frailty decline while the use of rehabilitative services such as PT may be protective against decline. Rehabilitative services are predominantly used among frail individuals and require a clinician order. Activities that support functional independence and further coordination between long term services and medical providers is needed to prevent or slow the progression of frailty decline.

D216 Student Presentation
State Alzheimer Plans: Levers for Improving Health Care in Dementia?

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Background: In 2011, the National Alzheimer's Project Act (NAPA) convened a council on priorities for research, care, and services to address the rising prevalence of Alzheimer's disease and related dementias (ADRD). Its most recent plan (2019) prioritizes 3 key health care goals: 1) develop a skilled primary care workforce for dementia detection and care; 2) improve rates and timeliness of diagnosis; and 3) promote equity for populations disproportionately affected by ADRD. To determine how state and territory plans (STP) translate national goals into local action, we explored how they address these 3 NAPA priorities.

Method: We reviewed each STP using a structured data extraction framework, noting creation date and whether it identified each NAPA health care target as a problem, set goals and strategies for improvement, and established a method for evaluating success. We rated strategies 0-3 (0=none, 1=general, 2=specific but lacking replicable steps, 3=specific, replicable action steps).

Results: 49 STPs, 6 with updates, have been e-published since 2007 and vary widely in scope. Approximately 60% prioritized primary care workforce development and/or timely ADRD diagnosis, 37-50% articulated a strategy for doing so, and <10% proposed an evaluation plan (Table 1). The highest rated STPs contain both short- and long-term goals, clearly define stakeholder roles and responsibilities, and name specific implementation partners. Equity strategies, when mentioned, lacked sufficient detail to evaluate.

Conclusions: For the past decade, NAPA has set important national ADRD priorities. Most states have issued STPs indicating intent to improve health care for people living with dementia. However, strategy specificity varies greatly across states and, for most, it is unclear whether state priorities are being met. States could more effectively achieve their stated dementia healthcare objectives by receiving additional centralized support to strengthen goals, and share successful strategies and plans for measuring success.

State Alzheimer Plans: Representation of National Targets for Improving Health Care of Dementia (n= # states; total=49)

	Problem Identified	Explicit Goal Set	Specific Action Steps (quality rated = 3)	Evaluation Plan Described
Skilled primary care workforce	30	25	20	4
Rates and timeliness of diagnosis	31	18	5	4
Equity	n/a	n/a	3	0

D217 Student Presentation
Association between frailty and cost of hospitalization in older adults who had surgery for hip fracture

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Background: The impact of frailty on hospital cost for older adults admitted with hip fractures is unknown. We estimated the association between hospital cost and frailty among older adults who underwent hip fracture surgery.

Methods: Using National Inpatient Sample data (2016 ~ 2017), we included hospitalized older adults (≥ 65) with hip fracture and surgical repair. Frailty was defined using the Hospital Frailty Risk Score (low risk (<5), moderate (5-15), and high (>15) out of the total score (0-99)). We conducted a multivariable generalized linear regression with log transformation to obtain the association between hospital cost and frailty, adjusting for patient's demographic and clinical characteristics (age, sex, race, insurance type, Elixhauser comorbidity index, delirium, elective vs. urgent admission, weekend vs. weekday

admission, teaching vs. non-teaching hospital, hospital location, and hospital bed size). Hospital cost was estimated from the total hospital charge by multiplying the dataset's cost to charge ratio.

Results: A total of 29,719 hospitalizations were included. They were mostly White (84.2%) and women (69.5%), with a mean age of was 81.5 (±7.3 standard deviation). The mean frailty risk score was 8.8 (±5.0), with 24.5% in low, 64.0% in moderate, and 11.5% in high frailty categories. The mean hospital cost was $19,534. Frailty was associated with 2% increased total hospital cost, and compared with low, moderate and high were associated with 7% and 29% higher cost (both $p<0.0001$). The average estimated hospital cost among those with low frailty risk was $16,995, moderate $19,388, and high $25,733. Other than frailty, Blacks (4%), Hispanics (4%) Medicare (5%), additional comorbidity (4%), delirium (16%), or Western location (18%) were associated with higher hospital cost. Age (0.5%), urban teach hospitals (13%), Midwestern location (6%), Southern location (11%), medium size hospital (4%) or large size hospital (7%) were associated with lower hospital cost.

Conclusion: Frailty was associated with higher hospital cost after adjusting for patient demographic, clinical, and hospital-related factors. Further research is needed to identify interventions to mitigate hospital cost in frail older patients hospitalized for hip fracture surgery.

D218 Student Presentation

Effect of Insurance and Neighborhood on Older Adults' Mental Health

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Background

Individual and neighborhood socioeconomic status affect older adults' health. Electronic health record (EHR) data often lack SES metrics; insurance and geocoded addresses may provide insights. We examine how enrollment type and neighborhood SES impact depressive symptoms.

Methods

Our cross-sectional study used EHR data of 2018 Medicare Shared Savings Program (MSSP) enrollees assigned to UCSF Health, age 65+, and residing in the San Francisco Bay Area. We divided insurance into Dual (Medicare & Medicaid) and Non-Dual (Medicare only). We scaled neighborhood SES (nSES), from 2013-2017 American Community Survey averages of income, employment, and education, into quintiles for Bay Area census tracts (Q1=lowest). Outcome of moderate and greater depressive symptoms was defined as ≥10/27 on PHQ9 screen. We calculated odds ratios (OR) with Generalized Estimating Equations (GEE) to account for clustering within tracts. Adjusted OR included insurance, nSES, self-identified race/ethnicity, age, and sex.

Results

6814 patients were included (28% Dual, 72% Non-Dual). 5151 (76%) had a recorded PHQ9 screening within one year. Unadjusted bivariate models found Dual enrollment, living in nSES quintile <Q5, female sex, and identifying as Non-Hispanic Black or Hispanic to significantly increase the OR of greater symptoms.

Fully adjusted models increased the effect size of Dual enrollment (OR[95%CI]: 3.0[2.3-4.1]), and nSES Q2, 3, and 4 retained significance (1.9[1.3-2.8], 1.6[1.0-2.3], 1.6[1.1-2.2], respectively), while Q1 did not (1.3 [0.8-2.2]). The adjusted model found Non-Hispanic Asian and Other race/ethnicity as protective (0.5[0.3-0.7], 0.5[0.3-0.9]); Non-Hispanic Black and Hispanic no longer met significance.

Conclusions

We found evidence that individual (insurance type) and neighborhood (census tract from EHR address) level indicators for SES independently associate with greater depressive symptoms. Both may serve in identifying Medicare enrollees who may face greater mental health burdens. Further investigation into the interaction across levels, and effects within different patient sub-populations is warranted.

D219 Student Presentation

Evaluating home healthcare agency responsiveness to the needs of older adults in the era of COVID-19

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Background:

Older adults requiring skilled home health (SHHC) services after hospitalization are among those at highest risk of re-hospitalization and adverse events even during non-pandemic times. Home health agencies are in a unique position to identify and address older adult safety during the pandemic. However, agencies need strategies to obtain and disseminate safety data to ensure safe transitions.

Methods:

Researchers conducted a qualitative study using focus groups and semi-structured interviews to (1) understand the impact of the COVID-19 pandemic on hospital-to-SHHC transitions, and (2) identify strategies for ensuring safe transitions. We used purposive sampling to identify key stakeholders: SHHC front-line clinicians, SHHC leadership, older adults, and family caregivers.

Results:

Contributors identified four key issues related to the pandemic: (1) fear and risk of viral transmission; (2) personal protective equipment (PPE) availability, training, and policy; (3) lack of caregiver training; and (4) missing equipment and care plan information.

More patients and caregivers were declining home health services, communicating a fear of potential transmission via home entry. Organizational leadership implemented workarounds to ensure sustainable PPE sourcing and distribution. Clinicians expressed confusion around the safety of reusing PPE. Due to social distancing policies, caregivers have not received hospital training to support older adults. Hastened hospital workflows have produced communication breakdowns leading to missing equipment and care plan information. Home health providers have provided extra time and service to address training and information gaps.

Strategies for ensuring safe transitions include: (1) more transparent messaging regarding safety practices to clinicians, patients, and caregivers; (2) regular check-ins with staff regarding patient safety concerns; (3) collaboration among transfer facilities to provide caregiver training prior to home health referral; (4) provision of culturally appropriate caregiver training in-between home health visits; (5) collection and dissemination of care transitions data from patients and caregivers in real-time.

Conclusion:

These findings will inform strategies for developing interventions to ensure safe care transitions.

D220 Student Presentation

Are patient portals used to support palliative and end-of-life care? A scoping review

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Background: Older adults are increasingly the focus of chronic condition management models that involve the adoption of digital health technology, including patient portals. Although widely used for preventive care, little is known about the use of patient portal tools in palliative and end-of-life care (PCEOL). We conducted a scoping review to identify PCEOL patient portal tools evaluated in the academic literature.

Methods: Three academic databases were searched in accordance with the PRISMA-ScR guidelines. Articles published before March 2020 were included in the review if they described a feature, resource, tool or intervention that 1) focused on at least one domain of PCEOL care as defined by the National Coalition for Hospice and Palliative Care (physical, psychological and psychiatric, social, spiritual and cultural, ethical/legal, and care at the end of life), 2) targeted adults with serious life-limiting illness, and 3) was offered via a patient portal. Descriptions of the portal features, target population, and user acceptability measures were abstracted for included sources.

Results: The initial database search identified 796 articles. Nineteen articles describing 12 unique tools met the inclusion criteria. The identified tools addressed the following PCEOL domains: ethical/legal (N=5), physical (N=5), and psychosocial support (N=2). No tools addressing spiritual, cultural, or care at the of life were identified. Usability, acceptability, and user satisfaction were formally evaluated for some of the identified PCEOL patient portal tools (N=8). Studies reported high acceptability of tools among patient and caregiver users, but few sources commented on usability specifically among older adults.

Conclusions: PCEOL patient portal tools are understudied. As medical care increasingly moves towards virtual platforms, future research should investigate the usability of PCEOL patient portals resources among older adults and evaluate the impact of these tools on chronic health outcomes.

D221 Student Presentation

Deciding to Enter and Leave Skilled Nursing Facilities After a Hospital Stay: A Qualitative Study

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Background

Among Medicare beneficiaries hospitalized for an acute illness approximately 20% will be discharged to a skilled nursing facility (SNF) for additional medical care prior to returning home yet there is no consensus as to how the decision for a patient to transfer into our out of a SNF is made. The objective of this study was to examine the factors that drive community dwelling older adults to enter and leave a SNF for their rehabilitation care.

Methods

Patients, and caregivers when available, were interviewed twice after returning home from a SNF. Interview transcripts were used to examine factors influencing decisions about admission to and discharge from SNFs from a patient-centered perspective. The constant comparative method was used to identify themes that influenced these care transition decisions.

Results

There were 24 patients or patient-caregiver dyads interviewed for a total of 39 people interviewed. The primary theme identified was a sense of lost autonomy regarding the decision whether or not to go to or leave a SNF. Most felt their physical health, the healthcare team, or insurance made the decision to enter or leave a SNF for them. For example, on going to the SNF one person said, "Well, it was mandatory from the hospital. I mean, it wasn't a choice, doctor's orders," and on leaving the SNF, another person said, "I would've stayed longer and the insurance just wouldn't pay for it…. I probably would've liked to have another week." Despite the lack of autonomy about whether to transfer in or out of the SNF, many expressed more autonomy in terms of where to go. As one person said, "They gave me multiple choices and I chose the one across the street from the hospital, because it was there and accessible."

Conclusions

Patients feel a loss of autonomy when they make care transitions to and from SNFs. Decisions to enter or leave the SNF may inadequately respect patient autonomy and ignore patient perspectives on readiness to return home. Future work should explore barriers to patient centered decision making and improve patients' role in the process.

D222 Student Presentation

Older Adults with Anxiety have Higher Avoidance of In-Person Medical Visits during the COVID-19 Pandemic

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Background: The COVID-19 pandemic continues to have detrimental effects on older adults' mental health while rapidly transforming access to medical care. Our objective was to determine if anxiety surrounding the pandemic may be associated with increased avoidance of in-person medical visits, even when visits were perceived as needed.

Methods: We conducted phone-based surveys from April 7th, 2020 to October 27th, 2020 with 155 older adults age ≥60 from two community sites and an academic geriatrics outpatient clinical practice. Healthcare system access was assessed with questions on telehealth use, the number of delayed in-person medical appointments or procedures, and avoidance due to fear of the coronavirus of in-person medical visits participants perceived as "needed". Anxiety was measured with the Generalized Anxiety Disorder 2-item (GAD-2) scale. We used bivariate statistics to determine the association between the rate of healthcare utilization and anxiety. We also assessed free-text comments for expression of anxiety or concerns about access to medical care.

Results: Participants were on average 75 years old (SD=10), 50% of whom had hearing or vision impairment, 26% had difficulty bathing, 64% lived alone, and 92% had accessed telehealth clinical services. Approximately 52% reported worries about delayed medical care and 41% reported avoiding an in-person medical visit that they felt was needed due to fear of COVID-19; 55% of avoided visits were routine or preventive, 43% specialist appointments, and 8% urgent care/ED visits. Individuals screening positive for anxiety were more likely to avoid in-person medical visits (60% versus 47%, p=0.006). Open-ended responses revealed worries about delays in routine medical care (e.g. injections, vaccines, dental visits), fears that non-COVID health needs were deemed non-essential, and difficulty accessing the health system due to restrictions.

Conclusion: Older adults who screened positive for anxiety were more likely to avoid needed in-person medical visits, and had a broad range of visit types they felt were needed. Clinicians should work with older patients, particularly those who are anxious, to provide safe and accessible options for seeking in-person care and reassure patients that non-COVID related health concerns are still a priority.

D223 Student Presentation, Encore Presentation
Impact of Adult Day Service Center Closures in the time of COVID-19

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Adult Day Service Centers (ADCs) are a form of community-based long-term care that address frail older adults' health and social needs. Due to their congregate nature and participants' compromised health, many ADCs have been forced to temporarily shutter during the COVID-19 pandemic. It is unknown how closures have impacted service delivery at ADCs. Guided by the Resiliency Framework, we (1) explore methods employed by ADCs during the pandemic to meet participant/caregiver needs and (2) determine how/whether these methods have mitigated the negative effects of ADC closures on participants and their caregivers. Both virtual focus groups and one-on-one semi-structured qualitative interviews were conducted with ADC staff members (n=20) across the United States. Preliminary results showed precipitous declines in physical, cognitive, and mental health of participants, as well as increased caregiver strain, particularly among dementia caregivers. However, ADCs found creative solutions to care for participants despite restrictions, creating, in their words, "centers without walls." Staff developed virtual programs (e.g. support groups, music and exercise therapy) and conducted "door-step" visits to support productive engagement and combat loneliness. Telehealth supported care coordination and identification of emergent clinical problems. Results suggest that despite innumerable COVID-19-related challenges, ADCs demonstrated resilience and creativity in managing participants' needs, fostered a sense of purpose, and provided caregiver respite. Further research on the effectiveness of remote programming and advocacy for sustainable reimbursement by payers is needed to ensure that ADCs can continue to provide older adults and their families with meaningful support as the pandemic wears on.

D224 Student Presentation
Length of hospital stay and frailty in older adults undergoing surgery for hip fracture

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Background

Appropriate rehabilitation after hip fracture surgery among older adults is crucial for better clinical outcomes and shorter length of hospital stay (LOS). Frailty, a geriatric syndrome characterized by decreased physiological reserves, may prolong patients' LOS due to difficulty determining and finding individually suited post-discharge rehabilitation. We aim to investigate the association between LOS and frailty among older adults with hip fracture surgery.

Methods

Using the National Inpatient Sample data for 2016 and 2017, we conducted a retrospective study to assess the association between LOS and frailty. A generalized linear regression with gamma distribution was used with covariates of demographic characteristics (age, sex, race, insurance type, clinical variables (Elixhauser comorbidities, emergency/elective, weekday/weekend, and presence of delirium), and hospital characteristics (location, hospital type, and size). Frailty was assessed using the Hospital Frailty Risk Score (total score 0-99, with low risk <5, moderate (5-15) and high >15), and associations were expressed as odds ratios with p-values.

Results

A total of 29,719 hospitalizations were included. Mean LOS was 5.59 (±1.69) days. Mean age was 81.5 (±7.3) years, 69.5% were female, and 84.2% were White. The mean frailty score was 8.8 (±5.0). Prevalence of low, moderate, and high frailty were 24.5%, 64.0%, and 11.5%, respectively. LOS was significantly associated with frailty. Compared with low frailty, moderate and high frailty were associated with 17% and 55% increase in LOS ($p<0.0001$). The estimated average LOS was 4.3 days, 5.6 days, and 8.2 days in the low, moderate, and high frailty groups, respectively. Age was inversely associated with LOS (0.2% decrease, $p<0.0001$), and women were associated with a 9% shorter LOS compared to men ($p<0.0001$). Compared to Whites, LOS was 11% and 9% longer ($p<0.0001$) in Blacks and Hispanics, respectively. Being non-Medicare recipients (9% increase), having higher comorbidity (5% increase), and delirium (33% increase) were associated with longer LOS ($p<0.0001$). Elective and weekend cases were associated with 10% and 3% shorter LOS ($p<0.0001$).

Conclusion

LOS is significantly associated with frailty even after adjusting for patient demographic, clinical, and hospital-related factors.

D225 Student Presentation
Geriatricians' Strategies for Improving Telehealth Care and Access during COVID-19: A Qualitative Study

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Background:

This study examines US geriatricians' perspectives about using telehealth to meet patients' health needs during the COVID-19 pandemic.

Methods:

Using purposeful sampling, we invited US-based geriatricians from various regions and rural-urban settings for 30-minute semi-structured video interviews. Interview guides contained open-ended questions and probes assessing strategies to overcome sensory, cognitive, accessibility, and technological challenges among older adults during the pandemic. Interviews were transcribed and double-coded. We performed a framework analysis to facilitate and expedite the summary and identification of patterns and themes.

Results:

We included 18 participants (12 metro, 4 suburban, 2 rural; 9 community, 9 academic); Semi-structured interview data revealed three major themes:

First, to address communication issues, physicians often relied on caregivers—including family members, nursing home or assisted living personnel, and home health aides—to overcome technical or cognitive barriers. During visits, physicians spoke slowly, utilized captioning tools, and used deliberate language to compensate for tech-related communication issues.

Second, many geriatricians had concerns about patient access to medical care during office closures. They stated many older adults lack reliable Internet or computer access. While some resorted to early reopening for in-person visits, other geriatricians had home aides or staff deliver iPads or GrandPads to patients for the televisit. Participants also consciously chose simple, one-click platforms to minimize technical difficulties during virtual visits. When video was not possible, physicians resorted to phone calls.

Third, some physicians anticipated patient discomfort with technology. These physicians had staff call patients before visits to assess technological ability and provide instructions on accessing the telehealth platform. Others organized frequent check-in calls and deployed medical students to conduct patient technology education.

Conclusions:

Geriatricians employed a variety of strategies to ensure the health needs of patients would be met during COVID-19 including early resumption of in-person visits, device delivery, additional staff support to provide technology training, and caregiver assistance with cognitive and technological challenges.

D226 Student Presentation

Addressing Resource Insecurity and Social Isolation for Older Adults during the COVID-19 Pandemic

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Background: The COVID-19 pandemic has had a significant impact on vulnerable older adults (OAs). OAs are more at risk for severe illness from COVID-19, and many have been socially isolated as a result of stay-at-home orders. In a recent study, anxiety and/or depressive disorder symptoms in OAs doubled from 10.6% in 2019 to 21.9% in June 2020. In response, the SHARE Network, a Geriatrics Workforce Enhancement Program on the South Side of Chicago, and students at the Pritzker School of Medicine initiated the OA Aid (OAA) Program to address resource insecurity and social isolation among local OAs.

Methods: The OAA resource delivery initiative which ran from April-June, 2020, aimed to secure meals and personal protective equipment for OAs on the South Side of Chicago. Food delivery recipients were identified in collaboration with the National Alliance for Mental Illness and the SHARE Network. Resources were secured and delivered by medical student volunteers. The OAA social calls program was established, pairing local OAs with medical students for regular phone calls. An electronic survey was sent to student volunteers to assess perceived impact on both OAs and students. Likert-style and qualitative responses were collected. Quantitative analysis was conducted using STATA 16.

Results: In total, the OAA program secured and distributed 690 meals, 1400 face masks, and 20 boxes of medical gloves. The program provided a bridge for recipients to find long-term food options, and by the end of the program, the majority had done so. Twelve medical students were matched with OAs in the social call OAA program. Of those, 5 (42%) submitted survey responses. Students reported a high mean level of agreement (4.6 ± 0.4) toward the positive benefits of the program for their OA match and themselves (4.2 ± 0.5). Open-ended responses, which centered on themes of shared experience and community, reinforced the dual benefits of the program.

Conclusion: Programs targeted at OAs during the COVID-19 pandemic should address short and long-term resource insecurity and seek to relieve social isolation. Social call programs may not only benefit OAs, but may also be beneficial to the wellbeing of medical student volunteers.

D227 Student Presentation

COVID-19 Recommendations for Assisted Living: Implications for the Future

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Background:

COVID-19 has challenged assisted living (AL) communities, given their congregate nature and population of residents who are vulnerable to COVID, but lack the capacity of nursing homes (NHs). This presentation (a) summarizes recommendations from six key organizations related to preparation for and response to COVID in AL in relation to resident health and quality of life; (b) compares recommendations for AL with those for NHs; and (c) assesses implications for the future of AL.

Methods:

We collected, categorized, and summarized recommendations related to preparation for and response to COVID in AL, long-term care in general, and NHs, from six key organizations: the Centers for Disease Control and Prevention, the Centers for Medicare & Medicaid Services, the American Geriatrics Society, the Society for Post-Acute and Long-Term Care Medicine, the American Health Care Association/National Center for Assisted Living, and the Alzheimer's Association.

Results:

Recommendations for AL and NHs were similar in many areas, while differences provided insight into the ways that the pandemic has challenged AL in particular, and may have implications for the evolution of AL. Differences include recommending more flexible visitation and group activities for AL, providing screening by AL staff or an outside provider, and suggesting that AL staff should access resources to facilitate advance care planning. Recommendations for both AL and NHs that provide insight into how AL may be integrating more health care into their offered services include working with consulting clinicians who know both the resident and the AL setting when making transfer decisions, and suggesting that AL communities follow guidance for testing as recommended for NHs.

Conclusions:

COVID may accelerate the integration and/or closer coordination of social work and medical care into AL, because recommendations suggest AL would benefit from the services and expertise of licensed nurses, social workers, and physicians. There seems to be an unmet need to mitigate loneliness in AL, which warrants specific attention moving forward.

D228 Student Presentation

Feasibility of Collecting Over-The-Counter (OTC) Medication Possession and Use in the Home with Older Adults

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Background: While consumption of over-the-counter (OTC) medications has increased, especially among older adults, there are many questions remaining about OTC possession and patterns of use. This is because, while previous studies have been conducted to assess OTC use across large populations, a standard methods protocol to identify OTC medications is not available. Our objective was to develop and test a feasible method to measure possession of OTCs in community-dwelling older adults.

Method: Development included a review of existing literature and available protocols to establish an interview protocol that could be introduced in a feasibility study. The resulting Home Medication Inventory Method was tested in a feasibility study from November 2019 through September 2020. We chose to collect information for possession in addition to use for OTC medications. We established a standardized definition for counting OTC medications. Home Medication Inventory interviews were conducted both in-person and remotely via a web-based videoconference platform, with remote interviews unrestricted to location. Interviews were performed individually with consenting older adult participants in Wisconsin and Indiana. Eligibility criteria included participants at least 60 years of age who purchased or considered purchasing an OTC medication for themselves in the last year. Individuals with a score of 3 or less on the Six-Item [Cognitive} Screener (SIS) were excluded.

Result: A total of 51 participants completed an interview, 15 in-person, and 36 remotely. Interviews lasted a mean (SD) of 20.15 (12.7) minutes, with all data collected in less than 45 minutes for each participant. No differences in duration or completeness of interview content were found between in-person and remote. Participants possessed in total 390 OTC medications, a mean (SD) of 7.65 (6.3) per participant.

Conclusion: This Home Medication Inventory method was able to identify medications available in participants' homes, including those used intermittently and consistently. The feasibility of this method is robust to both in-person delivery as well as web-based platforms, expanding the reach and efficiency of data collection in clinical care or research involving OTC medication data collection.

D229 Student Presentation

Home Neighborhood and Post-Discharge Emergency Department Use in Older Injured Patients

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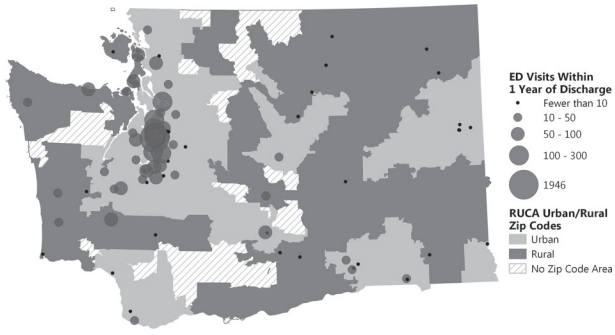
Background: Older adults treated at a level-1 trauma and regional burn center are discharged across rural, urban, and underserved areas in our state. Little is known about their Emergency Department (ED) utilization post-discharge. This project aims to describe how rurality and urban neighborhood deprivation relate to statewide ED use and death among older adults after index injury hospitalization.

Methods: We merged data from our health system's and the statewide trauma, death and ED use registries. We identified injured adults age ≥55 years hospitalized at our institution between 2015-2019 who survived to discharge. Primary outcomes were ED visits and death within 1 year. To determine rurality and neighborhood deprivation, we geocoded patient home addresses stratified based on zip codes using Rural-Urban Commuting Area (RUCA) codes. We aggregated urban patients to Census block groups and classified them by neighborhood deprivation using the Area Deprivation Index (ADI). We will analyze the association of home ADI and RUCA code with post-discharge ED use with death as a competing risk.

Results: A total of 6975 individuals met study inclusion criteria. Our cohort was 83% non-Hispanic White with a median age of 69, 57% male, 18% rural, and the most common mechanism of injury was falls (58%). A total of 1752 (25%) had at least 1 ED visit statewide, 530 (7.6%) had 3 or more ED visits, and 223 (3.2%) died within 1 year.

Conclusions: Unplanned ED visits post-injury are an important marker of health care utilization in older patients. The timing, frequency and geographic location of ED use inform about challenges in transitions of care, and potential neighborhood socioeconomic and urban-rural disparities in older trauma survivors.



Map of Statewide Post-Discharge ED Use

D230 Student Presentation

Re-opening nursing facilities to visitors during a pandemic: An early look at experiences

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Background:

In the setting of the pandemic, nursing facilities across the United States closed to family in-person visitation in March 2020. Facilities, following local, state, and federal guidance, have begun re-opening to visitors. New policies and practices are being created to promote safe visitation.

Methods:

Several Indiana nursing facility leaders participated in a voluntary survey regarding both outdoor and anticipated indoor visitation. Facilities were asked to provide information about their current outdoor visitation practices and identify concerns. Responses were compared to current state guidance and summarized.

Results:

A total of 15/40 (response rate of 37.5%) facility leaders responded to the survey. Policies were largely similar and explicitly incorporated state guidance. Common concerns regarding visitation included issues with staffing during visitation, scheduling, and visitors not following masking and social distancing guidelines.

Conclusion and Implications:

Facilitation of visits to nursing facility residents during a pandemic requires additional policies and resources. Facility leaders report positive early experiences and raise concerns about operational considerations and potential non-compliance of visitors or residents to policies.

D231 Student Presentation

The Effectiveness of Hospital-Based Volunteer Programs on Older Adult Outcomes

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Background:

With the growing aging population, approximately 50% of all hospital bed days are accounted for by older adults. Extended hospital stays often breed new issues for older adults to contend with: about a third leave the hospital functionally weaker than when they arrived. There is a significant shortage of healthcare providers, specifically those trained to care for the unique needs of older adults. One solution to address these challenges is to incorporate volunteers into hospital care. We conducted a review on the effectiveness of hospital-based volunteer programs to improve outcomes of older adults.

Methods:

We conducted an initial broad search in two databases (PUBMED and CINAHL) using "hospital volunteers" and "older adults" as our core search criteria. Abstracts of this initial search were reviewed. We identified four key areas of interest: delirium prevention, mobility, nutritional assistance, and psychological well-being. We then conducted a follow up search for each of these four areas separately to make sure we identified the primary articles in each area. Two researchers met to discuss the effectiveness and quality of these articles. A consensus was reached on which articles would be included in this review.

Results:

The strongest evidence for improving outcomes of hospitalized older adults was the Hospital Elder Life Program (HELP) geared toward delirium reduction. Beyond reducing the incidence of delirium and rates of falls, the HELP is effective in decreasing readmission rates, with a 2018 review reporting an average saving amount of $2700 per hospitalization. Meal-time assisted volunteer programs improve older adults' mean daily energy intake and the quality of mealtime care for patients and nursing staff. There is more limited data on volunteer programs focused solely on mobility or psychological well-being, but when volunteers engage in mobilizing and therapeutic activities with older adults, it positively impacts outcomes related to falls, patient satisfaction, and well-being.

Conclusions:

Volunteers have a vital role in older adult care in the hospital and have shown to improve some patient outcomes. More rigorous studies are needed. Future studies should evaluate the cost-effectiveness of trained volunteer programs in the hospital as well as the broader implementation of volunteers working with older adults in different clinical settings.

D232 Resident Presentation, Encore Presentation

Implementation of the 4AT delirium detection tool in clinical practice: evidence from 69,462 acute medical admissions in two centers

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BACKGROUND

There are multiple delirium assessment tools. Yet validation data have mostly been generated under study conditions. There are few studies providing information in full clinical populations on (a) tool completion rates and (b) proportions of scores positive for delirium. The 4AT (www.the4AT.com) is a short (< 2 min) widely-used, validated clinical tool for delirium detection that does not require special training. We examined completion and detection rates of the 4AT as implemented in two university hospitals.

METHODS

We analysed electronic records on all consecutive patients aged ≥50 years admitted to acute medical wards between Apr 2016 and May 2019. The 4AT is scored from 0-12. Scoring: 0, negative; 1-3, cognitive impairment but no delirium; 4-12, possible delirium. Admission 4AT data in patients ≥50 are considered here. We assessed completion rates by routine clinical staff, the percentages with scores in the three scoring bands, and length of stay in the three scoring bands. We assessed completion rates, percentages with scores in the three scoring bands, and length of stay.

RESULTS

Of the 69,462 consecutive admissions aged ≥50 years old, 51,238 (74%) had a completed 4AT. 77% of patients aged ≥65 had a completed 4AT. In the 51,238 with completed 4AT, 33,028 (64%) had a score of 0, 9,499 (19%) had a score of 1-3, and 8,711 (17%) had a score of 4-12. Median length of stay in days in relation to scoring categories was 0: 3.6 days (IQR 1.3 to 8.6); 1-3: 8.9 days (IQR 2.8 to 26.1); 4-12: 9.2 (IQR 3.3 to 26.8).

CONCLUSIONS

These data suggest that implementation of the 4AT in the acute medical admissions process is feasible, with more than three quarters of older patients completing the tool. The overall rate of 4AT scores positive for delirium was 17% (in the full population aged ≥50). This figure is broadly in line with existing study estimates of the prevalence of delirium in acute medical patients, suggesting that the 4AT is detecting delirium at an appropriate level. Further studies of the 4AT and other tools in large clinical populations will substantially enhance our understanding of the implementability of delirium detection tools.

D233 Resident Presentation

Impact of Pharmacist-Led Transitional Care Management Services in an Interprofessional Outpatient Practice

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Background: Transitions of care are periods during which patients are vulnerable to medication-error related harm, potentially leading to hospital readmission. Transitional care management (TCM) services were introduced by the Centers of Medicare and Medicaid Services (CMS) in 2013 to aid in reducing hospital readmission rates and healthcare costs.[1,2] TCM services include initial interactive contact, often by the primary care physician office, within 48 hours of acute care discharge and certain non-face-to-face or a face-to-face visit within 7-14 calendar days. A medication reconciliation takes place either at initial outreach or provider visit. Pharmacist involvement in this process can be valuable to reduce medication-error related harm.

Methods: Pharmacist-led TCM services were initiated within our interprofessional geriatric practice in July 2019. This project is a pre-post study evaluating the effect of these services on hospital readmissions for our patients. The intervention population includes patients who received TCM services after hospital discharge within the first 12 months that TCM services were implemented at our practice. The control group includes patients who were discharged from the hospital to home within the 12 months prior to implementation of TCM services at our practice. Intervention and control hospital readmission rates at 30, 60, and 90 days of initial hospital discharge will be compared. Other characteristics that will be compared across both groups include patient demographics, time to face-face-visit post-discharge, discharge diagnosis, and reason for readmission if applicable. Provider engagement post-hospital discharge for patients in the non-TCM group will also be taken into consideration.

Results: Results in progress. Results will include comparison of readmission rates and characteristics between groups.

Conclusions: We anticipate finding that TCM services at our practice lowered readmission rates. In the future, we hope to use the other characteristic data to improve our process by focusing on higher-risk patients.

References:

1. World Health Organization. Medication Safety in Transitions of Care.https://www.who.int/patientsafety/medication-safety/TransitionOfCare.pdf?ua=1. Published 2019. Accessed December 11, 2020.

2. Am J Med Qual. 2017;32(1):19-26.

D234

Effectiveness of Deprescribing Interventions in Older Adults: An Overview of Systematic Reviews

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Background: Numerous systematic reviews (SRs) have been conducted on deprescribing, yet priorities for deprescribing practice remain unclear. We conducted an overview of SRs examining whether deprescribing interventions led to a difference in outcomes for older adults, compared to usual care, with a focus on examining the effectiveness of such interventions on subgroups of the very old (75+), by dementia status, frailty/multimorbidity status and setting.

Methods: We searched 11 databases from 2005 to October 2020 for eligible SRs. Seven outcome themes were examined – deprescribing, medication-related, clinical, patient-centered, adverse effects, intermediate biomarkers and healthcare utilization. Double data extraction was undertaken with disagreements handled through consensus. AMSTAR 2 was used for quality assessment. We performed a narrative synthesis of included SRs.

Results: 2335 unique citations were retrieved, of which 93 full-text SRs were assessed for eligibility. 34 SRs reporting on 252,393 participants were included. 18 focused on deprescribing, with 9 of these targeting specific medications. The remaining 16 examined reducing potentially inappropriate medications or improving prescribing quality. The most common outcome themes were deprescribing-related (n=31), adverse effects (n=20), patient-related (n=18), clinical (n=14), healthcare utilization (n=12) and other medication-related outcomes (n=10). Only one SR reported on effects on cost of deprescribing. Of the 31 SRs reporting on deprescribing outcomes, 14 (45%) found positive effects, 3 (7%) found no effect, 2 (7%) found negative effects and 12 (39%) found inconsistent effects. Negative effects were reported in only 6 SRs (18%) in adverse effects, patient-centered and intermediate biomarker outcomes. For clinical or patient-centered outcomes, no SRs reported a beneficial effect, with most studies finding no or inconsistent effects. Few SRs reported results according to pre-specified subgroups of interest. SRs scored low or critically low in quality assessment.

Conclusions: In older adults, deprescribing interventions can successfully result in medication withdrawal, and appear safe, but have demonstrated little impact on clinical or patient-centered outcomes. There is a paucity of information for cost outcomes, as well as for subgroups of older adults.

D235 Student Presentation, Encore Presentation

COVID-19, Social Isolation, and Loneliness in Older Adults: Leveraging Exercise to Age in Place Study

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Background: Social isolation and loneliness are associated with morbidity and mortality and are highly prevalent in older adults. Older adults are a high-risk group for developing serious complications from COVID-19 and as a result were asked to shelter-in-place. This limitation on their activities and physical interactions may impact social isolation and loneliness. We aimed to determine the effect of the COVID-19 pandemic on social isolation and loneliness among older adults who participated in the Leveraging Exercise to Age in Place (LEAP) Study.

Methods: We conducted a pre-post analysis using paired t-tests of cognitively intact, community-dwelling older adults in Los Angeles, California previously enrolled in in-person exercise classes as part of the LEAP study prior to March 19th, 2020 when California started shelter-in-place. Participants (n=59) >50 years, had social connectedness, loneliness, and demographic data collected pre- and post-COVID shelter-in-place. Participants' social connectedness was measured via the 11-question Duke Social Support Index (DSSI) and loneliness via the 3-question UCLA Loneliness Scale (UCLA 3).

Results: Participants had an average (±SD) baseline DSSI of 27.2 (± 3.5) and UCLA 3 of 4.8 (± 1.7) and were an average of 76.6 ± 9.2 years, 81% female, 63% white, 29% widowed, 42% living alone, 27% acting as caregivers, and 44% were diagnosed with 3 or more chronic health conditions. We completed post-assessments on average 61 ± 29 days after the start of shelter-in-place. Results of the paired t-tests indicated no statistically significant difference in social connectedness and loneliness pre- and post-shelter-in-place.

Conclusions: Following the start of the COVID-19 pandemic, changes in social isolation and loneliness were not statistically significant. Reasons for the lack of observed change include: the limitations of a small sample size, possible protective factors from prior enrollment in the LEAP program, or insufficient time at post-assessment to develop changes in loneliness and social isolation. However, given the lasting effects on morbidity and mortality and the early timing of assessments, changes should continue to be monitored via repeat assessments.

D236 Student Presentation

The Prevalence of Dehydration in Patients With Dementia

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Background

Guidelines and research suggest that dehydration occurs commonly during dementia, and is associated with various negative consequences, but studies have examined limited populations. We sought to ascertain the prevalence of dehydration among a group of older Veterans with dementia, measured using several different physiological tests, and at different time points before death.

Methods

We analyzed retrospective outpatient data. We compiled a cohort of all Veterans receiving care in the VA over age 74 who died between the 2010 and 2018. 87,519 patients with dementia and 210,844 healthy comparisons were included. We used published guidelines to operationalize dehydration: Bun/Cr ratio>20; urine specific gravity>1.015; serum sodium>145 mEq/dL; and serum osmolality>295 mOsm/kg. Measures were considered separately, and an aggregate measure was computed, with any one of them positive. 2-sample Z tests compared the average yearly prevalence of dehydration with and without dementia during years 0-2 and 5-10 before death.

Results

Using an aggregate measure, during years 5-10 before death, the prevalence of dehydration in those with dementia was slightly higher than in those without dementia (41.2% vs 39.8%). During the two years before death, the prevalence of dehydration in those with dementia was also slightly higher than in those without dementia (53.8% vs 47.7%). Among individuals with dementia, the prevalence of dehydration was higher during years 0-2 before death than during years 5-10 before death (53.8% vs 41.2%). There was a very broad range in the estimate of dehydration depending on the measurement (e.g. 4.6% based on sodium but 48.9% based on osmolality).

Conclusion

Although individuals with dementia had a slightly higher prevalence of dementia than those without, the differences were relatively small. Despite common assumptions, we did not find evidence that older veterans with dementia experience disproportionately high rates of dehydration before or around the time of death. Dehydration was common among across the cohort, and may warrant attention. Further research is needed to ascertain whether and how dementia is associated with fluid abnormalities.

D237 Student Presentation

Neuropsychiatric Symptom Clusters in Older Mexican Americans With and Without Cognitive Impairment

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Background: The Hispanic older adult population in the US will triple by 2050 and is at a disproportionate risk for dementia. Neuropsychiatric symptoms (NPS) may be early manifestations of neurocognitive disorders, such as Alzheimer's and dementia. Limited evidence exists on neuropsychiatric and behavioral symptoms and subcategorizing NPS into clusters to help advance understanding of symptoms among community-dwelling older Hispanic populations. This study aimed to utilize factor analysis to examine the NPS clusters in older Mexican Americans (MAs) with and without cognitive impairment and to examine the longitudinal prevalence of NPS using Waves 7 and 9 of the Hispanic Established Populations for Epidemiological Study of the Elderly (HEPESE).

Methods: We used HEPESE data from Wave 7 (2010-2011; n=925) and Wave 9 (2016; n=460) of community-dwelling MAs ≥ 80 years of age. NPS were assessed using the Neuropsychiatric Inventory Questionnaire (NPI-Q) by informants, and cognitive impairment (CI) was based on the participant's Mini-Mental State Examination (MMSE) score ≤ 18. Exploratory Factor Analysis for NPS clustering was performed using IBM SPSS 25.0. NPS clusters for participants with and without CI were identified by Principal Axis Factoring analyses with varimax rotation. Frequencies in NPS and cluster prevalence were assessed longitudinally.

Results: NPS were reported in 5% to 35% of adults with or without CI. Euphoria was the least prevalent symptom reported by informants. A simple three-factor structure model of the NPI was identified: Hyperactivity (Irritability, Agitation, Disinhibition), Mood Disturbances (Depression, Appetite, Apathy, Sleep, Anxiety), Psychosis/Motor Disturbances (Hallucination, Motor Disturbances, Delusion). NPS cluster presentation varied between older MAs with and without CI. Participants reported a greater prevalence of NPS at Wave 9 compared to Wave 7 except for Delusions.

Conclusions: Our results suggest that there are different NPS profiles for MAs with and without CI, and the prevalence of NPS appears to worsen with time. Future work will explore how NPS progression can predict cognitive decline and identify risk factors associated with changes in NPS over time among older MAs.

D238 Student Presentation

Are There Any Correlations Between Caregiver Demographics and Caregiver Burden in Dementia?

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Background: Many patients with dementia are cared for by informal caregivers outside of formal medical facilities. Due to the encompassing nature of dementia, there is often a complex relationship between caregivers and caregiving, which can result in a psychological or physical stress that leads to caregiver burden. Caregiver burden can affect quality of life for both caregiver and patient. The Zarit Burden Interview (ZBI) is a self-reported interview of 22 items that is used as a measure for caregiver burden. This literature review aims to summarize some of the factors that contribute to caregiver burden in caregivers of patients with dementia. Factors such as age of caregiver, Neuropsychiatric Inventory (NPI) of patient, gender of caregiver, and relationship of caregiver to patient (spouse versus non-spouse) were determined and analyzed.

Methods: We included forty studies (found on PubMed) which were less than 15 years old and used the ZBI as the measure of the severity of caregiver burden. The relationship of ZBI scores to other variables, such as age and gender of caregiver were determined. Calculations were done in Python using NumPy and SciPy modules.

Results: We observed that a higher caregiver burden was associated with a higher average caregiver age. Increasing burden was also observed to be positively correlated with the percentage of caregivers in a study that were female. When ZBI scores were broken down among different caregiver age groups, the most severe burden was observed in the group of caregivers ages 70 and up. No significant correlation was found between ZBI and percentage of caregivers in a study that were spouse. A non-significant positive correlation was found between ZBI and NPI.

Conclusions: The presence of a correlation between burden and caregiver gender or age suggests a potential causal relationship between these factors. Further research is necessary to prove such a relationship, which could guide recommendations for support systems for at-risk individuals.

D239 Student Presentation

Impact of COVID-19 on Persons with Dementia and Their Caregivers: Decreased Community Resource Utilization and Less In-Person Visitation

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Background

Persons with dementia (PWD) and their caregivers have been particularly affected by COVID-19. Most PWD are aged over 65 and at higher risk for COVID complications, and many live in communities that limited visits during COVID. Resources for caregivers, including Alzheimer's Association programs, were suspended or virtualized during the pandemic. Our objective was to determine how COVID affected caregivers and PWD, and how the pandemic affected use of Alzheimer's Association resources.

Methods

A 20-question anonymous survey targeted at caregivers was conducted via Google Forms. The survey was sent to emails registered with the Alzheimer's Association Greater Cincinnati Chapter, and a survey link posted on the chapter's Facebook page. Responses were collected from 07/16/20-07/31/20. Statistical analysis of responses was completed on JMP software.

Results

77 unique responses were collected. Respondents' mean age was 64.5 years (SD 11.6 yrs) and 70% of respondents were women. The mean age of the PWD was 79.9 years (SD 9.6 yrs). Most PWD were living at one of the following: with respondent (34%), independently (25%), in assisted living (19%), or in a long-term nursing facility(14%). Three PWD moved in with family during COVID, four PWD were moved to a higher level of care, and two PWD died during the pandemic.

31% of caregivers had not spent time in-person with the PWD during COVID (compared to 4% prior to COVID), but respondents increased video call use from 4% to 26%, and interaction through barriers from 0% to 21%. 76% of respondents thought that quality of life for the PWD had decreased, and 87% stated that their worry over the PWD was increased.

87% of respondents were using at least one Alzheimer's Association resource prior to COVID but only 45% were using any resource during COVID. 34% of respondents desired more advertisement of virtual programs and there were 6 suggestions for programs that already existed.

Conclusions

Caregivers thought that COVID had worsened life for PWD and increased caregiver worry. One third of respondents had not spent in-person time with PWD during COVID, but other forms of interaction increased. Caregivers used Alzheimer's Association resources less during COVID and many were not aware of virtual resources.

D240 Student Presentation

Caregiver burden, A virtual group psychoeducation intervention to reduce depression and anxiety in caregivers of those with dementia

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BACKGROUND: "Caregiver burden" refers to the physical, psychological, social, and financial symptoms that arise from tending to chronically ill patients. According to the 2019 Alzheimer's Association annual report, more than 16 million Americans perform unpaid caregiving tasks for people with Alzheimer's or dementia with more than half lacking formal training. Caregivers of dementia patients average 21.9hrs of care per week and are more likely to report increases in stress. The decline of caregiver mental health generally parallels patients' advancing dementia symptomatology. Though substantial research has examined face-to-face caregiver education intervention, there is less evidence on the virtual setting. The present study examines the effect of a virtual psychoeducation treatment group on caregiver burden in primary caregivers of patients with dementia.

METHODS: Caregivers (ages 20-85) of patients with Alzheimer's or dementia, with a score > 30 on the Caregiver Burden Inventory (CBI), were recruited at the Glennan Center Memory Consultation Clinic. Participants completed 8 weekly 1-hr virtual psychoeducation group sessions and 2 workshops. Measures, including The Center for Epidemiologic Studies Depression Scale (CES-D), the State Trait Anxiety Inventory (STAI-S, STAI-Y), the Positive and Negative Affect Schedule (PANAS), and the Perceived Stress Scale (PSS), were administered at baseline, after sessions 5 & 8, and post-intervention. A series of hierarchical regressions were performed to examine caregiver burden, anxiety, and depression.

RESULTS: The 8 participants thus far were 100% female, ages 44-73, with 5 being non-hispanic/white and 2 being African American. Most were primary caregivers for 1-2yrs and the amount of care ranged from 3.5hrs/week to 85hrs/week. Additional data will be presented.

CONCLUSIONS: We found the virtual setting promoted consistent participation and was a solid platform for discussing shared experience. Challenges included ensuring participant attendance and technical difficulties with displaying content. Upon completion of data analysis, additional conclusions will be reported.

D241 Student Presentation

COVID-19 pandemic impact on geriatric mental health among diverse seniors of a FQHC

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Background: The COVID-19 pandemic has caused an unprecedented public health crisis, particularly in low-income and diverse ethnic/racial communities. In March 2020, California's governor issued a stay at home order to protect residents and slow the spread of the disease. Prior to this order, social isolation and loneliness among older adults was already a concern as studies showed correlation with depression and physical disease. Our objective was to examine the impact of the pandemic on the mental health of diverse seniors by administering a questionnaire to patients of a FQHC. **Methods:** The research site is a FQHC serving the Central Valley of CA and participants were patients age 60 and older. Data was collected via paper-based questionnaires and telephone interviews in English and Spanish. Information included demographics, social isolation, loneliness (using the Revised UCLA Loneliness Scale), depression (using the PHQ-9), and coping mechanisms. PHQ-9 scores were compared with scores recorded prior to the stay at home order (06/2019-03/2020). **Results:** Data collection is ongoing; these are preliminary results. Among this sample (N=43, mean age 64.9, 71.43% Hispanic, 62.3% Female, 55.8% Immigrant), we discovered: (1) family members are the most important social support; (2) social interactions have reduced dramatically since the stay at home order; (3) loneliness measures are not high (m=1.8), but PHQ-9 scores are higher after the stay at home order (m=7.4 to 8.3); (4) nearly 1/2 have friends or family who tested positive, and almost 1/3 have had a family or friend die from COVID-19. **Conclusion:** There is need to continue monitoring loneliness and depression among low-income and diverse older adults during the COVID-19 pandemic. Geriatricians should be aware of the importance of family interactions when assessing and treating mental health of older patients. Future research may seek to understand mitigating factors among this group, including immigrant status and family relationships.

D242 Student Presentation

Impact of Loneliness on Mental, Physical, and Cognitive Functioning in Schizophrenia

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OBJECTIVE: Rising rates of loneliness and social isolation (L/SI) have been observed worldwide[1], however the impact of L/SI on health among persons with schizophrenia (PwS), a high-risk group for L/SI, has not been examined. This cross-sectional study examined associations between loneliness and health among PwS and non-psychiatric controls (NCs). We hypothesized that loneliness would be linked to poor health outcomes in both groups.

METHODS: The study sample included 25 PwS (mean age 52.0, age range 32-69 years, 48% women) and 38 age- and sex-comparable NCs. Participants completed assessments for physical well-being (Medical Outcomes Survey – Short Form 36 or SF-36, physical composite score), mental-wellbeing (SF-36, mental composite score), depression (Patient Health Questionnaire-9), positive symptoms (Scale for the Assessment of Positive Symptoms), negative symptoms (Scale for the Assessment of Negative Symptoms), and emotional support (Emotional Support Scale). SPSS was used to conduct T-tests, Mann-Whitney U- tests, and linear models.

RESULTS: PwS had higher loneliness scores and lower emotional support than NCs ($p< 0.001$). Increased loneliness was associated with higher perceived stress in the entire sample ($p<0.001$, $\eta_p^2=0.379$). Worse positive symptoms in PwS ($p= .012$, $\eta_p^2=0.289$), as well as worse physical well-being ($p=.008$, $\eta_p^2=0.221$), worse depression ($p=0.003$, $\eta_p^2=0.271$), and worse mental well-being ($p=0.012$, $\eta_p^2=0.2$) in NCs were significantly associated with increased loneliness. Less emotional support was associated with worse executive functioning in NCs ($p=0.017$, $\eta_p^2=0.18$) and worse positive symptoms among PwS ($p= .04$, $\eta_p^2=0.237$). All models covaried for age, gender, diagnostic group, marital status, depression, and emotional scores.

DISCUSSION:

PwS had higher loneliness scores than NC. Loneliness is a strong predictor of perceived stress, positive symptoms (in PwS), as well as physical well-being, depression and mental well-being (in NCs only). Lack of emotional social support was associated with worse executive

functioning (in NC) and worse positive symptoms (in PwS). Future research must identify specific mechanisms that link loneliness to health in PwS, providing targets for health interventions among PwS.

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D243 Student Presentation

Open Label Pilot Trial of 40hz Light and Sound Exposure Therapy for Patients with Mild Cognitive Decline and Early Alzheimer's Disease: A Case Demonstration

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BACKGROUND: Methods for treating cognitive decline associated with Mild Cognitive Impairment (MCI) and Alzheimer's Disease (AD) have been met with limited success. However, emerging studies on synergistic 40hz light and sound therapy treatments have yielded promising results in AD rodent models. Studies using this approach demonstrate both reduction in biomarkers and improved memory related cognitive task performance. This intervention holds potential as a non-pharmacological, non-invasive treatment option for AD and MCI. The goal of this pilot study is to translate 40hz light and sound therapy into a human model using a novel smart tablet application that combines these sensory domains with cognitive games.

METHODS: Study received IRB approval by the George Washington University. Participants were primarily recruited from the GWU Center for Integrative Medicine. Inclusion criteria consisted of subjective or objective cognitive complaints in an individual ≥50yo. Participants were excluded for history of epileptic seizures including febrile seizures and significant eye disease. Participants provided their own smart tablet. Initial and follow up Montreal Cognitive Assessment Scale (MOCA) testing was performed at 0, 3, and 6 month intervals to assess cognitive function. Participants were directed to use the application for 1 hour a day.

RESULTS: Preliminary results of potential light therapy impact can be demonstrated through a case example of a caucasian female participant with amnestic MCI. As highlighted in Table 1., the participant demonstrated improvement in metric assessments by the 6 month evaluation.

CONCLUSIONS: Over the span of 6 months, it is notable that this preliminary participant showed improvement in cognitive screening metrics. Of particular note, is the improvement to full marks in the MOCA Memory Index Score. While there is no way to confirm these improvements are solely attributable to the light and sound therapy, these findings warrant continued exploration. Furthermore, no adverse effects or difficulty in complying with the therapy were reported by the participant.

Table 1. Case Participant

	Month 0	Month 3	Month 6
MOCA	23	21	24
MOCA-MIS (Memory Index Score)	6	2	15

D244 Student Presentation

Geriatric Psychiatry In-Patient Perspectives: Disclosure of Dementia/Major Neurocognitive Disorder (MNCD)

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Background: As the older population in the United States grows in the next decades and the prevalence of MNCD increases, developing strategies to manage the disclosure of dementia/MNCD becomes crucial. The aim of this study is to assess the beliefs and attitudes regarding the diagnosis of MNCD of patients in an urban inpatient geriatric psychiatry unit, and specifically, to ascertain whether these patients believed that such disclosure would cause them to feel depressed or at risk for suicide.

Methods: Retrospective chart review and semi-structured clinical patient interviews conducted at an urban inpatient geriatric psychiatry unit.

Results: Preliminary results:

Sample: 10 males and 15 females; average age of 72.1 +/- 7.4 years; 76% Caucasian, 20% Hispanic, 8% African American. 64% completed high school. MoCA scores ranged from 4-30, average 17.00 +/- 7.36, suggesting a range of mild to severe cognitive impairment. 60% of the patients had a diagnosis of MNCD prior to admission.

Also see table below.

Conclusion: We found that the beliefs and attitudes regarding the diagnosis of MNCD of patients in the study ranged from hopelessness to acceptance of memory impairments, with 28% of patients reporting that disclosure would cause them to feel depressed and 16% reporting that it would cause them to feel suicidal. Further research on patient perspectives in the setting of this study may lead to the development of strategies to support patients at the time of disclosure, which may help bridge the gap between published guidelines and clinical practice.

Reference:

Poyser, Charlotte A, and Tickle, Anna. "Exploring the Experience of the Disclosure of a Dementia Diagnosis from a Clinician, Patient and Carer Perspective: a Systematic Review and Meta-Ethnographic Synthesis." Aging & Mental Health, vol. 23, no. 12, 2019, pp. 1605–1615.

Patient Responses

Patients reporting:	Yes	No	Other responses
Presence of memory problems	52% (n=13)	48% (n=12)	
H/o being given a diagnosis of dementia/MNCD*	23.08% (n=3)	69.23% (n=9)	7.69% (n=1)
Disclosure of diagnosis would be helpful	64% (n=16)	20% (n=5)	16% (n=4)
Negative psychological impact of disclosure**	37.04% (n=10)	37.04% (n=10)	25.93% (n=7)
Depression	28% (n=7)	52% (n=13)	20% (n=5)
Suicidal thoughts	16% (n=4)	76% (n=19)	8% (n=2)

***Sum less than 25 due to negative response to questions addressing the presence of memory problems.**

**** Sum greater than 25 due to multiple responses from some patients.**

D245 Resident Presentation

Characteristics and prognosis of PIB-PET negative mild cognitive impairment

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Background

Multiple studies have shown an association between the presence of amyloid deposits detected by PIB-PET scan in patients with mild cognitive impairment (MCI) and their progression to Alzheimer's disease (AD). However, less is known about the prognosis and characteristics of amyloid negative MCI patients. We looked at the characteristics of PIB-PET negative MCI patients, their progression to dementia and the type of dementia to which they progress.

Methods

A targeted literature review of databases was performed for articles published between 2010 and 2020 in English. The following combination of terms was used: (PiB or PIB or Pittsburgh compound B or PIB-PET or 11C PIB-PET or amyloid ligand or [11C]PiB) AND (positron emission tomography or PET) AND (amyloid imaging or beta-amyloid or amyloid or amyloid-b or amyloid deposition) AND (mild cognitive impairment or MCI).

Results

The initial electronic database search elicited 591 abstracts, of these, 8 were included in the final analysis. Two were cross-sectional studies and six were prospective cohort studies. The cross-sectional studies identified hippocampal structural abnormalities in MCI PIB(-) brains. The cohort studies included 68 MCI PIB(-)subjects followed clinically and with imaging for 18 months to 5 years. Dementia progression rate was 0-22%/year. Only two studies saw any conversion to AD. Other studies reported progression of MCI PIB(-) subjects to varied forms of dementia including Argyrophilic grain disease, Senile dementia of the neurofibrillary tangle type, Progressive supranuclear palsy, Subcortical dementia, Fronto-temporal dementia and dementia with Lewy bodies. 69% of patients showed stable MCI. A subset of patients (10%) reverted to normal cognition.

Conclusions

Clinically, MCI PIB(-) and MCI PIB(+) patients are indistinguishable as they have similar performance in memory tests. Most MCI PIB(-) patients remain clinically stable; some of them revert to normal cognition. Those that progress to dementia have varied pathologies other that AD.

D246 Resident Presentation

Cognitive Impairment Increases Hospitalizations in Some But Not All Chronic Diseases

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Background:

Patients with chronic diseases, such as Heart Failure (HF), Chronic Obstructive Pulmonary Disease (COPD), End Stage Renal Disease (ESRD), and Diabetes Mellitus (DM) have high hospitalization and readmission rates. These chronic diseases are also associated with cognitive impairment (CI). Prior studies[1,2] have shown an increase in all-cause hospitalizations in those with heart failure (HF) and CI. Our study examined the relationship between CI and hospitalizations in COPD, ESRD, and DM.

Methods:

A targeted literature review databases was performed of articles published that related three variables: the above chronic disease, hospitalizations, and CI between 2000-2020. Search terms included: *cognitive impairment, admission, readmission, hospitalization, COPD, chronic obstructive pulmonary disease, diabetes, ESRD, and dialysis.*

Results:

The initial search yielded 1,133 abstracts. 12 were deemed relevant, 9 underwent full review, and 7 were included. Two studies involved COPD[3,4] and found no significant relationship between CI and increased hospitalizations. Three studies involved DM and found DM with any CI, as well as increased severity of CI had significantly higher all-cause hospitalizations[5,6]. DM with CI also had higher 30-day readmissions compared to DM without CI[7]. Two studies involved ESRD. ESRD with CI had significantly higher readmissions compared to ESRD without CI[8,9].

Conclusions:

Despite CI's prevalence in chronic diseases, our study suggests that CI may affect hospitalization and readmission risk more in some, but not all chronic diseases. While CI is linked to medication non-adherence and decreased ability to participate in discharge patient education, it may not always increase risk for readmissions. More research is needed.

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