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Predicting Adverse Discharge Destination from Geriatric Rehabilitation: a Retrospective Chart Review

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Background/Purpose: Returning home is considered a key indicator of successful rehabilitation. It is important that we better understand the factors predicting adverse discharge to help inform patient and provider expectations as well as health resource planning.

Method: We conducted a retrospective chart review of patients admitted to a Geriatric Rehabilitation Unit (GRU) in Hamilton, Ontario. Patient characteristics, cognitive scores, delirium prevalence, and outcomes of the rehabilitation course were abstracted. The primary outcome was adverse discharge destination. Correlation between variables and an adverse discharge was determined with Pearson chi-squared and univariate logistic regression.

Results: Of the 251 patients included, 25 patients (10.0%) experienced an adverse discharge, and 74 of the remaining 226 (32.7%) had a delayed discharge (beyond 21 days). Requiring assistance with ADLs prior to hospitalization (p=0.037), a diagnosis of COPD (p=0.003), and lower serum albumin level at the time of GRU entry (p=0.042) were associated with an adverse discharge destination. Our data showed no impact of age, length of stay, MMSE score, occurrence of delirium, number of comorbidities, and polypharmacy, on an adverse discharge.

Discussion: In our GRU, 90% of patients admitted returned home with continued or increased supports. Patient characteristics commonly associated with poor hospital outcomes (older age, comorbidity level) were not hindrances to successful rehabilitation. Level of function and albumin level provided greater prognostic information than cognitive assessments suggesting the importance of frailty assessments in determining rehabilitation success.

Conclusion: Among older adults admitted to a geriatric rehab unit, frailty indicators such as ADL assistance and low albumin predicted adverse discharge disposition.

Social Capital, Cognitive Health, and the Epigenetic Clock in Older Canadians

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Background/Purpose: Biological aging, or the difference between chronological χ apparent age, has been suggested to be associated with several adverse social exposures and to predict poor health outcomes. This study aims to assess the association of social capital, or one's networks of social relationships, with cognitive outcomes in older adults and whether there are underlying epigenetic aging mechanisms.

Method: We used data from the Canadian Longitudinal Study on Aging (n=1479; ages 45-85 years). Social capital was categorized into structural or cognitive social capital. These were operationalized from questions around social participation and social support. The outcome variable, cognition, was operationalized according to five domains: attention, verbal fluency, memory, executive function, and psychomotor speed. Epigenetic clock acceleration was calculated by subtracting chronological age from DNA methylation epigenetic age. Covariates included age, sex, general health, stress levels, socioeconomic position (SEP), and health behaviours. Multivariable linear regression models conducted in R were used to assess the relationships of interest.

Results: Individuals with low structural and cognitive social capital had lower SEP, higher stress levels, and worse health behaviours than those with high structural and cognitive social capital. High structural social capital was associated with decelerated epigenetic clock (β=-0.80, 95% CI -1.5, -0.14), and better attention (β=0.21, 95% CI 0.12, 0.30), verbal fluency (β=0.16, 95% CI 0.11, 0.24), executive function (β=0.18, 95% CI 0.084, 0.29), and memory (β=0.088, 95% CI 0.012, 0.17).

Discussion: Low structural social capital in older Canadians is associated with worse cognitive outcomes in several domains and accelerated biological epigenetic aging. This relationship is also partly explained by general health and SEP.

Conclusion: These findings contribute to the growing body of evidence explaining the role of social inequalities in aging.

Interviews from an Environmental Scan Exploring Facilitators and Barriers for Perioperative Geriatric Care Models

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Background/Purpose: Specialized perioperative geriatric care pathways improve outcomes for older adults undergoing surgery, however there is variable uptake across Canada. We interviewed participants from a national environmental scan of perioperative geriatric programs to identify strengths, weaknesses, opportunities, and threats to such care models.

Method: The national environmental scan included an initial online survey followed by an optional interview sent to Canadian geriatricians, anesthesiologists, and general surgeons. Semi-structured telephone interviews were conducted from May 2020 to August 2021, consisting of pre-defined questions on the programs, implementation barriers, and facilitators. Responses were transcribed and independently analyzed by two authors using an inductive approach to identify themes. Saturation of themes was attained. Themes were categorized using a SWOT framework by two authors independently, and differences were resolved through discussion.

Results: Of 132 initial survey respondents, 24 were interviewed. Eleven themes were identified. Strengths included interest in creating and/or sustaining structured perioperative geriatric programs due to perceived value for patients and health care teams, added value of frailty assessment, capacity building, and delirium as a common focus. Weaknesses included mostly reactive involvement and lack of formal recognition. Opportunities included building in elements for program success (hospital-system buy-in, cross-specialty team collaboration, workflow integration, and built-in evaluation) and virtual care to improve rural access. Threats included shortage of geriatric-specialized clinicians and the pandemic diverting priorities.

Discussion: While interviewees favoured creating and/or sustaining structured perioperative geriatric programs/pathways, such programs need to be designed to fit the workflow and resource constraints whereby care is delivered proactively, potentially leveraging opportunities to enhance coordination, accountability, and cross-specialty collaboration.

Conclusion: Interviews from this national environmental scan inform the current strengths, weaknesses, opportunities, and threats to implementing perioperative geriatric care models.

Older Adults Assigned a 'Low Acuity' Triage Score: a Description of Patient Characteristics and Outcomes in St. John's, NL

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Background/Purpose: Older adults (≥ 65 years) are more likely to access the Emergency Department (ED) due to complex comorbidities and social issues. Studies suggest that older adults, despite 'low acuity' Canadian Triage and Acuity Scale (CTAS) scores, are more likely than their younger counterparts to be admitted. Our primary objective was to describe outcomes of older adults in the ED assigned 'low acuity' triage scores. The secondary objectives were to compare outcomes to a younger control group, and between age subgroups of older adults.

Method: A retrospective cohort study was performed on patients assigned a 'low acuity' CTAS score at two EDs in St. John's, NL. Eligible patients were divided into age subgroups, including: 40-55 years (controls), 65-74 years, 75-84 years, and ≥ 85 years. The primary outcome was admission to the hospital at initial ED visit. Secondary outcomes included length of stay and re-visit to the ED, among others.

Results: Admission to hospital was not more likely in older adults ($p > 0.05$). However, older adults had more frequent ED visits, social work consults, and hospital admissions in the previous six months ($p < 0.05$). Among subgroups, those ≥ 85 years were more likely to be admitted ($p < 0.05$). ED length of stay and re-visit rates did not differ ($p > 0.05$).

Discussion: Admission rates were not higher in older adults compared to controls. However, older adults ≥ 85 years required more hospital resources, comprehensive workups, and were more likely to be admitted compared to those 65-74 years.

Conclusion: Older adults presenting with 'low acuity' CTAS scores utilized disproportionate resources in the ED. Our results highlight the importance of a modified triage assessment approach, prioritizing the needs and improving outcomes for this population.

Accessibility of a Virtually Delivered Fall Prevention Program During COVID-19 for Frail Community-Dwelling Older Adults

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Background/Purpose: Sunnybrook Hospital's Fall Prevention Program (FPP) was modified to be delivered virtually in response to COVID-19. We aimed to compare the patient population who sought the FPP virtually versus in-person and explore how the virtual delivery of care impacted accessibility.

Method: A retrospective chart review was performed. A convenience sample of sixty charts was selected from patients assessed for the FPP between January 2019 and April 2021. Measures of patient characteristics, frailty, co-morbidity, cognition, and socioeconomic status were abstracted. Patients were stratified by virtual or in-person assessment and compared using Wilcoxon Rank Sum tests for continuous variables, and Chi-squared tests for categorical variables.

Results: Among the sixty patients the median age was 79.5 years (IQR 75-85), 28% were male, 68% were University educated, the median Clinical Frailty Score was 5 (IQR 4-5), and 83% used >5 medications. Twenty-two patients (37%) were seen virtually and the remaining 38 (63%) were seen in-person. The virtual cohort showed a significantly higher use of outdoor walking aids (p=0.039) and showed non-significant trends towards using >10 medications, requiring assistance with >3 IADLs, reduced accuracy with clock drawing, and higher treatment attendance (82% virtual vs. 55% in-person). No significant change was seen for time between assessment and treatment (median 50.5 days virtual vs. median 53 days in-person; p=0.423).

Discussion: The population seeking the FPP virtually was similarly frail as the in-person cohort but had some increased barriers including increased use of walking aids, medications, assistance with IADLs, and cognitive impairment (measured with reduced clock drawing accuracy). Despite these barriers, attendance remained high.

Conclusion: The virtual FPP delivery should remain an option for patients at Sunnybrook as it appeared accessible for frail seniors during a pandemic.

Does a Simple Bedside Clinical Frailty Score Predict CPR Survival?

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Background/Purpose: Frailty has been associated with decreased survival to discharge following in-hospital cardiac arrest. Currently, there is limited research about the association between frailty and survival to discharge following in-hospital cardiac arrest in Canada. This study builds off a study by Ibitoye *et al*. in *Age and Ageing* 2021, and aims to determine the sensitivity and specificity of the Clinical Frailty Scale (CFS) score with respect to cardiopulmonary resuscitation (CPR) survival for hospitalized patients over age 60 in Regina, Saskatchewan.

Method: A retrospective chart review of patients who underwent CPR identified eligible patients. CFS scores were determined from physiotherapy assessments by a multidisciplinary team. Sensitivity and specificity of CFS scores ≥5 as a predictor of CPR survivorship was calculated and interrater reliability of the CFS score was evaluated.

Results: 200 charts were reviewed. Of the 81 patients included in this study, 10 patients (12%) survived to discharge. The median age was 73. Interrater agreement of the CFS score is 0.82 between healthcare providers and 0.74 including the patient family partner (PFP). For CFS scores ≥5, the sensitivity is 0.44 and specificity is 0.70. In patients whose CFS score <5, 14% survived and 86% died. In patients whose CFS score ≥5, 9% survived and 91% died.

Discussion: In Regina, a CFS score ≥5 did not predict CPR survival. The CFS score has good interrater reliability amongst healthcare providers, and was less accurate among the PFP. Contrary to prior research, a CFS score ≥5 did not suggest futility of in-hospital CPR.

Conclusion: The CFS is a simple bedside assessment with good interrater reliability. Although not perfect, the CFS can assist clinicians by informing end-of-life care Discussion: s with patients about the realistic outcomes of resuscitation.

Geriatric Specialists Perspectives on Virtual Care during the COVID-19 Pandemic

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Background/Purpose: During the COVID-19 pandemic, physicians used telemedicine to minimize viral transmission and care disruptions. We aimed to assess the use of telephone visits, video visits, and eConsults by physicians providing geriatric care, and to understand their perspectives on telemedicine during the pandemic.

Method: We performed a mixed-Method: s cross-sectional study using an online survey including geriatricians, Care of the Elderly physicians, and physicians who cared for ≥10 patients in a long-term care home in Ontario, Canada. We performed a reflexive thematic analysis of free-text survey responses. We assessed the current use of telemedicine and compared the proportion of participants using telemedicine pre-pandemic with self-predicted use post-pandemic.

Results: We received 29 survey responses from geriatricians (75.9%), Care of the Elderly physicians (10.3%) and physicians in long-term care (13.8%). The majority (96.6%) of respondents reported using telephone visits. Comparing self-predicted use of telemedicine post-pandemic with reported pre-pandemic use, we expect a significant increase in telephone and video visits, but not eConsults ($p<0.001$, 82.1 vs. 35.7% for telephone, 84 vs. 28% for video; $p=0.47$, 68.8 vs. 56.3% for eConsults). Thematic analysis revealed geriatric specialists perceived telemedicine had a role during the pandemic, virtual care assessments were often incomplete, perspectives on using telemedicine in geriatric practice improved, and continued use depended on the availability of remuneration.

Discussion: If remuneration remains available, respondents predicted continued use of telephone and video visits post-pandemic, which may be attributed to improved perspectives on using telemedicine developed during the pandemic despite limitations relating to incomplete assessments. Generalizability of results is limited by our small sample of mostly geriatricians.

Conclusion: Geriatric specialists perceived a role for telemedicine in geriatric care during the pandemic. Despite its limitations, ongoing use was expected but dependent on available funding.

Interventions to Reduce Social Isolation and Loneliness in Older Adults: a Systematic Review and Meta-Analysis of Randomized Controlled Trials

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Background/Purpose: Social isolation and loneliness are significant public health concerns faced by older adults due to physical, cognitive and psychosocial changes that develop with aging. In addition, social isolation and loneliness are associated with increased morbidity and mortality. We aimed to evaluate the efficacy of interventions for loneliness and social isolation/support targeting older adults, and subpopulations most likely to benefit.

Method: We systematically reviewed primary and grey literature of interventions targeting loneliness and social isolation/support in adults aged ≥ 65. We searched OVID, CINAHL, CENTRAL, Embase, PsychINFO, Web of Science, and Scopus from inception to March 2020. Abstracts and full texts were completed in duplicate. Full text extractions were completed by one author and reviewed by an independent author. Risk of bias was completed in duplicate. Overall effect sizes (ES) were calculated via random effects models by type of intervention. The protocol was registered with PROSPERO (CRD42020178836).

Results: Out of 16229 citations screened, 71 studies were included, with 59 in meta-analysis. Six interventions were associated with a significant reduction in loneliness compared to control, typically usual care: animal therapy (ES -1.41, 95% confidence interval -2.49 to 0.32), psychotherapy (ES -0.33, 95% confidence interval -0.52 to -0.14), group and individual counseling (ES -0.34, 95% confidence interval -0.66 to -0.03), exercise (ES -0.28, 95% confidence interval -0.40 to -0.16), music therapy (ES -0.22, 95% confidence interval -0.41 to -0.03), and technological interventions (ES -0.37, 95% confidence interval -0.65 to -0.10). In studies completed in long-term care, the ES was -1.30 (95% confidence interval -1.83 to -0.76). There was moderate to substantial heterogeneity in most interventions.

Conclusion: Our systematic review and meta-analysis indicates that non-pharmacological interventions can reduce loneliness in older adults.

Correlates of Anxiety and Depression in Caregivers to Assisted Living Residents During COVID-19: a Cross-sectional Study

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Background/Purpose: Family and friend caregivers (henceforth "caregivers") to residents in Assisted Living (AL) homes experienced significant increases in anxiety and depression during the COVID-19 pandemic. Little is known about the extent that aspects of caregiving versus other pandemic-related stressors contributed to this increased mental health burden. We examined correlates of clinically significant anxiety disorder and depressive symptoms among AL residents' caregivers during the initial wave of COVID-19 in two Canadian provinces, and their related coping responses.

Method: Caregivers to AL residents in Alberta and British Columbia (BC) completed a web-based survey (between Oct 2020-Mar 2021) providing data on their sociodemographic, health and coping characteristics and concerns about residents' health/social care before and during the pandemic. Presence of clinically significant anxiety disorder and depressive symptoms were assessed with the GAD-7 and CES-D10

instruments, respectively. Multivariable (modified) Poisson regression models identified caregiver correlates of anxiety and depressive symptoms.

Results: Among 673 caregivers (547 in Alberta, 131 in BC) surveyed, most were English-speaking white women. Anxiety disorder was present in 28.6% of caregivers and 38.8% had depressive symptoms. Both personal stressors (more chronic conditions, income reduction, poor social support) and caregiver stressors (concern about care recipients' depression, intention to withdraw resident from AL) were independently associated with caregiver depression and anxiety. A quarter of depressed and anxious caregivers increased their alcohol consumption versus 16.5% of all caregivers.

Discussion: Caregivers to residents in BC and Alberta AL communities reported significant personal and caregiving-related stressors during the initial wave of the COVID-19 pandemic. These stressors were independently correlated with depression and anxiety.

Conclusion: Physicians interacting with caregivers should screen for anxiety and depression among caregivers with stressors identified in this study and offer tailored supports.

Psychiatry Service Utilization Among Older Home Care Clients Differs in Two Canadian Provinces

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Background/Purpose: Despite the implications of *universal* healthcare in Canada, it is generally accepted that mental health care for older adults have been neglected. We aimed to examine the differences in mental health diagnoses and utilization of psychiatric services in Manitoba, specifically the Winnipeg Regional Health Authority (WRHA) and Nova Scotia (NS).

Method: We conducted a retrospective cohort study of home care clients 60 years or older. The InterRAI was linked to physician visit/billing data and hospital admission data between 2011-2013 with 4 years of follow-up. Statistical testing across groups used chi-square and *t*-tests, and multivariable logistic regression models were conducted on the likelihood of receiving psychiatric services.

Results: The prevalence of at least one psychiatric diagnosis (53%) was the same in the WRHA (*n*=5,278) and NS cohorts (n=5,323). In the WRHA, 107 different psychiatrists provided 8,246 visits (vs. 58 psychiatrists providing 793 visits in NS) with 79% of the visits occurring in hospital (vs. 26% in NS). In the WRHA, 17.2% of the cohort received one or more visit(s) by a psychiatrist and 9.1 psychiatry visits per person, compared with 4.2% and 3.6 visits per person in NS. Younger age, psychotropic medication use, depressive symptoms, dementia, urban living and having an unstable health condition were significantly associated with receipt of psychiatry services in both cohorts.

Discussion: There was a 4-fold increased likelihood of receiving psychiatry visits and 2.5 times more visits on average in the WRHA compared to NS despite no difference in prevalence of mental health diagnoses, population frailty or rate of psychiatrists.

Conclusion: This raises important questions about differential access to psychiatry services by age, site of care (hospital vs. community), and by geographical location.

Assessing Advance Care Planning Visits in a Residency-based Outpatient FQHC

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Background/Purpose: One of the most important components of hospital admissions should be to address goals of care for acutely ill patients. Physicians should ensure that patients' values and goals are aligned with their hospital care. There is an increasing percentage of the population who are 65 years of age and older; individuals with multiple chronic illnesses are living longer and have a higher chance of having acute health issues, requiring hospital admission. Hence, it is causing an increase in health care costs. One of the factors that can allow for patients' goals to be addressed during hospitalization is an already established POLST (physician's order for life-sustaining treatment). The goal of this study is to highlight the potential and need for discussion of advance care planning in an outpatient setting.

Method: Data gathering from NextGen EMR system in a community-based FQHC in central NJ. Inclusion criteria: 65 and older active patients from Jan 2018 till March 2021 who had POLST and advance directives and billing codes 497 and 498.

Results: 1883 patients met inclusion criteria; of which 45 had Advance Care Planning (ACP) visits. Approximately 2.4% of patients had ACP visits.

Discussion: There is a growing need to discuss goals of care for patients in an outpatient setting. There is not enough quantitative data/study on the completion of POLST forms or advance directives in outpatient settings. Future consideration can be to consider an intervention that increases the amount of advanced care planning visits within the next 6 months and the long-term goal is to measure the visit in a one-year time span.

Conclusion: Addressing goals of care in a non-acute setting in elderly individuals can lead to better health outcomes and quality of life.

Pharmacological Management of Agitation and Delirium in Older Adults: a Survey of Practices in Canadian Emergency Departments

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Background/Purpose: Agitation and delirium are common presenting symptoms for older adults in the emergency department (ED). No medications have been found to reduce delirium severity, symptoms, or mortality, yet they may cause harm. We sought to characterize the use of decision-making tools including preprinted order sets (PPOs) and evaluate prescribing patterns of medications for agitation by ED physicians in Canadian hospitals.

Method: In this multi-centre study across Canada, we surveyed physicians in Vancouver, Toronto, and Quebec. The site in Quebec, the Centre Hospitalier Universitaire de Sherbrooke (CHUS), is recognized as a Certified Geriatric Emergency Department by the American College of Emergency Physicians. Fisher exact tests were used to compare use of decision-making tools. Ordinal linear regression models were run to identify a relationship between starting dose of medications and location.

Results: The familiarity with and use of PPOs was statistically greater at CHUS than in Vancouver or Toronto. The most common medications used across sites were haloperidol, lorazepam, and quetiapine. Practice location was a significant predictor of starting dose of haloperidol, with Vancouver and Toronto having higher starting doses than CHUS. Starting doses of quetiapine and lorazepam were higher in Vancouver than Toronto or CHUS.

Discussion: Sedating medications such as benzodiazepines and antipsychotics are used across EDs in Canada despite little evidence for effectiveness in agitation in older adults and risk of ham. Sites with higher utilization of PPOs used lower and more consistent starting doses.

Conclusion: Implementation of PPOs may be a useful way to standardize ED management of older adults experiencing agitation and delirium. Education is needed across Canadian EDs to decrease use of antipsychotics and benzodiazepines for older adults in the favor of evidence-based, non-pharmacological interventions.

Diagnostic Accuracy of Tools for Measuring eHealth Literacy in Older Adults: a Systematic Review

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Background/Purpose: Since the onset of the COVID-19 pandemic, there has been a heightened need for virtual care and online health interventions. To understand eHealth literacy's role in these activities for older adults, we must recognize how best to measure it.

Method: We completed a systematic review to examine which instruments for measuring eHealth literacy are validated against a reference standard or another measurement tool in studies enrolling adults ≥ 60-year-old with a study mean age of ≥ 65-year-old. We searched MEDLINE, EMBASE, the Cochrane library, and PsycINFO on January 13, 2020. Two reviewers independently reviewed abstracts and full-text articles, completed all data abstraction, and assessed the risk of bias of included studies using the Quality Assessment for Diagnostic Accuracy Studies-2 tool.

Results: We identified 14940 citations, reviewed 99 full-text articles, and included two studies. Studies showcased three ways of assessing eHealth literacy: computer simulation, eHealth Literacy Scale (eHEALS), and Transactional Model of eHealth Literacy (TMeHL). eHEALS correlated moderately with participants' computer simulation and TmeHL correlated moderately-to-highly with eHEALS. eHEALS is a self-reporting 8-item instrument to determine an individual's self-perceived eHealth literacy. TmeHL is an 18-item self-reporting scale describing functional, communicative, critical, and translational literacies. The high risk of bias in patient selection and lack of reporting on the administration process for tests represented the greatest threats to both studies' validity.

Discussion: There is no high-quality evidence supporting a scale to evaluate eHealth literacy in older adults. The emergence of Web 2.0 and lack of an agreed-upon definition and criteria may explain the shortcoming in the validation of eHealth scales.

Conclusion: Given the increased popularity of technologies engaging older adults in health, further validation of eHealth literacy tools is needed.

Surgical Acute Care of Elderly (ACE) Strategy

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Background/Purpose: Older adults comprise an increasing proportion of patients on the general surgery ward. When compared to their younger counterparts, older adults have worse outcomes including a higher rate of postoperative complications, longer stays in hospital and irreversible functional decline. In recognition of these challenges, we propose the development of a multi-component inter-disciplinary geriatric intervention and care strategy, called the Surgical Acute Care for Elders (ACE) Strategy, for older patients undergoing unplanned general surgery.

Method: We are conducting a mixed-Method: s quality improvement study using the 'Model for Improvement' as the framework. The project will involve three subsequent phases. Phase 1 which is currently underway, involves generating change ideas from literature review of other geriatric care models, chart audit to characterize the patient population and qualitative analysis from key stakeholder interviews. The next phase will involve a feasibility analysis to target identified drivers.

Results: We conducted a chart audit from December 2020 to March 2021 of 332 patients of which 55 >65 years-old were admitted to general surgery. The mean age was 77.1, 18.2% were from institutional living, 50.5 % of patients had >5 medications and 43.6% were living with mild frailty. Outcomes included 10.5% of patients experienced delirium, 3.6% had geriatric medicine consultation, 87.3% had opioid prescribed and 21.8% had benzodiazepine prescribed.

Discussion: Despite a relatively frail, comorbid patient population with noted polypharmacy there was limited reported incidence of delirium, which is likely being under-recognized. There is also limited use of the geriatric inpatient service. Prescription practices reflect high usage of potentially deliriogenic agents.

Conclusion: Potential change ideas with strong evidence include standardized ACE admission order sets, early frailty assessment with proactive Geriatric Medicine inpatient consultation and standardized ACE nursing plan with daily care rounds.

Contemporary Attitudes, Knowledge, Practices and Needs of Geriatricians and Residents Caring for Older Surgical Patients

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Background/Purpose: More older adults are undergoing surgery. Geriatricians can optimize health and function during the perioperative period as well as reduce complication rates, length of stay, and mortality. The study objective is to gain contemporary understanding of attitudes, knowledge, practices and needs of Canadian geriatricians and geriatric medicine trainees on caring for older adults undergoing surgery.

Method: In December 2021 we distributed a national web-based survey to geriatricians and geriatric medicine residents to determine attitudes, knowledge, practices and needs about caring for older adults undergoing surgery. Data was analyzed within each domain (attitudes, knowledge, practices and needs) using summative scales for quantitative data and thematic analysis for qualitative data.

Results: 44 geriatricians and 26 geriatric medicine trainees completed the survey. 73% had positive attitudes when caring for surgical patients. Most geriatricians (61%) care for surgical patients less than 25% of the time. Both geriatricians and trainees reported challenges when caring for older surgical patients. 53% were aware of relevant surgical guidelines. The average knowledge test score was 75%. 59% of respondents felt well equipped to care for older surgical patients and 20% completed additional clinical training in this area. Most reported at least some need for further training in surgical risk assessment (58%), collaborative care models (50%), prehabilitation (55%) and perioperative medicine (59%).

Discussion: This is the first study to provide contemporary insight into the attitude, knowledge, and needs of geriatricians and geriatric medicine trainees regarding the care of older surgical patients.

Conclusion: Geriatricians and geriatric medicine trainees have favorable attitudes, good surgery specific knowledge and some awareness of relevant surgical guidelines. Most respondents were interested in additional training and this study identified knowledge gaps.

Understanding Consultation Patterns of the Inpatient Geriatric Service in Calgary, Alberta

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Background/Purpose: Consultation to Geriatric Medicine for Comprehensive Geriatric Assessments (CGA) is known to improve outcomes of frail older adults in hospital. Although widely accepted, consultation patterns and utilization of Geriatrics from other hospital-based services is poorly understood.

Method: We conducted a cross-sectional study using administrative data from the Discharge Abstract Database and Sunrise Clinical Manager to describe patients 65 years and older who received a geriatric medicine consultation while admitted to hospital in Calgary, Alberta between January 1, and December 31, 2019. The service requesting geriatric medicine consultation and reason for consultation were identified.

Results: Of the 29,090 patients 65 years and older admitted to hospital, 1563 patients (5.4%) received at least one Geriatric consultation. A total of 1838 consultations were completed. The number of reasons for geriatric assessment per consultation ranged from 1 to 7. The most common reasons for consultation were rehabilitation (43%), delirium (27%), dementia (24%), falls (21%), and disposition planning (19%). Consultations were most frequently received from Hospitalist (48%), Internal Medicine (17%), Orthopedics (9.4%), Trauma (5.1%), and Cardiology (4.5%) services.

Discussion: The Geriatrics service is consulted for common geriatric syndromes, but it supports the care of only a small proportion of older adults. The Geriatrics service is consulted for appropriate reasons; however, in the literature, 25%-80% of hospitalized older adults are reported to be frail, suggesting there may be a large proportion of frail older inpatients who would benefit from a CGA.

Conclusion: These initial results provide insights into how the Geriatrics service in Calgary, Alberta, is being utilized. Further analysis will include identifying inpatient populations that would benefit from a CGA, which will create opportunities to educate consulting services on the value and role of the inpatient Geriatrics service.

Persistence of Overactive Bladder Therapies in Frail Older Adults

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Background/Purpose: Frail older adults(FOA) are more likely to have overactive bladder(OAB). Frailty may differentially affect persistence with OAB drugs. OAB is a risk factor for falls/fractures and the use of anticholinergic medications may affect this risk. Objective: To compare treatment persistence and fall/fracture risk between FOA and non-FOA users of beta-3-agonist(β3A), oxybutynin(OB) and newer anticholinergic(NAC) drugs.

Method: This was a population-based, retrospective, matched cohort study using linked administrative data from Ontario, Canada (2016–2020). Patients ≥ 66 years of age were included. Frailty was defined by the Johns Hopkins Adjusted Clinical Groups frailty indicator. New users of B3A, OB, and NAC were balanced on all measured baseline characteristics using matching weights derived from propensity scores estimated with multinomial logistic regression. Weighted Cox proportional hazards regression was used to analyze risk of the outcomes during continuous medication usage, and hazard ratios (HR) and 95% confidence intervals (CI) were obtained from bootstrapping.

Results: After weighting, approximately 18% of each of the new users of either β3A, OB, or NAC were frail. Of the β3A users, FOA had a significantly longer median(IQR) period of continuous use (146[28-1156]days versus 96[30-1168]days $p<0.01$). FOA had significantly longer periods of continuous usage of the OB and NAC OAB drugs. The HR (95%CI) for fall/fracture was higher among OB (1.11(1.00-1.23)) and NAC (1.05(1.00-1.11)) compared to β3A users after adjustment for frailty. This elevated risk relative to β3A users was similar among frail and non-frail users of OB and NAC.

Discussion: FOA had significantly longer initial periods of continuous use across all OAB medication groups. The use of OAB anticholinergics (both OB and NAC) was associated with increased risk of fall/fracture, which did not appear to be higher in FOA

Conclusion: Continued research in medication persistence amongst FOA is needed.

The Effect of Age and Obesity Severity Assessed by Edmonton Obesity Staging System on Weight Loss

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Background/Purpose: The prevalence of obesity increases with age, and is associated with decreased quality of life, frailty, and increased mortality. Excess weight severity is increasingly being defined based on complications, many of which increase with age. Weight loss (WL) amongst older adults with obesity improves function and quality of life, but little is known about the impact of age and obesity severity on WL success.

Method: 16,894 adults from the Wharton Medical Clinic were examined. Patients were categorized into four age categories: World War II (WWII) (1922-1927) and Post War (1928-1945), Boomers (1946-1964), Generation X (1965-1980), Millennials (1981-1996) and Generation Z (1997+). Patients were categorized into Edmonton Obesity Staging System (EOSS) 0 to 3 (no patients were EOSS 4). Multivariable linear and multivariable log binomial regression were used to examine the joint association of generation and EOSS status with WL.

Results: All generations had significant weight loss ($P<0.01$), except for Millennials and Generation Z ($p=0.13$). There was a significant main effect of generation for both absolute ($P<0.0001$) and likelihood of ≥ 5% WL ($P<0.0001$) after adjustment for sex, BMI, treatment time, and EOSS*Generation interaction. No statistically significant main effect of EOSS

status on absolute WL (P=0.8089) or likelihood of ≥ 5% WL (P=0.38). No evidence of a combined association of EOSS and generation for absolute (P=0.45) or likelihood of ≥ 5% WL (P=0.83) with adjustment for sex, BMI and treatment time.

Discussion: Increasing age, as assessed by generation, is associated with greater absolute WL and likelihood of achieving clinical WL. Individuals lose a similar amount of weight regardless of obesity severity.

Conclusion: This suggests that while increasing age is associated with WL success, increasing obesity severity may not impact an individual's ability to lose weight.

Impact of Prehabilitation on Functional Outcomes following Total Joint Arthroplasty for Osteoarthritis: a Systematic Review and Meta-analysis of Randomized Controlled Trials

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Background/Purpose: The importance of prehabilitation for people awaiting total joint arthroplasty (TJA), both hip and knee, due to osteoarthritis (OA) on postoperative functional outcomes remains controversial.

Method: The databases Embase, MEDLINE, the Cochrane Central Register of Controlled Trials, CINAHL and Scopus (inception-June 2021) were searched for randomized controlled trials evaluating prehabilitation interventions in adults (≥ 18 years old) awaiting primary TJA due to OA. Self-reported outcomes were measures of function, health-related quality of life (HRQoL), and pain. Performance-based outcomes were measures of lower-body strength, balance, and range of motion (ROM). RoB 2.0 was used to assess for risk of bias. Standardized mean differences (SMD) were calculated for treatment effect sizes at 6-weeks after TJA. Timepoint of interest coincides with routine surgical follow-up.

Results: Twenty-six studies capturing 2004 participants were included. High risk of bias was found in 24 trials. No significant effect of prehabilitation was observed for self-reported measures of function (SMD 0.02 [95%CI: -0.17, 0.22]), HRQoL (SMD -0.02 [95%CI: -0.30, 0.27]) and pain (SMD -0.05 [95%CI: -0.40, 0.29]) after total knee arthroplasty (TKA). No significant effect of prehabilitation was observed for performance-based measures of lower-body strength (SMD -0.06 [95%CI: -0.33, 0.20]), balance and mobility (SMD -0.16 [95%CI: -0.09, 0.40]) and ROM (SMD -0.00 [95%CI: -0.20, 0.19]) after TKA. There are limited and contradictory research (n= 2) for total hip arthroplasty (THA) studies.

Discussion: Prehabilitation did not improve self-reported or performance-based outcome measures at 6 weeks after TKA surgery. Effect on THA outcomes was inconclusive.

Conclusion: The accompanying findings of a high risk of bias across trials does not support the implementation of prehabilitation programs for people awaiting TJA due to osteoarthritis in current clinical practices.

Opioid and Non-Opioid Analgesic Use in Older Orthopaedic Rehabilitation Inpatients

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Background/Purpose: Little is known about how opioid and non-opioid analgesics are used during inpatient orthopedic rehabilitation, particularly in older adults. This study's objective was to characterize the use of these analgesics in an older adult population undergoing orthopedic rehabilitation.

Method: This is a retrospective observational study of adults aged 65+ (with a younger comparison group), admitted for orthopedic rehabilitation between November 2019 and June 2021 at an academic rehabilitation hospital in Toronto, Canada. Demographic, clinical, and medication administration data were collected. Mean daily opioid dose for the first seven days of each admission was characterized using oral morphine equivalents (OME), and use of non-opioid analgesics over the course of the admission was recorded.

Results: A total of 643 patients were included: 125 (19.4%) were chronic opioid users, 416 (64.7%) were opioid-naïve and received opioids, and 102 (15.9%) received no opioids. Median daily OME over the first week for chronic users was 30.3 mg/d and for opioid-naïve users was 6.9 mg/d. Among opioid-naïve patients, opioid dose decreased incrementally by age group: 50-64 (19.4 mg/d), 65-74 (12.6 mg/d), 75-84 (6.0 mg/d) and 85+ (3.4 mg/d.). As for non-opioid analgesics, 333 (51.8%) received at least one during the admission, with the proportion receiving non-opioid analgesics decreasing with age: 50-64 (64.3%), 65-74 (63.9%), 74-75 (44.7%), 85+ (33.3%).

Discussion: We observed a decrease with age for both opioid dose as well as the proportion receiving a non-opioid analgesic. Opioid dose in this cohort of older adults was substantially lower than the 50 OME threshold suggested in guidelines.

Conclusion: Both opioid and non-opioid analgesic use was heterogeneous in older orthopedic inpatients and decreases with age. Further study and dedicated guidance for analgesic prescribing are warranted for this unique patient population.

Exploring Patterns of Physical Activity, Sedentary Behaviour, and Sleep in Community-Dwelling Older Adults Living with Frailty

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Background/Purpose: The Canadian 24-hour movement guidelines help people move more, reduce sedentary time, and sleep well. However, few older adults adhere to these recommendations. We quantified the movement and sleep patterns of community-dwelling older adults (aged 65+) living with frailty.

Method: Participants wore an ActiGraph GT9X Link accelerometer on their non-dominant wrist for one week (24 hours/day) as they engaged in their daily activities, with the exception of water-based activities like showering. Descriptive statistics were used to express moderate-vigorous physical activity (MVPA), sedentary behaviour (SB), and sleep patterns. Waking hours with ≥110 and ≤10 steps/minute were used to quantify minutes of MVPA and SB, respectively. Bed and wakeup times with a standard deviation (SD) of >30 minutes were defined as inconsistent.

Results: 27 community-dwelling older adults (mean age: 78.4 (SD=5.6) years, 74.1% female) enrolled in this study. MVPA was an average of 6.3 (SD=26.3) minutes/week. Time spent in sedentary behaviour was an average of 17.5 (SD=1.5) hours/day. Most participants (88.9%) had <7 hours of sleep/day (mean: 5.0 (SD=1.3) hours/day), of whom 16.7% had consistent bed and wakeup times, 37.5% had consistent bedtimes but inconsistent wakeup times or vice versa, and 45.8% had inconsistent bed and wakeup times.

Discussion: The Canadian 24-hour movement guidelines for older adults recommend ≥150 minutes/week of MVPA, ≤8 hours/day of SB, and 7-8 hours/day of sleep with consistent bed and wakeup times. None of the participants in this study met the MVPA and sedentary behaviour recommendations, and only 7.4% (n=2) met the sleep recommendations.

Conclusion: Program and policy developers should consider current MVPA, SB, and sleep patterns in older adults living with frailty and design interventions to promote gradual progress towards achieving the movement guidelines.

Association Between Non-English Preferred Language and Restraint Use Among Patients with Delirium

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Background/Purpose: Patients with a non-English preferred language in anglophone settings face barriers to high-quality health care. We examined whether physical restraint and antipsychotic use differed by language preference for patients with delirium admitted to two acute care hospitals.

Method: This retrospective cohort study included patients aged 18 years and older identified as having delirium through validated chart abstraction from two academic hospitals in Toronto, Ontario, Canada between January 1, 2010 and March 31, 2015. All data including patient reported preferred language was collected from hospital electronic patient records. We studied physical restraint and antipsychotic use using logistic regression models to determine odds ratios (ORs) for each outcome, adjusting for sex, age, dementia diagnosis, functional dependence, and living in a long-term care home.

Results: Our analysis included 213 patients with delirium of whom 32% reported a preferred language other than English. Compared to those who spoke English, patients with a non-English preferred language were older (79.6 [SD 9.4] vs 73.7 [SD 15.0] p<0.001), more likely to have dementia (26.5% vs 17.2% p= 0.085) and have functional dependence (60.1% vs 47.6% p=0.056). After adjusting for confounders, patients with delirium who spoke a non-English language had increased odds of receiving physical restraints (30.9% vs 11.7%; aOR 3.70; 95% CI 1.64-8.36) and increased odds of receiving antipsychotics (44.1% vs 24.1%; aOR 2.28; 95% CI 1.14-4.58) compared to patients who spoke English.

Discussion: Patients with delirium who reported a non-English preferred language were more likely to received physical restraints and antipsychotics compared to English-speaking patients.

Conclusion: Strategies to improve communication may be required to ensure more equitable delirium treatment for patients who speak a non-English language and to reduce use of unnecessary restraints.

Frailty Prediction Using Doctor's Communications in Primary Care System: eConsult

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Background/Purpose: eConsult is an online system for family medicine in Canada. Authors examined the use of natural language processing (NLP) in automatic identification of frailty in patient cases with high accuracy and explored semantic characteristics of such cases that distinguished them from non-frailty cases to help refine and inform the definition of frailty and provide its reusable knowledge.

Method: In this study, we selected contrasting samples from eConsult cases submitted in the Champlain health region between 2018 and 2019 and filtered them by patient's age 65 and the use of term "Frail" in their case description. We used text data as training material represented in Bag-of-Words using Random Forest algorithm to achieve accurate prediction of "frail" cases automatically.

Results: Using text from electronic conversations between primary care providers and specialists we could develop a prediction algorithm with a very high accuracy of 94%. We also analyzed the semantic properties of the associated text segments in eConsult system to be mostly about medication.

Discussion: This study also provided evidence of semantic characteristics that are specific to frail cases. Among frail cases several of the most important terms were related to medications (e.g., daily dose, recommended medication, best treatment). Given that polypharmacy is known to be a very common challenge in the management of older patients with frailty (Gutiérrez-Valencia *et al*. 2018), the high frequency of medication related terms that distinguish this population is not surprising.

Conclusion: It is possible to automatically identify "Frailty" cases in eConsult system with high accuracies using machine learning algorithms. The predictions can inform and assist practitioners recognize frailty in patient cases and as a result, provide organized and reusable knowledge to enhance the quality of service for frail patients.

The Impact of Advanced Age on Prosthetic Rehabilitation Gait Outcomes Following a Lower Limb Amputation

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Background/Purpose: The majority of people with lower limb amputations (LLAs) are 65 years, and the rate of LLAs performed in the oldest old (80 years) is expected to increase due to population aging. Prosthetic rehabilitation can improve walking ability, but it can be complicated by age-related comorbidities. Studies investigating the effect of age on gait that included the oldest old are limited. This study sought to evaluate the impact of age on gait outcomes at discharge from prosthetic rehabilitation.

Method: A retrospective chart audit for admissions to an inpatient amputee program from 2012-2019. Study criteria were: transtibial level LLA and above, 18 years. Participants were stratified into 7 age categories: 18-29, 30-39, 40-49, 50-59, 60-69, 70-79 and 80+. The L-Test of Functional Mobility, 6-Minute Walk Test (6MWT), and Activities-specific Balance Confidence (ABC) scale assessed functional mobility, endurance, and balance confidence respectively. Three separate one-way analysis of variance (ANOVAs) models with post-hoc Tukey testing for pairwise comparisons evaluated outcome data at discharge.

Results: A total of 601 participants (62.3±14.1 years, 434 males) were included in the analysis. The ANOVAs were statistically significant for all outcome measures ($p<0.001$). Post-hoc testing for the L-Test and 6MWT demonstrated that the oldest old had significantly reduced performance compared to people under 60 years old ($p<0.05$), but there were no significant differences between the oldest old and the 60-69 [(L-Test, $p=0.113$), (6MWT, $p=0.094$)] and 70-79 [(L-Test, $p=0.866$), (6MWT, $p=0.907$)] groups. The oldest old reported significantly lower balance confidence compared to all 6 age groups ($p<0.05$).

Discussion: The oldest old show similar potential for walking ability as the most common age group of people with an LLA.

Conclusion: Advanced age alone should not disqualify individuals from prosthetic rehabilitation.

Association Between Regional Brain White Matter Hyperintensity Burden and Cognitive Domains in Parkinson's Disease

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Background/Purpose: Cognitive impairment is one of the most common non-motor features observed in Parkinson's disease (PD). White matter hyperintensities (WMH) may worsen cognitive dysfunction in PD. It is unclear, however, whether the location and regionality of WMH may affect different cognitive domains. This study aimed to investigate the association between location and brain region of WMH volumes and different cognitive domains in patients with PD.

Method: 133 older adults with PD from the Ontario Neurodegenerative Research Initiative (ONDRI) were included. Percentages of WMH volumes were calculated regarding its location (deep and periventricular) and per brain regions (frontal, temporal, parietal, occipital lobes, and basal ganglia+thalamus). Global cognitive performance, executive function, attention/working memory, memory, visuospatial abilities, and language were assessed. Multivariate linear regression analysis adjusted for age, sex, years of education, and disease duration was performed.

Results: Participants were predominantly men (74%; mean age 67.88 years) and H&Y of 2 (±0.37) points. Worse executive and visuospatial functions were associated with larger total WMH volume, and worse visuospatial function was also associated with larger periventricular WMH volumes. Worse global cognition and executive function were associated with larger deep WMH in the frontal lobe. Worse executive and visuospatial functions were associated with larger periventricular WMH volume in the frontal lobe. Poorer executive function was also associated with larger periventricular WMH in the occipital lobe. Poorer visuospatial function was associated with larger periventricular WMH volume in the parietal and temporal lobes.

Discussion: WMH in periventricular regions may disrupt neuronal networks that connect distant cortical areas, consequently impairing the connectivity of several brain regions.

Conclusion: Periventricular WMH in frontal, parietal, and occipital lobes are associated with poor performance in multiple cognitive domains in PD.

The Role of the Community Pharmacists in the Management of Acute Pain in Adults: a Scoping Review

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Background/Purpose: Acute pain is often under-treated and results in negative health outcomes in older adults. A link to community experts, community pharmacists (CP), could support self-management of acute pain. Knowledge on CP practices in the management of acute pain in adults is lacking. We conducted a scoping review to describe CPs' practices or interventions in acute pain management in adults and to identify barriers and facilitators in CPs' engagement in relation to adults' self-management of acute pain.

Method: We searched the literature in five bibliographic databases for eligible studies published after 1990. Search results were independently screened for inclusion criteria by 2 reviewers. Study design, participants', CP engagement characteristics were extracted and the results were synthesized and organized thematically.

Results: The appropriate research question was attained after four iterations. We identified 2419 studies that met the inclusion criteria and we retained 40 studies for extraction. Findings suggest that CPs intervene mostly in the domains of low back pain, musculoskeletal injuries, toothache, and postoperative pain. CP interventions designed to manage these acute conditions include opioids stewardship, educational pamphlets and workshops, disease specific programs, one-on-one consultations/counselling, order sets for opioid alternatives, and referrals to primary care physicians. Additionally, recurrent barriers were centered on time-associated constraints, limited scope of practice, and communication between healthcare professionals.

Discussion: Many interventions exist that include CPs in the management of acute pain. However, there is a need for more training in acute pain care and strategies or tools to reduce time-associated constraints.

Conclusion: The knowledge gained from this work will provide the foundation for the development of tools to support

older adults in better management of acute pain within their community circle of care.

Screening for Geriatric Syndromes in Community Pharmacy: a Feasibility Study

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Background/Purpose: Polypharmacy is common in older people and may contribute to geriatric syndromes. Community pharmacists could play a key role in the detection and prevention of geriatric syndromes. However, data on the feasibility of such a screening process remains limited.

Method: A community pharmacy feasibility trial in Montreal, Canada, enrolled patients aged ≥ 75 years, receiving ≥ 5 chronic medications which may cause or worsen one of five geriatric syndromes (falls, frailty, functional decline, malnutrition, and urinary incontinence). The primary endpoint was the feasibility and acceptability of a screening questionnaire designed to assess geriatric syndromes, which was assessed through eligibility rate, screening time and pharmacists' perspective. Secondary endpoints included the impact of the screening questionnaire on pharmacists' usual care, identification of medication related problems and pharmacological interventions.

Results: Among 750 patients aged 75 years and older, 298 patients met selection criteria (eligibility rate 39.7%), of which 21 underwent screening. Mean age was 79 years. Mean screening time was 10.5 minutes (95%CI 7.6 – 13.4). Screening was positive for at least one syndrome for 18 patients. Pharmacists reported that it was feasible to use it during geriatric pharmacotherapy assessment, but with help from pharmacy resident. Five out of the 6 participating pharmacists agreed or totally agreed to include geriatric syndromes screening in their practice since it allowed new clinical interventions.

Discussion: Although geriatric syndromes screening was feasible and acceptable to practicing pharmacists, many challenges were encountered, including lack of patient compliance with appointments and busy pharmacy workflow.

Conclusion: Screening for geriatric syndromes in community pharmacy was both feasible and acceptable to practicing pharmacists, but with obstacles. This could have an impact on identified drug-related problems and clinical interventions.

The Canadian Collaboration on Neurodegeneration and Aging—COMPASS-ND Study

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***Background/Purpose*:** The Canadian Consortium on Neurodegeneration and Aging (CCNA) is a national research initiative funded by CIHR and study partners engaging over 350 researchers in the field of dementia. The Comprehensive Assessment of Neurodegeneration and Dementia (COMPASS-ND) is an observational, longitudinal study of "real world" cases across ten different clinical cohorts and normal controls.

***Method*:** 1. Assemble a cohort of deeply phenotyped participants with or at risk for dementia that represent patients presenting to memory clinics.

2. Collect clinical data, neuropsychological testing, biospecimens, imaging, genetics, and brain donation.

3. Release 'clean' data to investigators and trainees for analysis and publications.

Results: To date, participant numbers recruited are: Cognitively Unimpaired (CU) 147; Subjective Cognitive Impairment (SCI) 136; Amnestic Mild Cognitive Impairment (aMCI) 273; Vascular MCI 148; Alzheimer's Disease (AD) 105; Mixed Dementia (Mixed) 74; Parkinson's Disease (PD) 81; PD MCI 45; PD Dementia (PDD) 13; Lewy Body Dementia (LBD) 30; Frontal Temporal Dementia (FTD) 41; and Other 1. Two-year follow-up assessments have been completed on 345 participants.

Discussion: During the recruitment pauses during the COVID-19 pandemic, our team pivoted to focus on expediting data monitoring, double data entry, and data upload to LORIS allowing for a data release on 574 participants thus far.

Conclusion: 1094 participants have been recruited, with the largest group having mild cognitive impairment. COMPASS-ND Study is established, implemented and actively recruiting. CCNA investigators can use the data to test their hypotheses.

Deprescribing and Long-Term Care Resident Empowerment in Medication Management: a Mixed-Methods Study

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Background/Purpose: Polypharmacy is prevalent in long-term care homes (LTCH) and increases the risk of adverse drug events. Evidence-based deprescribing interventions that are applicable in the LTCH environment are needed. 90% of residents of this LTCH are Chinese and speak Mandarin.

Method: This mixed-methods study in Ontario evaluated the deprescribing rate of PIMs before and after using an electronic deprescribing software, MedSafer, compared to a control unit. Chart reviews collected resident health data. The number of medications was compared before and after having used MedSafer, to the control unit. Patient information regarding deprescribing was translated into Simple Chinese for the residents in this Chinese LTCH.

Results: Residents in the control and intervention groups were similar in age and sex. The control unit had an average of 9 medications prescribed per resident, and the intervention unit had 11 per resident. Initially, 9 potentially inappropriate medications (PIMs) for 4 residents were prescribed in the control, and 85 PIMs for 30 residents for the intervention (average of 2.5 PIMs/resident) group. Following MedSafer-facilitated deprescribing, 36 PIMs were removed, leading to an absolute reduction of 1.3 PIMs per resident. The control unit's medications were unchanged.

Discussion: Most PIMs that were stopped were cough syrup, combination anticholinergics and antimuscarinics, multiple daily doses of calcium, PPIs, antipsychotics, and combination anticoagulants. Chinese residents consulted deprescribing information in their language. Polypharmacy increases the resident's risk of falls, hospitalizations, and emergency department visits. Residents should be empowered to have a say in their health care.

Conclusion: MedSafer significantly decreased PIMs when used in a long-term care home. Residents consulted deprescribing information in their native Chinese language to empower them in collaborating in their healthcare plan and beneficial medications.

Outcomes of Decision-Making Capacity Assessment

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Background/Purpose: Since 2006, we implemented a Decision-Making Capacity Assessment Model which includes a care pathway, worksheets, education and mentoring. This study assesses the impact of the utilization of this patient-centered DMCA model on the need for Capacity Interviews.

Method: This was a retrospective quality assurance chart review of patients referred for DMCA to the Geriatric Service at the Grey Nuns Community Hospital from 2006-2020. We extracted patient demographics, elements of the DMCA process, and whether capacity interviews were performed. We used descriptive statistics to summarize the data.

Results: Eighty-eight patients were referred for DMCAs, with a mean age of 76 years (SD=10.5). Dementia affected 43.2% (38/88) of patients. Valid reasons for conducting a DMCA were evident in 93% (80/86) of referrals and DMCAs were performed in 72.6% (61/84). 85.3% (58/68) of referrals identified the need for DMCA in two to four domains, most commonly accommodation, healthcare, and finances. Two to three disciplines, frequently social workers and occupational therapists, were involved in conducting the DMCAs for 67.2% (39/58) of patients. The Capacity Assessment Process Worksheet was used 63.2% of the time. Capacity Interviews were conducted in only 20.7% of referrals. Following the DMCAs, 48.2% (41/85) of those assessed were deemed to lack capacity.

Discussion: Dementia is associated with a progressive decline in decision-making capacity. As DMCAs can be burdensome and invasive for patients, avoidance of unnecessary DMCAs is essential.

Conclusion: This study suggests that the DMCA Model implemented has reduced the need for both a Capacity Interview and declarations of incapacity while simultaneously respecting patient autonomy and supporting them in their decisions in accordance with the legislation.

Deprescribing Education in Medicine, Nursing, and Pharmacy: a Scoping Review

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Background/Purpose: Despite recommendations that deprescribing be intentionally integrated into healthcare curricula, there is no universal syllabus or framework for teaching deprescribing. The purpose of this scoping review was to describe the literature regarding deprescribing and how it is currently being taught in the three health professions involved in most prescribing decisions.

Method: This scoping review was conducted using the 5 step model first introduced by Arksey and O'Malley. The databases searched include Medline, Scopus, and Embase, to May 2021. Papers were included if they were in English, contained an educational intervention about deprescribing tailored toward

physicians, pharmacists or nurses, or commentaries containing expert opinion on deprescribing education.

Results: A total of 2538 studies were screened; 239 papers underwent full text review. Extraction was conducted on 39 papers including 21 peer reviewed publications, 14 conference presentations, and 4 expert opinion/white papers. The studies were from 10 different countries. Twenty-six of the studies delivered group education and 2 had 1-on-1 teaching. Only 8 studies had a control group. Seventeen studies focused on physicians, 10 on pharmacy, and only 3 on nursing, yet 2 of the 4 expert opinions focused on nursing education. Increase in learner self-efficacy and increase in learner knowledge were most commonly measured outcomes. Less than half of the studies measured a decrease in medication.

Discussion: There is international interest in studying the education of deprescribing. The studies were generally lower quality, with no control group and very short period of follow-up.

Conclusion: There is evidence that learner knowledge is increased after brief educational interventions for deprescribing. Further research is required to determine the impact of educational interventions on deprescribing in practice.

Who Gets Discharged with an Opioid Prescription? A Retrospective Analysis of Older Orthopedic Rehabilitation Inpatients

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Background/Purpose: Chronic opioid prescriptions commonly originate in the post-operative setting, with 6% of opioid-naïve patients becoming persistent users. However, little is known about opioid use and discharge prescriptions in inpatient orthopedic rehabilitation (IOR). Our objective was to characterize factors associated with opioid prescription at discharge.

Method: This was a retrospective observational study of older adults admitted for IOR between November 2019 and June 2021 at an academic rehabilitation hospital in Toronto, Canada. Older adults were stratified by age, with age 50-64 as the comparator group. Those who did not use opioids within the first week or were discharged to acute care were excluded.

Results: We included 497 patients aged 50-64(n=77), 65-74(n=138), 75-84(n=151) and 85+(n=131). Opioid-naive users comprised 76.3%; median length of stay was 21 days. Daily opioid dose, characterized as median oral morphine equivalents, was highest in the youngest group (33.1, IQR 52.6) and lowest in the oldest group (4.0, IQR 6.9), and higher inpatient doses were associated with discharge with an opioid prescription. Rate of discharge opioid prescriptions was highest in the youngest group (79.2%) and lowest in the oldest group (49.6%). Likelihood varied by reason for admission: knee replacement resulted in the highest rate of discharge prescriptions (90.0%), while admission for non-operative reasons had the lowest (48.8%).

Discussion: There are various intrinsic factors such as age, and extrinsic factors such as daily opioid dose, which are associated with rates of opioid prescriptions at discharge from IOR.

Conclusion: Despite their vulnerability to developing opioid-related adverse events, older adults are frequently discharged from IOR with an opioid prescription. To mitigate potential contributions of IOR to chronic opioid use, more guidance is warranted around opioid management for this heterogeneous patient population.

Staying Apart to Stay Safe: Consequences of Imposed Social Isolation due to COVID-19 Visitor Restrictions on the Cognitive Functioning of Residents in Long-Term Care and Assisted Living Facilities in British Columbia

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***Background/Purpose*:** During the first wave of the COVID-19 pandemic public health orders restricted all visitation in Long-Term Care (LTC) and Assisted Living (AL) homes in British Columbia (BC), resulting in imposed social isolation of residents. The objective of this study was to understand the observations made by visitors about the changes in cognitive functioning of their loved ones, following approximately four months of separation.

Method: The BC Office of the Seniors Advocate conducted a survey in August to September 2020, titled "Staying Apart to Stay Safe", to understand the impact of visit restrictions in LTC/AL on both residents and visitors. Free text responses were filtered using keywords to extract comments related to cognitive functioning. An interpretivist grounded theory approach was used to analyze the free text data.

Results: Of the 12,354 free text responses provided by visitors, 2,781 included keywords related to cognition. The qualitative analysis resulted in the development of a conceptual framework with five parent codes: no change, decline in cognitive function, new or increased behavioural and psychological symptoms of dementia (BPSD), decline in general health, change to routine and/or environment for visits.

Discussion: Visitor responses included descriptions of cognitive changes in multiple domains, including language, learning and memory, attention and perceptual motor function. Visitors expressed their sense of loss and distress at their loved one's difficulty or inability to recognize them after approximately four months of imposed separation. While new or increased BPSD represented a minority of the coding references, these comments conveyed the helplessness and frustration visitors experienced.

Conclusion: These findings emphasize the importance of balancing the risk of infection from the COVID-19 virus with the unintended consequences that mandated social isolation posed on LTC/AL residents.

Examining the Relationship Between Dual-task Gait Costs and Cognition in Community Dwelling Alzheimer's Disease Patients

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Background/Purpose: Alzheimer's disease (AD) is a progressive neurological disorder that can be monitored through cognitive assessments and dual-task gait. Dual-task gait involves performing a verbal task (naming animals) while simultaneously walking. The difference between a participant's normal gait and their dual-task gait is referred to as their dual-task costs, i.e. how much the dual-task affected their gait parameters. The purpose of our study was to examine the relationship between dual-task costs, and performance on different cognitive assessments in a group of AD patients.

Method: Nineteen participants (aged 54-84) participated in our study. Participants were assessed multiple times. Cognition was assessed using the MMSE, MoCA, and the CogState Brief Battery. Gait was assessed using a GAITRite walkway. Mean and coefficient of variation were obtained for a variety of gait measures. Participants walked down the walkway at a normal walking pace without a dual-task, and then while simultaneously naming animals aloud.

Results: One-way ANOVA showed no differences in cognitive scores between visits. Two-way ANOVA for assessing gait found no effect of testing date on all gait parameters. However, there was a significant effect of dual-tasking. Multiple linear regression comparing dual-task costs with the previously mentioned cognitive assessments found no statistically significant linear relationship.

Discussion: Based on cognitive scores and gait, participants did not show a significant change between testing dates. The dual-task used in this study (naming animals) was sufficient in hindering gait. None of the cognitive assessments were able to linearly predict the performance detriment due to dual-tasking.

Conclusion: Our study further supports the idea that scores on cognitive assessments may not fully explain the level of impairment in an AD brain, and that dual-task costs provide valuable information on functional impairment.

Exploring the Use of a Structured Cognitive Screening Protocol Followed by Geriatric Assessment in an Ambulatory Hemodialysis Unit: a Collaborative Geriatric-Nephrology Quality Improvement Initiative

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Background/Purpose: The number of patients 75 and older on dialysis has doubled in Ontario over the last two decades. Cognitive impairment is disproportionately prevalent in the dialysis population. From May 4-31, 2021, a collaborative Geriatric-Nephrology quality improvement initiative was started in the ambulatory Hemodialysis Unit (HD) at The Ottawa Hospital's Civic Campus (TOH-C); this aimed to evaluate the feasibility of routine cognitive screening and targeted Geriatric assessments based within the unit.

Method: Patients aged 70 and older receiving HD for > 60 days were approached to participate in screening with the Mini-Cog (administered prior to or within the first hour of the patient's regular HD session). Scores below 4 were considered positive and these patients were contacted for a follow-up Focused Geriatric Assessment (FGA) with the Geriatric (Resident) Physician. The FGA involved: MoCA, Trails Making Test B, functional inventory, medication review and neurological examination.

Results: 21 patients met inclusion criteria; all consented to Mini-Cog screening. The age of screened patients was 76.5, 5.8 (mean,SD) years. Seven patients (33%) screened positive. Five patients consented to follow-up FGA. All five patients were clinically frail (by Clinical Frailty Scale); all were taking at least 5 regular medications. Four out of the five patients evaluated by FGA were determined cognitively impaired.

Discussion: A cognitive screening and Geriatric assessment protocol in an ambulatory HD unit was implemented successfully, well tolerated by patients, minimally impacted existing work-flows and required no supplemental fiscal resources; valuable baseline data on rates of geriatric impairments in seniors on HD at TOH-C was also obtained. To the authors' knowledge, this was the first quality project of this nature implemented in Ontario.

Conclusion: Next steps and future directions would include longitudinal follow-up and outcomes assessment.

Prioritizing Mental Health Support, Care and Treatment for Older Adults: What Matters Most to Canadians

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Background/Purpose: Age-related changes (e.g., loss of social roles, retirement, bereavement, and physical and cognitive function) can impact mental health, but a gap exists in aging-focused mental health research. As concern for the mental health of older adults continues to rise, particularly during the ongoing COVID-19 pandemic, aging-focused mental health research is necessary to inform an integrated health system response to increased support, care and treatment demands. The objective of this project was to identify the top 10 unanswered research questions on aging and mental health according to the priorities of older adults, their caregivers and health and social care providers.

Method: A steering group of experts by lived experience and key partner organizations guided a modified James Lind Alliance priority setting partnership. Methods included 12 steering group meetings, two national surveys (n=305; n=703), and four online workshops (n=52). Consensus was reached through qualitative and quantitative data analysis, rapid evidence review, and a nominal group technique.

Results: The top 10 unanswered questions include the following key concepts: 1) skill building for healthcare providers; 2) minimizing impacts of loneliness; 3) improving access to care; 4) realizing person-centred care; 5) challenges and opportunities for technology; 6) support during care transitions; 7) preventing provider burnout; 8) family caregiver roles in care planning; 9) financial supports to make care more affordable; and 10) caregiver mental health.

Discussion: The top 10 unanswered research questions on aging and mental health will help prioritize an aging-focused mental health research agenda in Canada and help to promote collaboration across siloed care and research fields.

Conclusion: The top 10 unanswered research questions will help to better meet the holistic care needs of aging Canadians at all points along the mental health continuum across the lifespan.

Improving Urinary Incontinence Care on the Acute Geriatric Unit: a Quality Improvement Project

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Background/Purpose: Urinary incontinence (UI) in inpatients is common and associated with negative outcomes. We aimed to reduce the average number of days for inpatients on the Acute Geriatric Unit with UI to regain independence with toileting by 3 days.

Method: We did individual interviews with 13 staff and 3 patients to understand the unit processes. Then, we completed a Plan, Do, Study, Act cycle with 10 stakeholders. We implemented an UI screening tool that if positive, would trigger a communication to the attending physician. The primary outcome was the average days from admission to achieving independence with toileting. Process measures were ratios of completed screens: new admissions and completed communications: positive screens. Balancing measures were staff satisfaction surveys. This project was exempt from ethics approval as per the ARECCI tool.

Results: Initial interviews revealed gaps in UI care, including lack of knowledge of patients' baseline status, communication lapses, variable staff engagement, inappropriate UI products use, and not prioritizing UI. The intervention occurred September-October 2022. Data were collected from patients discharged between April-May (baseline) and October-December (outcome). 53 patients were screened. 73.6% of newly admitted patients were screened. 41.9% of positive screens were communicated to the attending physician. The primary outcome decreased from 21 to 19 days. The number of patients who did not regain independence with toileting increased from 1 to 7 patients. 7 staff surveys were done and showed that the tool was acceptable.

Discussion: The inconsistent improvement in time to independence with toileting may be due inconsistent UI management plans after identification of the issue.

Conclusion: The QI intervention identified that the UI screening tool improved staff communication. Further interventions are needed to establish an UI care pathway to improve management of UI.

Electronic Consultation Use by Advanced Practice Nurses in Older Adult Care—a Descriptive Study of Service Utilization Data

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Background/Purpose: Canada's population is aging and projected to place unprecedented demands on physicians providing older adult care. Advanced practice nurses (APNs), which includes nurse practitioners (NPs), are nurses with advanced

knowledge and complex decision-making skills who can provide age-appropriate care. Electronic consultation (eConsult) is a secure web-based platform enabling asynchronous, provider-to-provider communication. eConsult is available to APNs, who can use this tool to consult with physicians and other APNs to address patient-specific concerns. We sought to describe characteristics of service utilization by APNs employing the Champlain BASE™ eConsult service in their care for older adults.

Method: eConsult utilization and user survey data for cases completed in 2019 were considered. Eligible eConsults included those that had APN involvement and were concerning a patient 65 years or older. Descriptive statistics were used to analyze service utilization and survey responses.

Results: 430 eConsults met the inclusion criteria for this study. 421 (98.0%) were initiated by NPs and the rest by physicians. 23 (5.3%) were received by an APN, of which 14 (3.3%) involved an NP-to-APN exchange. The median specialist response interval was 0.9 days (range: 3 min – 34 days). The top five specialties consulted were dermatology, hematology, cardiology, gastroenterology, and endocrinology, accounting for 53% of all eConsults. 73% of eConsults did not require a face-to-face referral after the consultation. In 90% of eConsults, APNs rated the service to be helpful and/or educational.

Discussion: APNs rated the eConsult service highly and facilitated timely access to specialist care for their older patients.

Conclusion: Innovative solutions are needed to help alleviate demands placed on physicians by the aging population—through eConsult, APNs can collaborate with physicians to access a variety of specialties and provide timely care for older patients.

Electronic Consultation as a Tool for Informing Frailty Identification in Provider-to-Provider Communication

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***Background/Purpose*:** Frailty is a condition that increases vulnerability to a precipitous decline in health, particularly if left unrecognized. While primary care providers (PCPs) serve as the first point of contact for most older adults, guidelines or tools for recognizing frailty in these patients are lacking. Electronic consultation (eConsult)—a web-based platform connecting PCPs to specialists—has generated a rich source of provider-to-provider communication. Patient descriptions captured on eConsult may provide opportunities for earlier identification of frailty in primary care. We examined the use of frailty-related terms in eConsult communication logs for long-term care (LTC) residents and community-dwelling older adults.

***Method*:** A literature search and consultation with clinicians, researchers, and caregivers informed the compilation of a glossary of frailty-related terms. eConsults were sampled from the Champlain BASE™ eConsult Service for cases submitted in 2019 on behalf of LTC residents or community-dwelling older adults. The use of frailty-related terms and their frequency in eConsult communication logs were computed. LTC cases and community cases were compared with respect to the number of terms per case and proportion of cases with frailty-related terms.

***Results*:** 119 eConsult cases were sampled from LTC and 114 from the community. Frailty-related terms identified per eConsult averaged 3.89 ± 2.48 in LTC cases and 1.66 ± 2.24 in community cases. 101 (84.8%) LTC cases and 65 (57.0%) community cases contained ≥ 1 frailty-related term(s).

***Discussion*:** These findings establish the feasibility of searching for frailty-related terms in eConsult data. The higher average of frailty-related terms in LTC cases supports the validity of these terms for identifying frailty in provider-to-provider communication.

***Conclusion*:** The identification of frailty through eConsult offers opportunities to recommend early access to interventions and resources in primary care settings for older patients.

Skeletal Health Determinants and Outcomes Among Canadians: Comparison of the Canadian Multicenter Osteoporosis Study and the Canadian Longitudinal Study on Aging Cohorts

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***Background/Purpose*:** Data are lacking on the change in bone mineral density (BMD), fractures, and osteoporosis (OP) treatment in Canada over time.

Method: We explored sex-specific differences in femoral neck BMD (FN-BMD), prevalent major osteoporotic fractures (MOF) in men and women 50-85 years from Canadian Multicenter Osteoporosis Study (CaMos, N=6,479; 1995-1997) and Canadian Longitudinal Study on Aging (CLSA,

N=19,534; 2012-2015). We created linear and logistic regression models to compare femoral neck and fracture risk between cohorts, adjusting for age and other important covariates. Among participants with prevalent MOF, we compared the use of calcium and vitamin-D supplements (SUP), hormone therapy (HT), and bisphosphonates (BP).

***Results*:** Mean (SD) age in CaMos (women 65.5 [8.5]; men 65.1 [8.7]) was higher than in CLSA (women 63.3 [9.0]; men 64.2 [9.1]). CaMos participants had lower mean height and BMI, and a higher prevalence of smoking than those of CLSA. Adjusted linear regression models (estimates; 95%CI) demonstrated lower FN-BMD (g/cm^2) in CaMos women (-0.017; -0.021 to -0.014) and men (-0.006; -0.011 to 0.000), while adjusted Odds Ratios (95%CI) for prevalent MOF were higher in CaMos women (1.99; 1.71 to 2.30) and men (2.33; 1.82 to 3.00) compared to CLSA. In women with prevalent MOF, HT use was not different in CaMos vs CLSA (43.3% vs 37.9%), but SUP use (32.0% vs 48.3%) and BP use (5.8% vs 17.3%) were lower in CaMos participants. In men, comparisons yielded inconclusive results.

***Discussion*:** Higher BMD, lower risk of fractures, and improvement in anti-osteoporosis treatment were noted in the CLSA participants as compared to CaMos participants, even after adjusting for multiple covariates.

***Conclusion*:** The etiology of these differences is likely multifactorial and includes changes in lifestyle, BMI, OP treatment, and the environment.

Empowering Dementia Friendly Communities, Hamilton, Haldimand: Implications of a Community Consultation for Health Care Service Provision

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***Background/Purpose*:** The Empowering Dementia Friendly Communities, Hamilton, Haldimand project, funded by the Public Health Agency of Canada, aims to implement initiatives to improve the quality of life for people living with dementia (PLWD). A community consultation was conducted to gain insight on the experiences and barriers experienced by PLWD.

***Method*:** From April to November 2020, PLWD and their care partners were invited to participate in individual interviews offered via telephone or videoconference, assessing their community experiences and ideas for improving the dementia friendliness of communities, or to complete a survey that asked questions about the dementia friendliness of various community activities and environments (agree, disagree, don't know) including access to healthcare and supportive resources. PLWD provided input on the consultation questions.

Results: 71 interviews and 234 surveys were completed across both communities. Less than half of survey respondents agreed that health care was accessible and responsive to PLWD (43.6%, N=102), health information was easily accessible (33.9%; N=77), they use technology to access healthcare (17.5%; N=41), have supports needed to live well at home (34.2%; N=80) and have access to supports and services during COVID-19 (33.8%; N=79). Key themes across methods were: Empower PLWD, challenge stigma and build understanding, foster social inclusion and participation, create dementia-inclusive built environments and transportation, and improve community responsiveness to crisis/COVID-19.

Discussion: PLWD face challenges accessing healthcare, supports and services. To support the quality of life of PLWD, communities need to be more responsive to their needs including involving them in decisions that affect them, supporting them to participate fully in their community, and improving pandemic responses for this population.

Conclusion: Significant opportunities exist to improve the quality of healthcare and supports provided to PLWD.

Time to Talk About Tissue Donation: Baseline Data

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***Background/Purpose*:** In Canada, demand for tissue from deceased donors often exceeds supply. Previous research suggests that while most patients are interested in donating tissue, their health care providers are not routinely discussing this with them. We created a survey to understand current practices and barriers regarding tissue donation discussions at our institution.

***Method*:** Two separate electronic surveys were sent to Residency Program Directors (RPDs) and resident physicians (RPs) at our institution, via REDCap.

***Results*:** From 25 RPDs who responded, 19 (76%) stated their residents do not get any teaching about tissue donation. However, the majority (n=16; 64%) expressed interest in incorporating education into their program; from 19 respondents,

a virtual educational presentation was reported to be most feasible (n=19; 100%).

Of 16 RPs who responded, 13 (81.25%) reported they had never discussed tissue donation. Of those who had (n=3; 18.75%), no one had done it in the past three months nor did it routinely. Ten RPs (62.5%) reported they had never received education about tissue donation. Lack of knowledge was reported as the main barrier to discussing and/or referring a patient for tissue donation (n=13; 81.25%). RPs most frequently requested an education session (n=13; 81.25%) and information sheet (n=13; 81.25%) to increase knowledge and referrals.

Discussion: RPs who responded are not routinely discussing tissue donation with their patients and/or their patients' loved ones, citing lack of knowledge as the predominant barrier. Most RPs and RPDs surveyed expressed interest in additional education on this topic.

***Conclusion*:** In keeping with previous findings, tissue donation is not being discussed routinely. Further research is needed to confirm findings.

Can a Paramedic-Led Standardized Prehospital Assessment Protocol of Older Adults Following a Ground-Level Fall Safely Identify Patients with Urgent Conditions and Reduce the Number of Ambulance Transports to the ED Following a Geriatric Training? A Feasibility Study

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Background/Purpose: Falls are an increasing cause of injury in older adults. They frequently lead to ambulance transports to Emergency Departments (ED). Most of these patients are then discharged without further treatment. This study examines the feasibility of implementation of a fall assessment protocol administered by paramedics on-site to determine which patients need ED evaluation and which can be safely referred to an outpatient specialized resource.

Method: A fall assessment protocol was developed and a group of paramedics in the city of Sherbrooke (Québec, Canada) was trained in its administration. The protocol was administered to all older adults (age >64 years) who requested an ambulance after a fall. Exclusion criteria were signs of instability. To ascertain safety, patients were transported to ED regardless of findings. Data were collected between October 2019 and March 2020. Primary outcome was detection of a condition requiring ED evaluation. Secondary outcomes were reduction of non-essential ED transport.

Results: In total, 125 patients were included; 111 were transported to ED and 14 refused transport. After paramedic evaluation, fall assessment protocol would have recommended ED transport for 108 patients. Mean intervention duration was 31 minutes. Most (57.7%) patients were discharged from ED. Infections and fractures were the most common admission diagnoses. Four patients for whom the protocol suggested ED transport was not required were admitted, of which two died during hospitalization.

***Discussion*:** This study is a first in Quebec, expanding the role of paramedics and potentially changing prehospital care trajectories. Limitations of this study are the small number of patients without abnormal findings and the short period of study.

***Conclusion*:** This study showed that the implementation of a paramedic-led fall assessment protocol is feasible. Upcoming steps are resource use and safety optimization.

Physical Function and the Impact of Medications in Older Adults: a Scoping Review

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Background/Purpose: Medications are commonly used by older adults and have documented side effects. However, the impact on physical function, such as functional independence, or muscle strength, is often missing from monographs. The objective of this project was to provide a review of the literature detailing the effects of the most commonly prescribed medications in older adults.

***Method*:** A literature search was performed from four different databases with the assistance of a librarian at the University of Alberta. The search was managed using Covidence software and all English language articles up to May 2021 were evaluated. Medications that were listed as the top 10 most frequently prescribed in older adults in Canada were used for the search which include HMG-CoA reductase inhibitors (statins), proton pump inhibitors (PPIs), angiotensin-converting enzyme (ACE) inhibitors, beta-blocking agents, dihydropyridine calcium channel blockers, thyroid hormones, angiotensin II antagonists (ARBs), natural opium alkaloids (opioids), biguanides, benzodiazepines and benzodiazepine derivatives, and thiazide diuretics.

***Results*:** The search initially yielded 5975 articles, which resulted in the extraction of 102 citations. The most common classes studied were benzodiazepines (n = 32), statins (n = 15), and combinations of cardiovascular drugs (n = 12). Benzodiazepines and PPIs consistently showed negative effects

on physical function measures, while no drug class showed predominantly positive results.

***Discussion*:** The limitations include variations in the study designs, outcome measures, and methods of measuring the outcomes. The evidence of negative physical effects appears to be missing from product monographs, yet could be responsible for harm seniors experience with medications.

Conclusion: Commonly used medications, many of which are not considered potentially inappropriate, have documented safety concerns regarding physical function.

Utility of Practical Office-Based Assessment Versus DXA Body Composition for Identification of Low Muscle Mass in Seniors

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***Background/Purpose*:** In busy clinics, consideration of sarcopenia can be overlooked, especially in those with obesity. Criteria for the diagnosis of sarcopenia have been defined by various consensus groups. Diagnosis includes both muscle mass and muscle function assessments. Muscle function can be readily assessed in the clinic [grip strength, chair stand]. However, muscle mass is assessed by DXA Body Composition [BC] or other costly assessments, which may not be readily available. The aim of this study was to see if inexpensive office-based scales give comparable results to DXA for EWGSOP (European Working Group on Sarcopenia in Older People) muscle mass diagnostic cut-offs.

Method: A 12 month study of independently mobile, community dwelling Seniors. Baseline, 6, and 12 month evaluations included comprehensive geriatric assessment, cognition, function, and BC using DXA and two office body composition scales. (Ozeri® and Omron®, differing by the latter including hand sensors).

Results: 50 participants: 11 men, 39 women. Average age 75.8 [67-90], average EQ5D VAS score 79.7 [30-100], MMSE 28.4 [20-30], MoCA 25.7 [4-30]. 86% of subjects were obese based on DXA body fat cut-offs. By EWGSOP diagnostic criteria [ASM/height^2] with DXA, 16 were classified as low muscle mass. Using BIA cut-offs [mmass/height^2] with Ozeri® 7, and Omron® 27, had low muscle mass.

***Discussion*:** Omron® cut-offs captured all the subjects identified by DXA, plus others on the diagnostic borderline. Prevalence of obesity in Seniors is rising. Sarcopenic obese are the most difficult to identify visually.

Conclusion: Use of a low cost, readily available bathroom scale (especially with hand sensors) may provide useful information on muscle mass, prompting additional investigations for sarcopenia and/or interventions to minimize further muscle mass loss to reduce the associated morbidity and mortality.

A Study of Primary Care Providers' Use of Econsult in Frailty Care: Uncovering the Tip of the Iceberg

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***Background/Purpose*:** Frailty is an accumulation of age- and disease-related deficits across multiple domains culminating in functional impairments. For patients living with frailty, Primary care providers (PCPs) are often the first point of contact. Identification and management of frailty remain complex and challenging. The current study examines PCP knowledge gaps and use of electronic consultations in the care of this vulnerable population.

***Method*:** The Champlain BASE™ eConsult service is an online platform where PCPs seek specialist advice. We conducted a retrospective analysis of eConsult cases where the text "frail" appeared in the PCP's query. Using validated taxonomies, reviewers classified PCP questions and specialist responses by clinical topic and question/response type. We generated descriptive statistics of the questions and responses, and PCP-reported impact of eConsult on the course of action.

***Results*:** Sixty-one eConsults to 24 different medical specialty and subspecialty groups were identified. Question content spanned 13 categories, most commonly the endocrine, circulatory, and digestive systems. Forty-one percent of questions pertained to drug treatment, 34% management, and 22% diagnosis. Eighty percent of specialist responses involved more than one response or recommendation, but only 17% recommended a referral. Fifty-seven precent of PCPs reported that a referral was avoided because of the advice received through the eConsult. Ninety-five percent of PCPs rated the specialists' response as helpful or very helpful.

***Discussion*:** This first look PCP-specialist communications about patients identified as "frail" uncovered a wide range of content areas and clinical topics. The eConsult service's impact and high user satisfaction suggest it is a valuable tool in complex care for older patients.

***Conclusion*:** Future studies should explore how eConsult data may be used to support PCPs in the early identification of frailty and to provide comprehensive geriatric care.

Leading to Achieve Integrated Care in Geriatrics

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***Background/Purpose*:** Leadership development is an identified gap in geriatrics (Pelleg *et al*., 2021). Building on previous calls for action (Heckman *et al*., 2013) and an arising need for strong leadership in older persons' care demonstrated throughout the COVID-19 pandemic, this session showcases examples from administrators in geriatric services relevant to leadership development among all working with older adults living with complex health conditions. Purpose: To identify key leadership lessons arising from experiences integrating geriatric clinical services at macro, meso, micro levels in Ontario.

Method: Three leadership cases are presented by administrators working in specialized geriatric services and primary care. Cases are analyzed using the Integrated Care for Older Persons with Complex Conditions & Care partners (IOPCC) Framework and the LEADS Leadership Capabilities Framework to explicate specific leadership activities and personal leadership approaches currently-in-use at macro, meso and micro levels within the context of health services for older adults living with complex health conditions.

Results: Application of the IOPCC and LEADS frameworks to geriatric services demonstrates leadership competencies pertinent to leadership development in geriatrics and the care of older adults living with complexity. Successful integrations are demonstrated.

***Discussion*:** Gaps in leadership can hamper the uptake of senior friendly care approaches and reduce the impact of geriatric clinical expertise in health service design for an aging population. Application of system design and leadership frameworks can help to identify leadership competencies specific to geriatrics. The examples presented illustrate possibilities to advance integrated care for older adults.

***Conclusion*:** Leadership development among clinicians and administrators in geriatric services and beyond is a key aspect of improving health care systems that work for older adults living with complex health conditions.

Perspectives of Chinese Family Caregivers' Access to Health and Social Services for their Older Loved Ones in the Greater Toronto Area: How Grit May Be Key

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***Background/Purpose*:** Research shows Chinese family caregivers (CFCs) of seniors tend to experience stress and depression when they do not access health and social services, though how this happens is unclear. Thus, the purpose of this study was to explore the experiences of CFCs of seniors, to understand mechanisms and structures shaping their agency to access health and social services.

***Method*:** Qualitative methodology informed by critical realism was used to collect, and analyze interview data in English, Cantonese, and Mandarin via internet platform or phone. Participants were recruited between August 2020 to June 2021 in the Greater Toronto Area, Canada.

***Results*:** Of the 28 CFCs, 61% were women, 57% aged 55 to 75 years old, and 68% were children of the seniors. CFCs expressed a firm commitment to making decisions judiciously about accessing health and social services. This commitment was based on the quality of their relationship with their older loved ones, and their cultural expectations. CFCs were constantly reappraising their expectations against self- and social stigma. At moments that older adults' needs changed, CFCs aptly decided when and how to access limited health and social services.

***Discussion*:** We posit that CFCs engaged in developing grit, a mechanism to adapt and meet their older adults' cultural expectations and needs for health and social services. Further, their grit shaped their agency for retention that often suppressed their own self-care and career aspirations, particularly when culturally acceptable services were limited.

***Conclusion*:** Our study posits that grit may be harnessed when CFCs are experiencing limited access to health and social services. However, to transform CFCs' adversity requires advocacy from formal providers to support timely access to services that retain and respect their cultural roots.

Validity, Reliability, and Acceptability of the Canmeds "Resident as Teacher Multisource Feedback" Assessment Tool

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***Background/Purpose*:** We evaluated the usefulness of the CanMEDS "Resident-as-Teacher Multisource Feedback" (RaT) tool used for structured teaching in the University of Toronto's postgraduate geriatric medicine training program.

***Method*:** The RaT tool consisted of 10 questions rated on a 5-point Likert scale and written feedback of strengths and weaknesses. Teaching evaluations from current trainees and recent graduates were analyzed by descriptive statistics, and for internal consistency and inter-rater reliability. Resident teachers were surveyed to comment on the acceptability of the tool to develop teaching competencies.

Results: Twenty-six teaching sessions consisting of 101 learner evaluations from 14 geriatric medicine residents were collected. An a priori decision was made to exclude 11 evaluations (11%) with two or more missing ratings. To determine inter-rater reliability and internal consistency, additional 48 evaluations (53%) were removed as they consisted of two or more items rated "not able to comment." Forty-two evaluations were analyzed. Internal consistency was high with Cronbach's alpha of 0.97, 95% confidence interval (CI) 0.89-0.99. Inter-rater reliability was substantial with Fleiss kappa at 0.73, 95% CI 0.13-0.87 across 10 questions. The overall performance rating was very positive, 4.68 (standard deviation 0.52), and concordant between ratings and comments. Seven of 9 teachers (78%) surveyed found the tool acceptable as a feedback tool to help improve teaching skills. Teachers generally valued the comments section over the rated questions.

***Discussion*:** The RaT tool demonstrated internal consistency and inter-rater reliability. Written comments were the most valuable to help residents improve teaching performance. Poor discriminatory power limited the usefulness of the ratings. Missing data was a limitation.

Conclusion: The RaT tool had internal consistency and inter-rater reliability, was valuable to residents' teaching feedback, and was acceptable to use in geriatric medicine residency training.

Assessment, Treatment, and Documentation of Malnutrition in the Geriatric Population

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***Background/Purpose*:** With an aging population, topics regarding the geriatric population are coming to the forefront. The purpose of this work is to continue education regarding the proper assessment, treatment, and documentation of malnutrition in the geriatric population.

***Method*:** Information for this presentation was compiled from various sources: American Society for Parenteral and Enteral Nutrition, American Geriatrics Society, Beers criteria, and other geriatric works and research.

***Results*:** This compilation provided a framework for the proper assessment, treatment, and documentation of malnutrition in this special population. This review also elucidated that although common in practice, there is no proven data on the utility of pharmacotherapy in treating malnutrition in the geriatric population

***Discussion*:** This presentation provides a framework for defining malnutrition, and understanding reasons why the geriatric population is at risk for malnutrition. Further, this presentation will provide instruction on how to perform a proper nutrition assessment. Also, this presentation will discuss the different clinical interventions for improving nutrition in the geriatric patient. Lastly, this presentation will also give insight in to understanding the proper documentation for malnutrition.

Conclusion: This work is significant because as the geriatric population grows worldwide, so do the number of patients to care for. Therefore, it is imperative for Geriatricians, Family Physicians, and other primary care providers to become well-versed in the proper detection and management of malnutrition.

LTC Outreach Nurse Practitioners: Covid-19 Wave 1 to Vaccines and Beyond

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***Background/Purpose*:** The Nurse Practitioner Led Outreach Team (NLOT) to long term care (LTC) has been providing onsite care for LTC residents with acute changes in condition since 2007. Covid-19 added challenges for the Champlain region's program in LTC settings due to medically complex residents, specific care requirements for those with dementia, pre-existing staffing shortages, and shared resident amenities. IPAC expertise varied while accessing PPE supplies added to workloads. This poster presents the positive impact of NPs working on-site in LTC homes during the pandemic.

***Method*:** Data was collected from The Ottawa Hospital's (TOH) 2019-2020 NP LTC Outreach Team's statistics. Information was collated from 10 LTCs in which the NPs provided on-site service. Leadership was provided by the NPs at all levels, on-site, regionally, and provincially, to develop and implement plans to support and mitigate risk to residents and staff.

Results: NPs were able to flex their roles to include leadership support, assisting with testing and mass vaccination, timely goals of care discussions, provide on-site palliative care and fill the void as MRP when attending physicians were unable to provide in-person, on-site care. As a result, 95 percent of residents with COVID-19 infections remained in LTC.

***Discussion*:** The covid-19 pandemic demonstrated NPs ability to assist with the management of LTC facilities and their residents. Their scope of practice enabled the NP team to build capacity, provide IPAC support, medical coverage, link to external resources, address vaccine hesitancy, and participate in current pandemic related research.

Conclusion: Nurse practitioners are a valuable resource in LTC due to their broad scope of practice that enhanced local on-site management of LTC facilities experiencing covid-19 outbreaks. Regional and provincial program initiatives will continue to evolve beyond the current pandemic.

Web-Based Dementia Foundations Program Improves Knowledge Significantly in Personal Support Workers (PSW), PSW Trainees, and Care Companions: Results: from a Pilot Study

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***Background/Purpose*:** There are estimated to be approximately 500,000 PSWs in Canada, with anywhere from 100,000-120,000 in Ontario. The objective of the current study was to evaluate usability, perceived usefulness, and impact of the Dementia Foundations Program, an online training program for unregulated care providers who provide care to persons living with dementia.

***Method*:** A cohort of PSWs, PSW trainees, and paid care companions (n=50) had access to the Dementia Foundations Program (dementiafoundations.machealth.ca), a 4-hour self-paced online program composed of four courses, for up to 6 weeks. Knowledge and attitudes were assessed using validated instruments at baseline and post-program. Main outcome measures were usability, satisfaction, and change in knowledge.

***Results*:** Participants reported high levels of satisfaction with the program. 92% of participants agreed that the online training met their expectations. 94% agreed that the training covered a broad range of topics and was not missing any important content. 98% agreed that the online training would benefit them. There were highly significant post-program improvements in knowledge as measured by the 25-item Dementia Knowledge Assessment Scale, with an average 30% improvement ($p < 0.001$, effect size > 1.2). There was a non-significant modest improvement in attitudes using the 20-item Dementia Attitudes Scale.

***Discussion*:** Our pilot study in PSWs, PSW trainees, and unregulated care companions demonstrated high levels of satisfaction with our asynchronous Dementia Foundations online program. There were substantial improvements in knowledge for participants, and it was perceived as a very useful complement to their existing education and training.

***Conclusion*:** The Dementia Foundations Program is a user-friendly and effective e-learning program, which can be conveniently scaled and spread to enhance unregulated care provider dementia education.

Nationwide Survey of Orthogeriatric Care Models in Post Hip Fracture Patients Age 65 and Older

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Background/Purpose: Fragility fractures are a serious and common consequence of falls in older adults. Orthogeriatric models of care reduce mortality and morbidity, but despite this evidence orthogeriatric programs (OGPs) are not standardized across Canada. The aim of this study was to better understand the facilitators and barriers of OGPs across Canada.

Method: Qualitative data on OGPs across Canada was gathered via email survey to all Canadian Geriatric Society members and distributed April 1st to May 1st 2021. Respondents answered 13 questions, using SKIP LOGIC, and data analysis was conducted with Qualtrics XM software.

Results: Of the 1002 members who received the email, 62 completed the survey. Members from 9 of 13 provinces completed the survey, 87% respondents were physicians and 92% from academic institutions. Approximately 77% of respondents indicated an existing OGP program, most commonly an optional or automatic geriatrician consult. Additional OGPs identified were expedited transfer to specialized geriatric rehabilitation units, other rehab units, fracture liaison service, or shared care between orthopedics and geriatric medicine. Approximately 23% (14/62) indicated no formal OGP at their workplace. Of these, 56% had an alternative service such as automatic consult commonly with Internal Medicine or a Hospitalist. Using multiple choice, respondents indicated the most important factor in helping to establish an OGP is clinical leadership (56%) and the most common barriers were lack of hospital prioritization (52%) and funding (49%).

Discussion: Further qualitative data from other specialities, for example orthopedics, would be helpful to understand additional perceived barriers and facilitators.

Conclusion: Our survey establishes a baseline knowledge of current care model practices in Canada and insights into the barriers and facilitators to establishing care models, to ultimately encourage program implementation and provide evidence-based practice across Canada.

Frailty and Point-of-Care Ultrasound Measures of Muscularity in Older Adults

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Background/Purpose: Frailty is defined as a syndrome of increased vulnerability due to both age and disease that leads to an inability to cope with acute stressors. There has been growing interest in both the surgical and emergency medicine literature in the potential use of Point-of-Care ultrasound (PoCUS) measures of muscle mass to assess frailty in older adults. Our study examined the association between a simple ultrasonic measure of muscle thickness (MT, vastus medialis muscle thickness) and commonly used frailty measures (Cardiovascular Health Study, CHS; Rockwood Clinical Frailty Scale, RCFS) in older adults.

Method: Participants were recruited sequentially from ambulatory geriatric medicine clinics in an academic medical centre (Vancouver General Hospital, Vancouver, Canada). Each subject had MT measured by PoCUS, as well as the CHS index and Rockwood Clinical Frailty Scale.

Results: 150 older adults (age >= 65; mean age 80.0±0.5 years, 66 women, 84 men) were recruited. In our final parsimonious models, MT showed a weak inverse association with the CHS index (Standardized β=-0.180±0.080, R^2 = 0.06, p=0.027) and no association with the RCFS (p=0.776). Within the CHS index, most of the association was due to grip strength in men (Standardized β=-0.326±0.099, R^2 = 0.26, p=0.001).

Discussion: Bedside ultrasonic measure of muscle thickness (MT) showed no association with a commonly used judgment-based frailty scale, the RCFS. There was a weak association with a multidimensional physical scale (the CHS index), but this was primarily due to a single physical measure (grip strength).

Conclusion: Frailty is a multifactorial syndrome, and caution must be used in trying to screen for this condition with a single measure. Further work might indicate a role for ultrasound in screening for a more restricted syndrome, such as sarcopenia.

Bringing the Topic of Driving Cessation to the Forefront with the Driving and Dementia Roadmap (DDR)

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***Background/Purpose*:** Early conversations and planning for driving cessation can be effective for facilitating decision-making and transitioning to non-driving for people with dementia (PWD) and their family carers (FCs). However, this topic is largely avoided. To address the gap in resources to support people throughout the planning process and beyond, we developed a web-based educational resource called the Driving and Dementia Roadmap (DDR). Our aim was to evaluate the DDR's implementation in Alzheimer Society (AS) settings, including early indications of its impact on AS staff, PWD and FCs.

***Method*:** The DDR was delivered to AS clients by staff from six organizations in four provinces. Semi-structured interviews were conducted with 19 AS staff, eight PWD and 13 FCs. Participants were asked about their experiences of delivering and using the DDR. Data were examined using a thematic analysis approach.

***Results*:** The DDR was reported to be an effective catalyst for generating attention to and discussions about driving cessation. For AS staff, the DDR helped to facilitate earlier introductions about driving to their clients. FCs stated that the DDR brought increased understanding about driving cessation, helping them to manage difficult conversations with the PWD. Information about alternative ways to meet transportation needs and access support helped FCs and PWD to instigate mobility plans and provided reassurance that post-driving cessation, "life doesn't stop".

***Discussion*:** The DDR's impact on facilitating early discussions about driving cessation among AS staff, FC and PWD can increase the likelihood of planning for when the PWD will stop driving.

***Conclusion*:** With the support of resources, such as the DDR, PWD and FC, may be more prepared for life without driving while maintaining their quality of life post-driving.

Understanding How Frailty is Addressed in the Training of Perioperative Specialists: a Scoping Review

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***Background/Purpose*:** The number of older adults living with frailty is rising, and there is an increasing need for frailty management in the perioperative setting. We aimed to identify and consolidate existing research on how frailty is addressed in relevant medical and surgical specialty training.

***Method*:** We conducted a scoping review using the Joanna Briggs Institute framework. Three electronic databases (MEDLINE, EMBASE and Scopus) and the Cochrane library of systematic reviews were searched for articles published in January 1947 to April 2021. Abstract screening and full text review were conducted by two independent reviewers. Data extraction was piloted by two reviewers and completed by the primary investigator.

***Results*:** After removing duplicates, our search strategy identified 3127 studies. 264 studies were reviewed at the full text stage and 26 studies were included in the review. Three-quarters (n=20) of the relevant studies were published in the

last 5 years. Studies originated from a small number (n=5) of countries. Less than half (n=10) of the identified articles identified 'frailty' in the study objective. Studies included a range of perioperative specialties, including surgical (n=18), anaesthesia (n=5), general medicine (n=4) or ICU (n=3). Most studies (n=21) assessed trainee knowledge (n=9) or perceptions (n=12) about frailty. Eight studies assessed the role of frailty in surgical decision-making. Of 8 studies involving an educational intervention, only one had frailty as the primary focus. The most commonly referenced frailty tool was the Clinical Frailty Scale (n=4).

***Discussion*:** This review identified a modest body of literature on how frailty is addressed in the training of perioperative specialists. Most studies examined knowledge and perceptions of perioperative trainees.

***Conclusion*:** Further investigation on the use of frailty educational interventions in perioperative training is needed.

Engagement and Attitudes Towards Advanced Care Planning in Primary Care During COVID-19

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***Background/Purpose*:** Advance care planning (ACP) is a verbal and written communication process that involves preparation of a plan for a time when an individual cannot make medical decisions for themselves. ACP increases patient-centered care, reduces caregiver burden and healthcare costs. Unfortunately, 80% of Canadians have thought about end-of-life care but less than 20% have an advance care plan. The research sought to determine the current level of engagement of patients attending a primary care clinic ACP, according to the Stages of Change Model.

Method: An anonymous, self-administered survey asked participants age ≥70 years attending a primary-care based COVID-19 vaccine clinic in Regina, SK on April 10, 2021 about their demographics, understanding of ACP, if/when they made an advanced care plan, and if COVID-19 had influenced their ACP thoughts/actions. The University of Saskatchewan's Behavioural Research Ethics Board approved this study.

***Results*:** A total of 133 surveys were completed. The median age of participants was 83 years, and 66% identified as female. According to the Stages of Change model: 27% of participants were at precontemplation stage, 21% at contemplation stage, 16% at planning stage, 26% at action stage and 10% at maintenance stage.

***Discussion*:** The number of individuals thinking about ACP in Regina may be lower than the national average (59% vs 80%, respectively). This study also suggests that when respondents were considering ACP, more felt comfortable discussing ACP with their family physician and family compared to the national average (90% vs 80%) but were less comfortable discussing ACP with their partners (86% vs 93%).

Conclusion: Those who attended the FMU COVID-19 Vaccine clinic in Regina have a diverse level of engagement in ACP.

Health Care Savings Associated with Harm Reduction Services for Older People: an Interrupted Time Series Analysis

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***Background/Purpose*:** Growing numbers of older people with experiences of homelessness (OPEH) and substance dependence require supportive housing and care grounded in harm reduction, but few models exist in Canada. To understand health system benefits, changes in health care use and cost were examined in OPEH participating in a harm reduction intervention.

***Method*:** Observational study. Context: 68-bed permanent supportive living facility for OPEH unable to secure stable housing elsewhere. Harm reduction policy underpins operations including primary health care, managed alcohol and tobacco programming. OPEH living in the intervention site between June 1, 2005 and January 1, 2019 were eligible for inclusion. Interrupted time series analysis of mean monthly health service use and costs for all residents for whom 3 years of administrative health and program data were available, pre- and post-exposure to the intervention.

***Results*:** Data were examined between 2002 to 2019. Of 184 people exposed to the intervention during the study period, 3-year pre/post data were available for 158. Mean age 62.6 years, 24.1% female. Self-reported: mental health diagnosis (39.2%), problematic substance use (alcohol, 13.9%, other substances, 6.0%). Total health care costs fell by $1,412 per resident, with continued decline thereafter. Hospital and physician costs were significantly lower after move-in. The mean unadjusted cost per resident in the 3 years was $14,828 lower than the previous 3 years.

***Discussion*:** Harm reduction supportive housing was associated with an immediate and on-going decrease in health care costs, primarily driven by lower hospital costs.

***Conclusion*:** Health care savings were seen with a harm reduction intervention for OPEH. Further study is needed of total system cost, and health/social outcomes.

Listening for a Chaos Narrative: a Qualitative Study to Improve Harm-Reduction Care for Older People with Experiences of Homelessness

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***Background/Purpose*:** Harm reduction (HR) services are needed in geriatric care. Working in HR is associated with high rates of staff turnover and burnout. To develop supports for staff working in HR, this study aimed to understand staff experiences, facilitators, and barriers to working in this area.

***Method*:** Qualitative interview study set in permanent supportive housing for 68 older people with experiences of homelessness, which provides HR services including managed alcohol and tobacco programs. Thematic analysis informed by Arthur Frank's chaos narrative. Member checking supported interpretation.

***Results*:** All staff working in the setting were eligible to participate. 19 staff participated (family physicians 3; nurses 2; social workers 1; unregulated staff 10; management 3). 3 participants were interviewed twice. The final dataset consisted of 22 interviews. Conceptualization of HR was broad, and staff prioritized 'housing first'; retaining resident housing was 'a HR win'. Staff respected decisions made by residents, even if in conflict with staffs' personal views. Staff were subject to resident anger and experienced distress, witnessing resident behaviours which resulted in poor health or social outcomes. Despite this, working with the residents was a source of inspiration, as staff honored longstanding adversity, resulting in a strong sense of accountability towards residents.

***Discussion*:** Relational care allowed staff to flexibly shape HR delivery. Using Frank's chaos narrative as a lens to understand apparently unpredictable decisions and behaviours of marginalized people, supports delivery of HR.

***Conclusion*:** Frank's narrative structure offers a potential lens for training and supporting staff working in HR.

Virtual Medical Education's Impact on Learner Engagement During the COVID-19 Pandemic

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***Background/Purpose*:** Medical education has pivoted online during the COVID-19 pandemic, creating challenges for educator and learner engagement. Initial informal observations at our centre noted decreased learner interaction and participation with potential negative consequences on medical education. We aimed to obtain baseline data on learner engagement and identify potential facilitators and barriers to effective virtual learning.

Method: We conducted a baseline 2 question survey and recorded attendance among learners participating in Geriatrics Teaching Rounds at Hamilton Health Sciences from January 2021 to March 2021. Using the multidimensional framework of engagement, questions addressing cognitive and emotional engagement ("My understanding of today's topic has improved" and "I was satisfied with teaching today," respectively) were rated on a 7-point Likert scale. Behavioural engagement was measured through attendance (number of learners present/total learners). We then conducted one-on-one semi-structured interviews with presenters and learners. Using thematic content analysis, potential facilitators and barriers to effective virtual learning were identified.

Results: Based on surveys from 21 noon teaching sessions (total 45 surveys), the median value for both cognitive and emotional engagement was 6.7 (1 = strongly disagree and 7 = strongly agree). The median attendance, however, was poor at 50%. Root cause analysis was conducted during one-on-one semi-structured interviews and the top three contributors to poor behavioural engagement were identified as increasing clinical demands, lack of set curriculum, and lack of administrative scheduling support.

***Discussion*:** Virtual learning may not negatively influence cognitive or emotional engagement of learners, but barriers contributing to poor behavioural engagement may be exacerbated by the virtual format and increasing clinical demands.

Conclusion: Further focused interventions on behavioural engagement should be studied to improve educator and learner experiences with virtual teaching.

Engaging Multi-level Interdisciplinary Stakeholders in Co-design of Competency-Based Education: Stepping Towards Integrated Supports for Family Caregivers

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Background/Purpose: The vision for moving integrated care closer to home to better meet the needs of a growing population of older adults living with complex conditions is highly dependent on family caregivers (FCGs). Educating healthcare providers to support FCGs is a step towards addressing the inconsistent system of supports for diverse FCGs throughout variable care trajectories. Involving multilevel stakeholders in the educational co-design process can help ensure the education is relevant and useful for the healthcare providers who interact with FCGs. We aim to describe the key processes involved with the successful co-design of person-centered care health workforce education.

***Method*:** We report on a formative evaluation of the education co-design.

***Results*:** Multi-level interdisciplinary stakeholders including FCGs, educators, researchers, healthcare providers, and leaders, educational designers, not-for-profit leaders, policy influencers, and policymakers were involved in three co-design phases: 1) Developing relationships and insights; 2) Translating insights into the design of the education; and 3) planning the implementation, spread, and scale-up.

Discussion: Four elements were critical to the success of the co-design project. First, a collaborative co-design team engaged with a range of stakeholders knowledgeable about healthcare and FCGs Second, the co-design team needed access to collaborators/staff with appropriate theoretical, academic research, evaluation, and facilitation skills. Third, an expert educational design team was essential in bringing stakeholders' ideas to life. This included a scriptwriter who translated FCGs' experiences with healthcare providers into engaging learning experiences.

***Conclusion*:** Co-design with healthcare providers and caregivers takes time and facilitation, however, we leveraged stakeholders' knowledge, experiences, and insights to reduce the time to develop, spread, and scale an innovative population health approach in which healthcare providers are educated to support all FCGs throughout diverse care trajectories.

Correlates of Anxiety among Alberta Family caregivers After 18 Months of the COVID-19 Pandemic

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***Background/Purpose*:** The COVID-19 pandemic has particularly affected people in need of care for complex chronic conditions, frailty, and disability and the family caregivers (FCGs) providing the care needed. The aim of this study was to estimate the prevalence of anxiety and loneliness and identify the factors associated with anxiety.

Method: Using REDCap we conducted a cross-sectional, online survey from June 21 through August 31, 2021. The survey captured FCG's perceptions of anxiety (State Anxiety Scale), weekly caregiving hours, frailty, financial stress, and ability to provide emotional support. We used descriptive statistics, χ^2, and regression analysis.

Results: 556 FCGs completed the survey, 83% were female and 73% were anxious. On the self-report version of the Frailty Scale (1-9), 65% were active (1-3), 33% were frail (4-6) and two were severely frail (7-9). 14% were caring for 21-40 hours weekly and 31% were caring for 41 or more hours. Overall, 46% of FCGs indicated they were experiencing financial hardships. Overall frailty (OR 5.8, p <.001), financial difficulty (OR 2.1, p .005), and weekly care time (OR 1.4, p <.023) were positively associated with anxiety.

***Discussion*:** Family caregiving has been more critical in the COVID19 pandemic, but the impact on FCGs and their related needs have been largely ignored in pandemic responses to date. Economist Dr. Janet Fast estimates that family caregivers contribute 66.5 billion yearly in unpaid labour, about 28% of the costs of the entire Canadian health system. They also play a pivotal role in engaging, empowering, and caring for Canadian living with complex chronic conditions.

***Conclusion*:** The impact of the pandemic on FCGs and their related needs requires immediate attention from both the health and social systems of care.

Describing Wait Times Associated with Access to Geriatric Medicine Consultation in the Outpatient Setting in Ontario, Canada

Paula Pop[1], Loretta Hillier[2], Jennifer Siemon[1], Sharon Marr[1].
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***Background/Purpose*:** There are no published data describing wait times for access to Geriatric Medicine in outpatient settings. Wait times are an important measure of access to specialist care and if prolonged, can have negative outcomes. It is imperative to describe these wait times to identify current access to care for older adults.

Method: Regional coordinators/leads of all Regional Geriatric Programs (RGP) and Specialized Geriatric Services (SGS) in Ontario were invited to complete an online survey in November 2020. Questions were asked about current and pre-COVID-19

pandemic service wait times by referral urgency, documentation system used, and factors impacting wait time.

Results: Surveys were completed by 54% (6/11) of RGP/SGSs. Average wait time to access Geriatric Medicine consultation for a non-urgent referral was 4.7 months (SD 1.9), compared to 3.6 months (SD 2.5) prior to the pandemic. Average wait time for urgent referrals was 1.6 months (SD 1.2), which was the same as prior to the pandemic. All respondents identified patient factors as impacting wait times (e.g., rescheduling, lack of availability). Other identified themes included specialist factors (e.g., language spoken, area of expertise) and limited capacity to meet referral volumes. Barriers identified in reporting and monitoring wait times included non-integrated reporting systems requiring manual data entry and resources needed for manual input.

Discussion: Despite some limitations, wait times were documented, varying dependent on urgency of referral. No consistent system exists for monitoring and reporting wait times. Program development should focus on creating systems for tracking and reporting wait times that automatically interface with current information systems.

Conclusion: Wait time documentation can be useful for provincial and local policy makers to address access to specialist care for this vulnerable population.

An Observational Study of the Correlation of Frailty Severity with Mental Health

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***Background/Purpose*:** The eFI (electronic Frailty Index) is used to assess the severity of frailty in elderly frail patients using a cumulative deficit model based on routine interactions with their GP. Frailty is associated with an increased risk of falls, reduced mobility, hospitalisations, disability and death.

Method: Patients were selected for annual frailty assessments by searching the electronic clinical system (SystmOne) using the eFI tool. Patients were assessed using the Comprehensive Geriatric Assessment (CGA) framework. In addition, all patients were screened for coexisting anxiety and depression using the Patient Health Questionnaire (PHQ-9) and Generalised Anxiety Disorder (GAD-7) questionnaire.

***Results*:** Of the 118 patients who ranged from mild to severe frailty, we found there was a positive correlation of the frailty severity eFI scores with increased rates of anxiety and depression evidenced by higher scores on the PHQ-9 and GAD-7 scoring tools. We found a positive correlation of the eFI with the PHQ-9 depression scores of ($r = 0.819$ $p<0.001$). Within the same data set, we found correlation coefficients of eFI and anxiety GAD-7 scores ($r=0.651$ $p<0.001$). Increasing frailty was found to be associated with a higher rate of depression and anxiety.

***Discussion*:** We found in this study higher (eFI) electronic frailty indices are associated with worsening physical impairment and higher rates of anxiety and depression. We would recommend annual frailty assessments in patients with high electronic frailty indices and this should include screening for mental health deterioration.

***Conclusion*:** Early detection of deterioration will enable patient centered supportive measures and targeted treatment strategies. Health maintenance programs should ensure patient centered holistic assessment of both physical and mental health needs for early identification to avoid deterioration of both physical and mental health.

Influence of Policy on Potentially Inappropriate Medications in Seniors: Case Studies from Canada

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***Background/Purpose*:** Seniors are often subjected to polypharmacy and potentially inappropriate medications (PIM), which increase risk for harm. Policies have been implemented to address access and use of particular medications, yet policies may have unintended consequences. The objective of this study is to compare medication prescribing policies in different Canadian provinces that impact use of PIM in older adults.

Method: Data from Canadian Institute of Health Information for community dwelling older adults aged 65+ for each province was analyzed by quartile from 2011 to 2019. Priority medications from the Canadian Deprescribing Network were selected, including proton pump inhibitors (PPIs), gabapentinoids, benzodiazepines, nonsteroidal anti-inflammatory drugs (NSAIDs) and opioids. Each province was compared and variations were examined for relationship to policy changes.

***Results*:** Three patterns were found in changes in PIM use. The first was the open listing of a medication leading to increased use, notably with PPI and gabapentinoids. The second pattern was the restriction of a PIM leading to substitution with another similar product that was also potentially inappropriate, which occurred with benzodiazepines being substituted for sedating antidepressants and antipsychotics. Finally, the third pattern was open listing of a 'safer' medication not leading to a decrease in a similar but less safe product product, seen with COX-2 selective inhibitors which did not lead to decreased opioid prescriptions.

***Discussion*:** Policy patterns appeared consistent for all medications and provinces, indicating that behaviour of prescribers and seniors are consistent in response to a particular policy. Seniors appear to increase use of medications when they are covered, whether the medications are PIMs or not.

Conclusion: Policies regarding PIMs are not implemented consistently across Canada and can lead to increased use of PIMs.

Frailty and Urinary Incontinence

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Background/Purpose: Urinary incontinence is common among frail older adults and has been associated with an increased risk of death. It can operate as a discrete syndrome, or as a "geriatric giant" signaling more widespread causes such as respiratory, joint, sensorimotor, or cognitive abnormalities. This study examined the association of urinary incontinence with frailty and mortality.

Method: We used successive cross-sectional studies (2005-2018) with mortality follow-up from the United States National Health and Nutrition Survey. Only individuals 60 years and older were included (N=13,480, mean age 70.5±7.2, 50.7% females). Standard procedures were used to create a 46-item frailty index (FI). All-cause mortality status until 2015 was identified from the National Death Index data. Descriptive statistics and logistic and Cox regression models were used to examine the association between urinary incontinence and frailty and mortality.

Results: The prevalence of urinary incontinence increased with increasing age (36.5% in aged 60-64 vs 48.9% in 80+) and more females (53.3%) experienced urinary incontinence than did males (30.3%). The mean FI score was 0.21±0.12. Higher levels of frailty were associated with greater urinary incontinence risk (Odds per 0.01 FI score 1.02 95%CI 1.02-1.03). Both frailty (Hazard rate 1.05 95%CI 1.04-1.05) and urinary incontinence (HR 1.14 95%CI 1.03-1.27 95% CI) were associated with mortality but in the adjusted model, only frailty remained significant (HR 1.05 95%CI 1.05-1.06).

Discussion: The degree of frailty confounds the higher risk of death associated with urinary incontinence among males and females over the age of 60 years.

Conclusion: Frailty is likely to be a contributing factor to urinary incontinence.

Point Prevalence of Delirium in the Halifax Infirmary on World Delirium Awareness Day, March 17th, 2021

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***Background/Purpose*:** Delirium is a common diagnosis, often underreported and associated with multiple adverse events in hospitalized patients. A recent review prompted by CIHI and performed in the Nova Scotia Health Authority (Central Zone) revealed that delirium was a frequent cause of mortality in medical patients, and yet only single digit cases were reported over the course of a year on surgical wards. The aims of this study were to determine the feasibility of a resident led hospital wide delirium screening program, and to ascertain the inpatient point prevalence of delirium in a tertiary care hospital site.

***Method*:** Patients admitted to the Halifax Infirmary site on March 17th were screened for delirium using the 4AT score. Additional data were collected on age, sex, and admitting service. Descriptive results were identified using percentage of participants screening positive for delirium, and stratified by level of care, admitting service, and specific hospital units.

***Results*:** A total of 336 patients were screened in a single day. Only 13 patients refused screening or were off unit. Ten volunteers (both medical and non-medical workers) completed the hospital wide screening in under 5 hours. Twenty-four percent of the hospital screened positive for delirium. The prevalence differed significantly based on level of care (ICU v Ward, $p<0.05$) but not by sex, age, admission under medical or surgical services, or specific hospital ward.

Discussion: This one-day point prevalence study was feasible and indicates that delirium is underreported for patients admitted under surgical services in this large single tertiary care centre. Further education around delirium recognition is required.

Conclusion: These data show that hospital-wide delirium screening initiatives are feasible, require limited resources, and can be an important addition to delirium awareness in Nova Scotia hospitals.

Launching PILUTS: A Pharmacy Intervention Study to Improve Lower Urinary Tract Symptoms

Cheryl Sadowski[1], Yazid Al Hamarneh[1].
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***Background/Purpose*:** Lower urinary tract symptoms (LUTS) are common in older adults, yet often unrecognized. The purpose of this project was to evaluate the impact of pharmacist identification and initial management on LUTS in older adults.

Method: This randomized controlled trial was conducted in community pharmacies across Alberta, Canada. Older adults (60y+) were eligible if they had any LUTS (measured by 3 screening questions). All enrolled patients completed an initial online questionnaire including demographics, description of LUTS, and scored 3 validated tools, the PPBC, B-SAQ, and ICI-Q-SF. The pharmacist reviewed the questionnaire, electronic records, and consulted with the patient, with follow-up at 3 and 6 weeks for those randomized to the intervention group. Patients who were randomized to the control group received usual care with no specific intervention.

***Results*:** The protocol has been registered and approved by the research ethics board. The study was launched after pharmacist training in April 2021, adapted for online delivery during the COVID-19 pandemic. A total of 7 pharmacies agreed to participate. Recruitment is ongoing, with some difficulties due to the COVID-19 pandemic. Feedback from the pharmacists regarding the initiation of the study has identified administration during COVID as too burdensome, LUTS as too time-consuming, and not feeling confident to address LUTS in a busy environment.

***Discussion*:** Conducting a project to evaluate the impact of pharmacist identification and initial management on LUTS in older adults in community pharmacies is feasible. However, the COVID-19 pandemic demands and pharmacy limited resources are restricting patient recruitment.

***Conclusion*:** There is interest from community pharmacists to engage in management of LUTS, but further research is required to determine the best approach to integrate care of LUTS during the pandemic.

Caregiver Experience of Driving Cessation in Dementia: Results from the Alzheimer Society of Saskatchewan Driving and Dementia Project Caregiver Survey

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***Background/Purpose*:** The decision to stop driving and the driving cessation transition is challenging, not only for people living with dementia (PWD), but also for their caregivers. To develop effective supports for caregivers through the process of driving cessation, their needs and experiences must be understood.

Method: The Alzheimer Society of Saskatchewan (ASOS) distributed online surveys to 1258 members of a client database via email, as well as an online call via the ASOS Facebook page. Two surveys were designed, with minor wording differences aimed at the following two groups: those supporting a PWD still driving, and those supporting a PWD who was no longer driving. Questions addressed the experiences, perceptions, and needs of caregivers supporting a PWD throughout the driving cessation process. Data was analyzed using descriptive statistics.

Results: A total of 251 responses were collected (44 supporting a current driver, 207 supporting a PWD after driving cessation). Most respondents had not made any plans for driving cessation. Most caregivers of active drivers expected that regulators and physicians would decide on the timing of driving cessation. However, caregivers of those no longer driving reported regulatory and medical involvement less often. More caregivers of those no longer driving felt that something positive had come out of driving cessation than was anticipated by those caring for people still driving.

Discussion: Despite consensus that driving cessation planning should occur early, this was not reflected in the experience of most participants. Differences in expectations about the driving cessation process compared to the actual experience highlight important areas for education and intervention.

***Conclusion*:** Driving cessation remains a difficult challenge for caregivers of people with dementia, and their perspectives provide valuable insight into how the process can be improved.

Risk Factors Associated with Contracting COVID-19 and Mortality in a Long-Term Care Facility During its First Outbreak

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***Background/Purpose*:** During its initial wave, 81% of the total mortality from severe acute respiratory syndrome coronavirus 2 (COVID-19) occurred in long-term care (LTC). This population's demographics, 'comorbidities', and syndromes are very different to those of younger, non-frail cohorts. Here we consider common features of illness in older patients, namely frailty, delirium and dementia, to determine the clinical characteristics related to COVID-19 infection, clinical presentation, and mortality in LTC residents.

Method: This is a secondary analysis of a prospectively gathered database from a non-profit LTC facility in Halifax, Nova Scotia, Canada during the first wave of COVID-19. Demographic data, clinical characteristics, and 30-day mortality were evaluated using linear and logistic regression analysis or Cox proportional hazards modelling where appropriate. Features considered included among others were symptoms, hypoxia, frailty, delirium, and dementia.

***Results*:** Of 462 residents, 246 contracted COVID-19. Fifty-three residents died within 30 days. In multivariable analysis, dementia and degrees of frailty ($p<0.01$), female sex, chronic respiratory conditions, and multiple room occupancy were associated with increased odds of contracting COVID-19. Delirium was present in 27% of those with COVID-19 and 40% of those who had any symptoms. Male sex, delirium, and requiring oxygen supplementation were associated with increased 30-day mortality ($p<0.01$). The effect size of delirium versus those who required oxygen was similar with respect to mortality (HRs 5.58 vs 3.94 respectively, $p<0.01$).

***Discussion*:** This study evaluated the clinical features of a LTC facility population that were associated with COVID-19 positivity, symptom presentations and mortality. Delirium is a common symptom of COVID-19 in the older population and is associated with mortality.

Conclusion: Delirium should be included in pandemic symptom checklists, as it is both a common clinical presentation of COVID-19 and is associated with important outcomes.

Perspectives in the Use of "Failure to Thrive" in Hospitalized Older Adults: a Qualitative Study

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***Background/Purpose*:** Older adults presenting to hospital with acute medical problems often have non-specific, atypical symptoms that do not fit within normal illness scripts. "Failure to thrive" (FTT) is a non-specific label frequently ascribed to older adults when such diagnostic uncertainty exists. This label has been found to have limited clinical utility, and has been associated with delays in care in a population that is medically acute. This study aims to identify perspectives among Internal Medicine (IM) residents that lead to use of this term.

***Method*:** A qualitative study was performed based on semi-structured interviews of 9 IM residents between 2019-2021. Transcripts of the audio-recorded interviews were independently reviewed by 2 of the authors for thematic analysis.

***Results*:** Five major themes were identified: 1) FTT was used in cases of diagnostic ambiguity, and the label persisted throughout hospital stay despite subsequently identified medical illness; 2) FTT patients were triaged as lower priority, seen as having "no learning value"; 3) all stated FTT has negative connotations, but 50% expressed they would continue to use the term; 4) 6 of 9 residents first encountered the term in medical school clinical experiences; and 5) all residents felt they had insufficient exposure to geriatrics in residency.

***Discussion*:** This study highlights underlying factors that potentiate the use of "FTT" when caring for older adults in the acute setting. The apparent effects of the hidden curriculum and a lack of exposure to geriatric principles in medical education are particularly notable as areas for intervention.

***Conclusion*:** This qualitative study identifies several factors leading to the use of "FTT" as a label for older adults in the acute care setting, and potential targets for intervention to discourage its use.

Pioneering Older Adult Research in Community Pharmacies: Insights into Barriers and Facilitators

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[1]*University of Alberta.*

***Background/Purpose*:** Pharmacists are frontline healthcare primary care providers who see older adults frequently. Evidence supporting their interventions in chronic diseases is well supported in the literature. A trial in Alberta was designed to evaluate pharmacist intervention to address urinary incontinence. However, recruitment has been a challenge. And so, we conducted a narrative review to understand the challenges of pharmacy practice research and describe its barriers and facilitators.

Method: A systematic search was conducted on MEDLINE, EMBASE, and Scopus to identify relevant published literature on community pharmacists' attitudes and experiences with practice research, as well as the barriers and facilitators to participation from database inception to May 2021. Data extraction and thematic analysis were performed by the main author in consultation with co-authors.

***Results*:** A total of 35 studies from 11 countries were included. Studies used a variety of methods such as questionnaires, interviews, and/or focus groups. Main drivers for participation included improving patient health outcomes, advancing the profession, satisfying a personal interest in research, and solidifying therapeutic knowledge. Main barriers included time, inadequate staffing, lack of remuneration, self-perceived incompetence, patient skepticism, and corporate/physician resistance. Pharmacist characteristics were also found to impact engagement.

***Discussion*:** In addition to the 'usual' barriers, i.e. time, staffing, and lack of reimbursement, our review uncovered 'new' barriers specific to pharmacists, researchers, and stakeholders (e.g. physicians) that influence participation. The findings of this review have informed the research team to develop a new engagement strategy, recruitment of frontline resources in the pharmacies, and an increase in empathy for pharmacists during COVID.

***Conclusion*:** The literature supports a number of facilitators and barriers that can influence pharmacy practice research, which can be addressed in pharmacist engagement and adaptation of study design.

Using Implementation Science to Promote the Use of the Fascia Iliaca Blocks in Hip Fracture Care

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Background/Purpose: Fascia iliaca blocks (FICBs) in hip fracture care reduces pain, time to mobilization, and delirium. Yet, there is variability and suboptimal uptake. The objective was to use a theory and evidence-based approach with the Theoretical Domains Framework (TDF) and Consolidated Framework for Implementation Research (CIFR), to analyze barriers and facilitators from perspectives of health care providers, patients, caregivers, and organizations to FICB administration and then select evidence-based interventions to enhance uptake.

Method: Interview and site observations were conducted to identify individual-level beliefs and contextual-level factors about FICB use. Barriers and facilitators were mapped to TDF domains and CIFR constructs. Evidence-based implementation strategies were selected from two databases.

Results: 30 clinician interviews, 5 patient and caregiver interviews, and 3 site observation visits revealed seven themes of influences: interpersonal relationships between health care professionals; clinician knowledge and skills; roles, responsibilities and processes for delivering FICB; perceptions on using FICB for pain; patient and caregiver perceptions on using FICB for pain; communication of hip fracture care between departments; and resources for delivering FICBs. The 18 barriers and 11 facilitators mapped to TDF domains and/or CIFR constructs. The behavior change domains mapped to eight implementation strategies: environmental restructuring, create and distribute educational materials, prepare patients to be active participants, audit and feedback, use local opinion leaders, use champions, train staff on FICB procedures, and mandate change. Fascia iliaca block administration increased to 61% from 44% and median time to intervention decreased from 1.73 to 0.93 days.

Discussion: TDF and CIFR provide a framework to identify individual-level and contextual-level barriers and facilitators to FICB implementation.

Conclusion: Our study explains why FICBs are underused. The mapped implementation strategies can guide improved uptake of FICB.

Canadian Geriatrics Society (CGS) 2021 Aging Care 5M Competencies for Graduating Canadian Medical Students

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***Background/Purpose*:** To prepare future physicians to care for a growing aging population, the CGS Education Committee formed a working group in 2019 to update the 2009 Core Competencies in the Care of Older Persons for Canadian Medical Students. The goal is to assist medical educators with developing relevant undergraduate medical curriculum.

Method: The working group chose the CGS 5Ms model and canMEDs framework to develop the competencies. A modified Delphi process was used. National participants were recruited and three rounds of Delphi surveys were conducted via survey monkey. A 7 point Likert scale was used for each competency statement.

Results: The first round was conducted in October 2019, n=72, identifying the importance and skill level of the components of the competencies under three headings; knowledge, skills and attitudes. The second round was conducted in September 2020, n=54, with proposed competencies under seven headings; aging, caring for older adults, (5Ms): mind, mobility, medications, multi-complexity and matters the most with > 70% agreement for all. Based on the strength of the agreement and comments, minor revisions were made and the final survey was conducted in June 2021. The agreement level for competencies varied from 85 - 98%. Thirty-three core geriatric competencies were developed under 7 headings. The CGS education committee approved the competencies in Dec 2021

Discussion: The 2021 Aging Care 5M Competencies framework integrates new concepts and knowledge that inform current practice in the field of geriatrics.

Conclusion: Thirty-three core geriatric competencies for the graduating undergraduate medical student were developed and classified under 7 headings. The framework will be distributed to the accreditation and examination bodies and Canadian medical schools and will be published in a peer reviewed journal.