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FINALISTS FOR THE WILLARD AND PHOEBE THOMPSON AWARD

The Intersection of Transgender Older Adults and Health Provision: A Scoping Review

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Background: Transgender older adults (TOA) are a vulnerable population who have and continue to face mistreatment, stigma, and discrimination when accessing healthcare. Evidence is needed to understand how to best support TOA navigating aging and end of life.

Methods: A scoping review was conducted to consolidate and summarize current evidence and to identify areas for future study.

Results: 63 articles were identified with 38 representing the lived experience of TOA, 22 pertaining to provision of care to TOA, and 3 involving both. Evidence synthesis resulted in the development of three major themes: health, mistreatment, and social connection/autonomy. TOA were found to be disproportionately burdened by multiple chronic conditions including a higher prevalence of depression and suicide. Preventative care such as vaccination and routine disease screening was disproportionately missed. TOA faced challenges with loneliness, mistreatment, and social resources. TOA feared non-affirming care in dependent living including the inability to live in the truth of their chosen gender. Gender affirming care in the TOA population improved quality of life. Care providers endorse a lack of knowledge regarding care of TOA and an interest in learning more.

Discussion: Despite this focus on transgender individuals 65+, no articles meeting our inclusion criteria represented the lived experience of TOA in dependent living. Further,

a lack of research with regards to gender affirming care and older bodies was raised by TOA and supported by this review. Research is needed to identify how to best support TOA in healthcare settings.

Conclusions: Care providers must consider chronic disease burden, routine preventative care, and the benefits of gender affirming care when serving TOA. Research is needed to establish best practices for care providers and to facilitate TOA informed decision making.

Access to and Perceptions of Long-Term Care Homes for Older Adults in Toronto Shelters: A Qualitative Study

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Background: Older adults in Canada are using shelters at increasing rates and are more likely to experience chronic homelessness than any other age group. An evaluation of a geriatric shelter outreach program found that a large proportion of older adults experiencing homelessness (OAEH) were not accessing Long Term Care Homes (LTCHs) despite being appropriate for admission. Our study aimed to understand the barriers and facilitators to the LTCH admission process in shelter settings.

Methods: For this qualitative study, we conducted six semi-structured interviews and six focus group sessions with shelter staff between July and October 2023 to assess the barriers and facilitators to LTCH assessment and admission

in shelter settings in Toronto, Canada. The focus group sessions involved 52 shelter staff across six shelters. Data were analyzed using thematic analysis.

Results: Barriers to LTCH access included shelter staff knowledge of the LTCH admission process, communication challenges, lack of access to external supports, stigma, and restrictive LTCH admission criteria regarding substance use and behavioural challenges (e.g. exit-seeking). Due to these barriers, LTCH applications often could not be completed. Additionally, completed applications frequently resulted in rejections or long wait times. Staff also reported being unequipped to care for frail OAEH awaiting LTCH in shelter settings. Information sharing, scheduled visits, collaborative decision-making, and access to external supports facilitated processes.

Discussion: Several barriers were identified that contribute to a lack of access to LTCH for OAEH when needed, including long wait times for admission. High care needs of those awaiting LTCH admission go unmet and stretch shelter capacity, leading to adverse outcomes.

Conclusions: This study identifies barriers OAEH in shelters experience along each step of the LTCH application process and highlights several opportunities to improve equitable LTCH access.

Using eConsult to Access Specialist Advice for Persons Living with Dementia—A Cross-sectional Analysis

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Background: Though dementia is recommended to be managed in primary care, the complexity of the condition and high prevalence of multimorbidity often require advice from a variety of specialists. eConsult is a secure web-based platform that may make communication with specialists more accessible for primary care providers (PCPs). We examined how eConsult is being used in the care of persons living with dementia (PLWD).

Methods: We conducted a cross-sectional study of eConsult cases closed in 2021 from the Champlain region in Eastern Ontario for PLWD living in the community and in long-term

care (LTC). Our team of clinicians coded the questions and responses using validated taxonomies adapted to this study. We provide descriptive statistics of the taxonomy results and service utilization.

Results: Our sample included 97 cases from the community and 53 cases from LTC. PCPs' questions were directly related to the patient's dementia in 30% of community cases (n=29), compared to 15% in LTC (n=8). Specialists responded to all cases in a median of less than 1.2 days, and often considered the patient's dementia in their responses (community: 46% [n=45], LTC: 38% [n=20]). Dermatology was the most frequently consulted specialty from LTC (30%, n=15), and geriatrics from the community (18%, n=17). Addressing the needs of caregivers, or resources, services or assistance for caregivers, were mentioned in 32% of community cases (n=31) and 26% of LTC cases (n=14).

Discussion: PCPs in the community and LTC are using eConsult to access specialist advice on a variety of conditions when caring for PLWD.

Conclusions: eConsult allows specialists to provide prompt responses and support to PCPs in managing complex conditions for PLWD, thereby reducing the potential wait times for, and travel burden on, this vulnerable population.

Understanding the Journey of Cognitive and Functional Disability in Long-term Care Residents—A Population-Based Cohort Study in Ontario

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Background: Many Long-Term Care (LTC) residents die from a frailty trajectory with physical and cognitive decline, accumulation of chronic health conditions and increasing vulnerability to stressors. Our objective was to describe the incidence of permanent severe disability and time spent alive with severe disability among LTC home residents to inform person-centred decision making.

Methods: We conducted a retrospective cohort study using health administrative data of older adults (≥ 65 years) who were admitted to LTC facilities between April 1, 2013, and March 31, 2018. With our patient partners we identified states of disability that are meaningful. We described the incidence

and prevalence of permanent total dependence for activities of daily living, inability to make decisions, inability to communicate, and incontinence. We described the characteristics of residents when they first experienced the permanent disability and those who survived for 1-year in with the disability.

Results: Our cohort included 120,238 residents with a mean (SD) age of 84.3 (7.7) years, 64.8% were female. Five years after LTC admission, 18.3% of residents (n=22,018) had developed severe cognitive disability, 7.6% (n=9,138) severe communication deficits, 13.1% (n=15,711) total dependence in activities of daily living (ADLs), and 25.3% (n=30,449) bowel or bladder incontinence. The median survival time was the shortest for residents who entered a state of total dependence in ADLs (45 days), but 25% survived less than 5 days, and longest for those with bowel or bladder incontinence (356 days).

Discussion: Severe cognitive and functional disability are common. While many residents die soon after developing severe disability, some live for prolonged periods.

Conclusions: These findings can be used to build a shared understanding of prognosis and possible outcomes as a starting point for goals of care discussions.

Teaching About Dementia in Canadian Undergraduate Medicine and Nursing Curricula: A Scoping Review

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Background: To support the increasing number of persons with dementia (PWD) and their caregivers, a healthcare workforce skilled in dementia care is needed, as identified in Canada's National Dementia Strategy. Understanding the scope of the existing literature about dementia in health profession curricula would produce valuable information that aligns with this strategy.

Methods: Arksey and O'Malley's (2005) framework for scoping reviews was utilized to answer the research question: What is known about teaching dementia care in undergraduate nursing and medicine curricula in Canada? The search strategy was developed with the support of a medicine liaison librarian; then, a comprehensive literature search across Medline, CINAHL, EMBASE, and PSYCinfo databases was conducted.

Results: After searching 866 citations and 76 full-text articles, 21 articles were included. All articles were published within the past 25 years. Most articles reported research in academic journals (14/21) and conference poster abstracts (3/21). The remaining articles were comprised of 1 letter-to-the-editor, 1 policy note, 1 commentary, and 1 article published by a provincial nurses' association. 14/21 articles addressed undergraduate medicine and 7/21 articles addressed undergraduate nursing.

Discussion: Articles often discussed teaching geriatrics content in curricula more generally, with dementia mentioned as one of multiple topics; rarely were articles focused on dementia education, exposing a gap in the medical education literature. Despite this gap, what literature that is available offers varying methods of instruction that could be helpful to institutions endeavouring to increase content and engagement about care for PWD.

Conclusions: Insights from this review may inform future research on dementia education in health professions. Certainly, results suggest the need for research about whether the current core competencies in nursing and medicine programs align with the skillsets needed to work effectively with PWD.

Revolutionizing Care through a Novel Care Pathway for Agitation and/or Aggression among PLWD in LTC: A Modified Delphi Study

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Background: Experiencing dementia with comorbid agitation and/or aggression is common among persons living with dementia (PLWD) in long-term care (LTC), and decreases the quality of life for both residents and their caregivers. Evidence-based care practices exist across the spectrum of care, but are under-represented in LTC. Our study is the first of its kind: an evidence-informed, co-designed care pathway for agitation and/or aggression among PLWD in LTC. Our work revolutionizes agitation and/or aggression care for PLWD in LTC at both national and global scales.

Methods: A modified Delphi process was developed and administered over two rounds with key stakeholders involved in the care for PLWD in LTC. Panelists were recruited via purposive and snowball sampling across 4 owner operator models. Pathway steps were reviewed using a 7-point Likert Scale, with feedback summarized via median agreement, IQR scores, and qualitative feedback.

Results: At Round 1, 21 panelists completed 80% or more of the Delphi survey and were included for Round 2. At Round 2, 16/21 participants completed the survey. The majority of statements achieved median consensus ≥ 5 after Round 2, with a few undecided statements at detection (i.e. context of psychometric tools) and pharmacological treatment of agitation and/or aggression.

Discussion: Notable findings include a need for interdisciplinary care team coordination across the spectrum of care, and increasing accessibility to non-pharmacological interventions in LTC. More discussion is needed surrounding the use of pharmacological interventions, as we lacked stakeholder agreement.

Conclusions: We developed the first co-designed care pathway for agitation and/or aggression, featuring end-user perspectives. We will continue to refine the pathway to

implement it within Canadian LTC centres to bridge the knowledge-to-practice gap, standardize agitation and/or aggression care nationally, and improve care outcomes in LTC.

**FINALISTS FOR THE
RÉJEAN HÉBERT CANADIAN
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INSTITUTE IN AGING PRIZE**

Acute Care of the Elderly Unit Discharge Summaries—Quality Improvement

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Background: Electronic discharge summaries have been known to lack important details. A discharge summary template was collaboratively developed to address gaps in geriatric specific discharge documentation and highlight geriatric competencies to trainees. This study investigates the template's effective implementation and assesses its impact on note quality.

Methods: A quality improvement approach was used to introduce a geriatric-specific discharge summary template on an Acute Care of the Elderly teaching unit with the purpose of improving trainees' discharge summaries. Discharge summaries were assessed before and after implementation for: structure, previously identified gaps in geriatric content, and overall note quality. A questionnaire was then distributed to trainees to understand their use of the template and barriers to quality notes.

Results: The discharge summary template was introduced to trainees during orientation. Evaluation of randomly selected, 27 discharge summaries post-implementation revealed an improvement in note structure with 81.5% being problem-based, up from 44.1%. The number of notes considered to have excellent quality geriatric content increased from 4.4% to 14.8%, but more notes were also found to have inadequate geriatric content (54.3% to 74%). Documentation of which medications were new occurred less after implementation, from 57.4% to 48.1%.

Discussion: From the survey, earners highlighted a lack of knowledge regarding medication changes and unfamiliarity with the patient as the primary barriers to higher quality documentation.

Conclusions: Although an improvement was seen in the structure and some of the geriatric content of discharge summaries after implementation of a geriatric-specific template, other barriers to high quality notes, including learner familiarity with the patient and their medications, must be addressed through changes in education and team management.

Polypharmacy in Older Adults with Transthyretin Amyloidosis Cardiomyopathy

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Background: Transthyretin amyloidosis cardiomyopathy (ATTR-CM) is an increasingly recognized cause of heart failure in older adults, however data on the prevalence of polypharmacy in this population is limited. We sought to estimate the prevalence of polypharmacy in a cohort of older patients with ATTR-CM.

Methods: This single centre retrospective cohort study included patients aged 65 years and older with a diagnosis of ATTR-CM (defined by positive myocardial biopsy or positive technetium-99m-pyrophosphate nuclear scintigraphy) followed at the University of Calgary. Two polypharmacy definitions were used including a commonly used definition of 5 or more medications and a definition of 10 or more medications. The latter definition has been suggested for use in heart failure populations due to inherently higher medication use associated with guideline-directed medical therapy. Polypharmacy was assessed at diagnosis and at one year post diagnosis.

Results: In a sample of 139 patients, 88.5% were taking 5 or more medications at diagnosis compared to 36.7% taking 10 or more medications. The prevalence of polypharmacy decreased at one year post diagnosis, with 79.9% of patients taking 5 or more medications and 28.1% of patients taking 10 or more medications.

Discussion: This study demonstrates a high prevalence of polypharmacy in older patients with ATTR-CM regardless of polypharmacy definition used. The prevalence of polypharmacy decreased at one year post diagnosis. This may be attributable to poor tolerance of commonly prescribed cardiovascular medications as previously described in the ATTR-CM patient population.

Conclusions: Polypharmacy is highly prevalent in older patients with ATTR-CM and there appears to be a trend towards deprescribing within the first year of diagnosis. Further study is needed to explore outcomes associated with polypharmacy in this population and whether outcomes differ based on definition of polypharmacy used.

Implementation of a Multicomponent Bedside Board to Reduce Delirium in Orthopedic Inpatients: A Quality Improvement Project

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Background: Delirium is common in orthopedic inpatients and is associated with significant adverse health outcomes. This third phase of a quality improvement (QI) project evaluates a multi-purpose bedside board designed to prompt staff to implement the six components of the Hospital Elder Life Program (HELP), with the goal of reducing delirium prevalence, enhancing communication, and engaging staff and care partners in delirium education.

Methods: Boards were installed beside 15 orthopedic beds at a single academic hospital in Hamilton, Ontario from December 2022 to August 2023. The QI model of PDSA cycles involved audits, surveys, interviews, and educational sessions to evaluate and optimize board design and utilization by staff. Delirium prevalence was determined through retrospective chart review using the CHART-DEL tool.

Results: Board completion rate stabilized at 69.2% over the 8-month study period. Of 141 charts reviewed, there was a non-significant reduction in delirium prevalence from 30.6% to 22.8% ($p=0.390$) comparing pre- and post-installation. Mean implementation rate of hearing-related prompts was 90.7% (86.2%-95.2%; 95% confidence interval [CI]), and 79.7% (75.2%-84.3%; 95% CI) for vision-related prompts. The proportion of staff-reported “excellent” delirium prevention knowledge improved from 19.2% to 29.6% ($p=0.016$).

Discussion: Multicomponent, non-pharmacological interventions reduce delirium occurrence, but are challenging to implement in routine care. Process and outcome measures demonstrate that staff and care partners were supportive of the tool, finding it improved patient care and communication. Staff time constraints were the primary barrier. Although delirium reduction was not statistically significant, the board is a feasible and well-received tool in the care of orthopedic older adults.

Conclusions: This QI project successfully integrated a bedside tool to prompt non-pharmacological delirium prevention strategies and communicate patient information within the HELP domains, with great potential for adaptation across care settings.

Cross Sectional Association Between Orthostatic Change in Systolic Blood Pressure and Cognition

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Background: The incidence of dementia in Canada is rising with the aging population. Numerous studies show orthostatic hypotension (OH) is common in adults with dementia and may be a risk factor for cognitive decline. The purpose of this study is to examine the prevalence of OH in older adults with cognitive decline and its association with cognitive performance.

Methods: This is a cross-sectional study of the Comprehensive Assessment of Neurodegeneration and Dementia (COMPASS-ND) cohort study, a longitudinal observational study. Participants were grouped as healthy controls (HC), mild cognitive impairment (MCI) and dementia (DEM) based on consensus criteria. All participants with Parkinson’s and related dementias were excluded from analysis. OH was measured as a change in systolic blood pressure from lying to standing. ANOVA and linear regression modelling were performed. Cognitive performance was measured using MoCA.

Results: 832 participants were analysed. Non-weighted prevalence of OH in MCI (44%), DEM (14%), and HC (28%). Regression modelling did not reveal a significant correlation between SBP change and MOCA score. In addition, there was no significant difference in the average change in SBP between the three groups.

Discussion: We have shown that prevalence of OH in a well characterized cognitively impaired cohort is 14% with many participants with MCI experiencing OH. However, the observed change in SBP did not correlate with cognitive performance. This may be because of the methodology used to define OH but may also point away from OH as a modifiable risk factor for cognitive decline.

Conclusions: Correlations between cognition and changes in SBP remain difficult to measure. Further avenues of research into the relationship between SBP, and the dynamics of cerebral blood flow during position changes may be warranted.

Microglia Morphology Characterization in Aging

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Background: Chronic inflammation is a hallmark of aging, manifesting in the brain as neuroinflammation (López-Otín *et al.*, 2023). Chronically activated microglia drive inflammation in the brain by releasing pro-inflammatory cytokines, chemokines, and reactive oxygen species (Hanisch and Kettenmann, 2007). These processes make the brain more vulnerable to dementias such as Alzheimer’s disease (Asai *et al.*, 2015), (Wright *et al.*, 2013). Activated microglia have a more amoeboid, less branched morphology, making it a potential marker of brain vulnerability (Vidal-Itriago *et al.*, 2022).

However, the relationship between microglia morphology and cognitive deficits has been poorly characterized. This study aimed to understand if microglia morphology changes as brain function declines with age.

Methods: Brain cross-sections from male and female 3-, 9-, and 15-month-old Fisher 344 rats were stained with the microglial marker Iba1. Both 9- and 15-month-old rats had known cognitive deficits. MatLab-based 3DMorph software (York *et al.*, 2018) was first validated and then used to characterize microglia morphology from the prefrontal cortex, orbitofrontal cortex, CA1 hippocampus, striatum, and corpus callosum using a double-blinded study design.

Results: Ramification index and cellular branching metrics indicate age- and brain region-dependent changes in microglia morphology.

Discussion: In Summary, using 3DMorph, we can accurately quantify the morphology of microglia in Iba1-stained rat brain cross-sections.

Conclusions: Now, we are better poised to 1) accurately characterize microglia morphology from different brain regions, 2) understand the relationship between microglia morphology and neuroinflammation, and 3) determine if microglia morphology can be used as a marker of cognitive decline.

Older Adults with Advanced Chronic Kidney Disease and Access to Palliative Care: A Retrospective Cohort Study in Primary Care

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Background: This study aims to characterize the delivery of primary and specialist palliative care for older adults with advanced chronic kidney disease (CKD).

Methods: A population-based retrospective cohort study, utilizing electronic health records in Toronto, Canada, involved older adults aged 65 and greater with advanced CKD not undergoing dialysis between April 1, 2012, and April 1, 2022, with a one-year follow-up. The study assessed ACP prevalence, goals of care (GOC) discussions, access to specialized palliative care, hospital admissions, locations of death, and mean survival time.

Results: Forty-seven older adults with advanced CKD (mean age: 81 years; 68% female; mean of 5 comorbidities; 47% lived alone) were included. In primary care, 70% had a documented substitute decision maker, 34% engaged in GOC discussions, and 34% discussed access to specialist palliative care. Seventy-four percent had at least one hospitalization, 32% died at home, and the mean survival was 2 years.

Discussion: The study highlights the significant comorbidities, hospitalizations, and mortality in older adults with non-dialysis advanced CKD, coupled with a relatively low prevalence of GOC conversations. These findings underscore

the importance of promoting ACP and GOC discussions in primary care and improving access to specialist palliative care.

Conclusions: The study concludes that the current prevalence of palliative care discussions in primary care for older adults with non-dialysis advanced CKD is suboptimal. Opportunities for enhanced training, point-of-care interventions, and facilitated access to specialist palliative care consultations are crucial for addressing challenges faced by primary care providers.

FINALISTS FOR THE DR. JACK & DR. ASA AWARD

Predictors of Language Concordant Cognitive Testing in Older Adults with Cancer

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Background: Quality standards recommend dementia assessments be completed in patients' preferred, or concordant, language. Rates of language concordant cognitive testing for patients preferring non-English languages are unknown. We aimed to (1) describe the proportion of patients receiving language concordant care and (2) identify factors associated with language concordant cognitive testing.

Methods: Our retrospective cohort study included patients aged ≥ 65 years who preferred a non-English language presenting to an academic geriatric oncology clinic between July 2015 and September 2022. We evaluated for documented language concordance (formal interpretation or patient-physician shared language), ad hoc, or no interpretation during cognitive testing. We performed multivariable logistic regression to assess patient and referral variables, selected a priori, associated with language concordant testing.

Results: We screened 1800 charts and identified 270 patients preferring a non-English language. The mean age was 81.2 years, 53.7% were female and median Charlson comorbidity index (CCI) was 1. Cognitive testing was completed for 252 patients, with 17.9% (n=45) receiving language concordant testing (93.3% professional interpretation, 6.7% shared language), 19% (n=48) receiving ad hoc interpretation and 63% (n=159) without documented interpretation. Patients with higher CCI scores (OR 0.59 per unit, 95%CI: 0.41-0.83) and more years spent in Canada (OR 0.97 per year, 95%CI: 0.95-1.00) had reduced odds of language concordant testing.

Referrals for cognitive assessment (OR 9.07, 95%CI: 1.82-45.10), and for patients with curative disease (OR 3.81, 95%CI: 1.44-10.09) increased the odds of language concordant testing.

Discussion: Most patients who preferred a non-English language did not receive language concordant cognitive testing. Individuals with increased comorbidity or who resided in Canada longer were less likely to receive language concordant testing.

Conclusions: Quality improvement efforts are needed to ensure older adults receive cognitive testing in their preferred language.

Impact of a Whole Pathway Approach, PRIME, in the Care of Older Adults Undergoing Gastrointestinal Surgery

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Background: PRIME is a whole pathway approach for collaborative geriatric care in gastrointestinal surgery. Pre-operative assessment includes surgical and geriatric risk assessment using the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) Risk Calculator. The study's objectives were to 1) assess the impact of PRIME on structural, process and three validated outcome indicators: re-admission, pneumonia, and non-home discharge; 2) assess the predictive value of the NSQIP Score.

Methods: This retrospective chart review of adults aged 70+ undergoing gastrointestinal surgery between July 1, 2020 and June 30, 2023 compared mean NSQIP Score-predicted outcomes to mean observed outcomes. Brier scores assessed the predictive value of the NSQIP calculator.

Results: 113 patients underwent gastrointestinal surgery mostly for cancer (82.3%). 99.1% received pre-operative comprehensive geriatric assessment and 98.2%, 97.3% and 98.2% received screening for dementia, function and frailty, respectively. Patients who received PRIME were less likely to be re-admitted (8.8% vs. 17.7%), less likely to have a non-home discharge (12.4% vs. 18.6%), but more likely to have pneumonia (6.2% vs. 3.0%). Median length of stay was similar to predicted. Brier scores were high for most outcomes, indicating limited predictive value of the NSQIP score. Brier

scores were low for venous thromboembolism, renal failure, ileus, readmission, non-home discharge, functional decline, and new mobility aid use, suggesting good predictive value for these outcomes.

Discussion: PRIME may reduce re-admission and non-home discharge. This is the first study to externally evaluate the predictive value of the NSQIP score for geriatric outcomes in this population; it may be used to predict functional decline and new mobility aid use.

Conclusions: Further work is needed to improve the predictive value of the NSQIP calculator in older adults undergoing gastrointestinal surgery.

A Thematic Analysis of Reflective Writing: What Does it Mean to be a Geriatrician?

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Background: As the aging population increases, the demand for geriatric medicine is expected to increase. However, interest in geriatrics among students and residents is low compared to other specialties. New ways need to be found to portray the practice of geriatric medicine. A thematic analysis of published reflective writing by geriatric medicine trainees was conducted to explore areas that are meaningful to them. These themes could be used to inform education and outreach initiatives aimed at medical students and residents.

Methods: Thematic analysis was conducted on reflective pieces written by geriatric medicine trainees between September 1, 2019 and January 1, 2024. The articles, including titles, were collated into one document. Themes were analyzed using the six-step method from Braun and Clarke.

Results: The collated document consisted of 26,300 words. Themes identified included physician wellness and fulfilment; importance of communication; competence in diagnosing and managing diseases common in older people; appreciation of the arts and humanities; advocacy around issues related to older people.

Discussion: Our analysis identified themes that define the day-to-day practice of a geriatrician. These themes provide further insight into what it means to practice geriatric medicine. They provide a holistic description of a geriatrician's practice that goes beyond the traditional 5 Ms (mind, mobility, medications, multimorbidity, matters most) which is centered around the patient. The themes capture true, meaningful experiences in geriatric medicine and can be used to counter negative perceptions among students and residents.

Conclusions: Through thematic analysis of reflective writing, meaningful experiences in the practice of geriatric medicine were identified. The themes identified can be developed into a comprehensive model that can be used to promote interest in geriatric medicine as a career.

A Canadian Geriatric Critical Care Curriculum Needs Assessment

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Background: Over 50% of Canadian intensive care patients are older adults over 65, and the importance of incorporating evidence-guided geriatric principles in intensive care settings has become increasingly recognized. We conducted a needs assessment of key stakeholders to determine perceptions of formal, informal, and hidden curricula regarding geriatric competencies in Canadian critical care medicine (CCM) residency programs.

Methods: We grounded this project in the Context, Input, Process, Product (CIPP) model for program evaluation. We surveyed Canadian CCM trainees, faculty members within Royal College-affiliated CCM residency programs, and community-based intensivists across Canada using a questionnaire which explored perspectives on caring for the critically ill older adult, perceived educational needs of CCM trainees in geriatric competencies, and strategies for curricular redesign.

Results: 20 CCM trainees, 27 faculty members, and 15 community intensivists provided demographic and free-text responses to the questionnaire. Qualitative content analysis demonstrated education gaps in core geriatric competencies. Identified barriers included i) insufficient time in the current curricula, ii) low prioritization of geriatrics education, iii) discomfort amongst intensivists to teach on geriatrics-focused topics, and iv) a lack of ‘local champions’ to promulgate best practices in the care of critically ill older adults.

Discussion: Geriatric education is currently limited in existing critical care curricula. Potential strategies to address this may include increased clinical collaboration between geriatricians and intensivists, inclusion of geriatricians in the development of CCM curricula, and identification of local champions among practicing intensivists. There is a growing recognition of the need to prioritize care of the aging critically ill population as well as greater geriatrician engagement with patients in intensive care.

Conclusions: The development of geriatric competencies amongst CCM trainees is becoming a recognized need, and participants identified various amenable barriers that impede learning.

REACH LTC—REAssessing CHolinesterase Inhibitors and Memantine in Long-Term Care

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Background: Choosing Wisely Canada (CWC) recommends regular reassessment of cholinesterase inhibitor (ChEI) and memantine use and consideration of deprescribing if risks outweigh benefits. This is not routinely occurring in Ontario long-term care (LTC) homes where 54% of older adults are still taking ChEIs at time of death. Our quality improvement study aims to improve rates of ChEI/memantine reassessment and deprescription at Sunnybrook’s LTC center.

Methods: A detailed chart review, direct observation of quarterly medication reviews, and physician surveys were completed. We also performed a root cause analysis via semi-structured stakeholder interviews with institutional leadership, physicians, registered nurses, pharmacists, social workers, and patient caregivers.

Results: We found ChEI/memantine use was 13.2% (n=45). Over 7 months, only 4.8% underwent reassessment, 4.4% underwent deprescription, and 20% died on these medications. There was 100% agreement among physicians that ChEI/memantine reassessment and deprescription is an important aspect of providing care, yet they reported a lack of training in deprescribing these medications and knowledge of resources. We identified numerous other key barriers (e.g., fear of deprescribing medications started by consultants, fear of negative effects from deprescription, inexperience counseling around deprescription), and also potential facilitators.

Discussion: Based on our findings, we developed high-impact interventions including a deprescribing toolkit with a decision support algorithm, clinician evidence summary, patient/family support package, critical conversation guide, and automated integration into quarterly medication reviews.

Conclusions: Many people living in LTC die still taking ChEIs/memantine. Despite deprescribing guidelines and CWC recommendations, reassessment and deprescription are not routinely occurring. Our study is the first to implement these national recommendations in LTC, where risks of ChEIs/memantine are more likely to outweigh benefits compared to community settings. This model for implementation can be scaled and spread to LTC centres across Canada.

Comparison of Discharge Destination Post Hip Fracture Among Rural Vs. Urban Dwelling Older Adults: A Retrospective Cohort Study

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Background: Given evidence supporting multidisciplinary inpatient rehabilitation post-hip fracture, it is critical that older adults in rural and urban areas have access to rehabilitation services

Methods: Our cohort included adults, aged ≥ 66 years, admitted to hospital with a low-impact hip fracture between January 1, 2010, and November 30, 2018 in Ontario, Canada. We described discharge destinations for rural- versus urban-dwelling older adults. Our primary outcome was discharge to inpatient rehabilitation. We defined rural residence as living in a community of $\leq 10,000$ people. We derived odds ratios (OR) adjusted for clinical and health system factors from logistic regression models.

Results: We included 67,245 urban- and 10,151 rural-dwelling older adults with low-impact hip fractures. Mean cohort age was 83.1 years (standard deviation 7.8) and 72.2% were female. Compared to urban-dwellers, rural-dwellers had lower odds of inpatient rehabilitation (OR 0.57, 95% confidence interval [CI] 0.52-0.62) and complex continuing care admission (OR 0.67, 95% CI 0.61-0.73), but greater odds of discharge home without any rehabilitation (OR 1.30, 95% CI 1.20-1.40) and homecare rehabilitation (OR 1.77, 95% CI 1.67-1.88). Rural dwellers had greater odds of long-term care admission in the age and sex adjusted model (OR 1.28, 95% CI 1.21-1.35), but not after adjusting for other clinical and health system factors (OR 1.08, 95% 1.00-1.17). There was no difference between groups in receipt of palliative care (OR 1.19, 95% CI 0.91-1.55).

Discussion: Our findings suggest a disparity in access to rehabilitation post-hip fracture among rural-dwelling older adults, compared to urban-dwelling peers, which may be associated with increased discharge to long-term care.

Conclusions: Further research is needed to understand key barriers to rehabilitation access post-hip fracture for rural-dwelling older adults and novel solutions to address this inequity.

FINALISTS FOR THE EDMUND V. COWDRY AWARD

Investigating Systematic Measurement Differences in Delirium Severity Between Hyperactive and Hypoactive Patients

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Background: Delirium affects 10% of older adults in the emergency department (ED). Research on differences between hyperactive and hypoactive delirium in terms of delirium severity and outcomes is limited. This study assessed whether systematic measurement differences between motor subtypes of delirium within and between severity scales exist, as well as rater confidence, interrater agreement and rater accuracy by ED staff.

Methods: A prospective observational study of emergency staff from two tertiary care hospital EDs. We designed four case vignettes of older ED patients with hyperactive delirium and four with hypoactive delirium. Each motor subtype had two mild and two severe cases. Participants rated the severity of case vignettes using two scales: Confusion Assessment Method-Severity Scale (CAM-S) and Delirium Index (DI).

Results: The survey was completed by 32 nurses, 11 physicians and 1 physician assistant (n=44). Interrater agreement for CAM-S and DI ratings were good to excellent (ICC = 0.89-0.96) and agreed with gold standard rater (mean difference = 3.7%) across all case vignettes. Only 60% of participants were confident in diagnosing and subtyping delirium, and 25% in rating delirium severity. Both scales rated hypoactive more severe than similar hyperactive cases (0.70 vs. 0.67, $\Delta 0.03$, 95% CI: 0.002, 0.061). The DI measured delirium severity less severe compared to identical cases rated using the CAM-S (0.65 vs. 0.71; $\Delta -0.06$, 95% CI: -0.094, -0.035).

Discussion: Participants' confidence in delirium diagnosis, subtyping and rating severity was low, which may suggest the need for greater delirium education in the ED. Notably, we found hypoactive was systematically measured more severe than equivalent hyperactive cases of delirium using CAM-S and DI.

Conclusions: The systematic measurement differences found herein may impact interpretation of previous literature on delirium motor subtype severity and associated outcomes.

The Relationship Between Delirium Severity and Patient Outcomes Classified by Motor Subtype: A Systematic Review

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Background: Delirium severity and clinical motor subtypes are independently associated with poor patient outcomes. However, the relationship between delirium motor subtype severity and patient outcomes is not well understood. This systematic review examined the association between delirium severity scores and outcomes for the delirium motor subtypes.

Methods: A systematic review comparing delirium severity scores and various patient outcomes categorized by motor subtype in older adult patients with delirium. Electronic searches of MEDLINE, Embase, Cochrane, and PubMed NBIB from inception to July 2022 and reference lists were hand-searched. Two reviewers independently screened abstracts and full texts and assessed the quality of included studies. One reviewer extracted data.

Results: 19 articles were included with a total of 5,607 patients. Delirium severity scores were used in these studies to predict and stratify risks, assess outcome prognosis, gauge changes in motor disturbance, evaluate individual symptom burden, and guide treatment management and response. The relationship between motor subtype severity and risk factors, length of stay, mortality and institutionalization were inconclusive. Motor subtype severity differed in illness severity, ward management, treatment use, delirium duration and symptomatology. More severe hypoactive delirium was associated with greater illness severity, cognitive impairment and longer delirium duration. More severe hyperactive delirium was associated with greater nursing care and psychotropic medication use.

Discussion: A limited number of studies have investigated delirium severity of the motor subtypes in association with outcomes. This systematic review found the relationship between delirium severity scores and patient outcomes categorized by motor subtype is confounded by differences in assessment tools and patient populations between studies.

Conclusions: Future research should focus on standardization of delirium measurement tools, including severity and subtyping methods, to evaluate differences between delirium motor subtype severity and related patient outcomes.

Quadriceps Muscle Thickness Measured by Point-of-Care Ultrasound and Hospital Length of Stay

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Background: Accurate prediction of hospital length of stay (LOS) and readmission rates could help improve effective healthcare resource allocation. Recent evidence suggests point-of-care ultrasound for muscle assessment, specifically muscle thickness, as a promising tool in this regard. Studies have shown significant correlations between muscle ultrasound measurements and patient outcomes, including functional capacity and hospital stay length, indicating its potential utility in clinical settings. This study explores the hypothesis that ultrasound measurements of quadriceps muscle thickness (MT) and echointensity (EI) can serve as predictors for these crucial patient outcomes.

Methods: The study measured quadriceps MT and EI using point-of-care ultrasound for patients in a supine position in the emergency department of Vancouver General Hospital.

Predictor variables included age, sex, muscle thickness, and echo intensity. Outcome variables were hospital LOS, readmission rate, and discharge destination. Follow-up was conducted after one month to assess hospital readmissions and mortality.

Results: A total of 120 participants were included (average age 76.9 ± 7.5 , with 64 women and 56 men). Mean LOS was 27.4 ± 31.4 days, and mean MT was 20 ± 6 mm. Sex-based differences in MT were statistically significant ($P = 0.032$). MT correlated significantly with LOS (Standardized $\beta = -0.152 \pm 0.016$, $R^2 = 0.290$, $P = 0.001$) in simple linear regression analysis. In the multivariate regression model, MT remained a significant predictor (Standardized $\beta = -0.152 \pm 0.563$, $P = 0.008$).

Discussion: The findings of this study indicate the potential of point-of-care ultrasound in measuring skeletal muscle as an effective predictor of discharge outcomes. Continued research is necessary to further establish the use of these measures to predict hospital LOS.

Conclusions: Muscle thickness is a significant predictor of hospital stay duration.

Building a Stronger Support System: Exploring Evidence-Based Solutions for Family Caregivers in Geriatrics

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Background: Family caregivers play a crucial role in geriatric care, often facing complex challenges while managing their own well-being. A comprehensive understanding of effective support strategies is vital (Schulz *et al.*, 2016).

Methods: Our research employs an explorative literature review to identify key insights for strengthening family caregiver capacity in geriatric care. By reviewing existing literature, we aim to uncover evidence-based practices, interventions, and support systems that contribute to the empowerment of family caregivers.

Results: The literature review reveals a range of effective interventions and strategies to enhance family caregiver capacity. Psychoeducational interventions: Workshops on stress management, communication skills, and caregiving techniques demonstrably reduced caregiver stress and burden, enhanced self-efficacy, and improved elder adherence to treatment plans (Tessier *et al.*, 2023; Lebowitz and Artukoğlu, 2022). Peer support groups: Shared experiences and emotional exchange within peer groups fostered coping mechanisms, reduced social isolation, and strengthened caregiver resilience (Schwei *et al.*, 2021; Rafael *et al.*, 2018). Technology-based interventions: Telehealth platforms and online resources provide accessible support, education, and connection, particularly for geographically isolated caregivers (Sen *et al.*, 2022; Stara *et al.*, 2022).

Discussion: The provision of care is a multifaceted undertaking that warrants a combination of customized support strategies that are tailored to individual needs and circumstances. It is essential to adopt culturally sensitive approaches, ensure technological accessibility, and conduct ongoing evaluations of available resources. By adhering to this approach, it is feasible to amplify the satisfaction derived from caregiving.

Conclusions: Enhancing the competence of family caregivers in geriatric care is a complex task that necessitates a comprehensive approach. By assimilating empirically proven interventions into regular geriatric care, we can enhance the caregiving experience for both caregivers and older adults. Investing in support systems fosters successful aging and fortifies geriatric care.

Predicting Falls Among Older Persons Using Machine Learning

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Background: Falls among older persons represent a critical concern globally, particularly in Canada, where they stand as the primary cause of hospitalizations for individuals aged 65 and above. Addressing this issue demands a sophisticated methodology, and our proposed approach employs machine learning algorithms to predict fall probabilities and devise personalized mitigation strategies.

Methods: Our chosen algorithm, CatBoost, stands out as a modification of a gradient-boosted decision tree algorithm, adept at handling missing data and categorical variables. The methodology was trained on a dataset comprising 800 patients in Australia, rigorously divided into training, validation, and test sets, ensuring robustness and generalizability. The algorithm identified strong predictors of falls in ambulatory older persons.

Results: Our results indicate that a concise set of standardized tests yields reliable estimates. Predictors of falls include the Timed-Up-and-Go (TUG) test, the Mini Nutritional Assessment (MNA), and the Body-Mass Index (BMI). We report an F1-score of 0.97, a precision-recall area-under-the-curve of 0.95 and a false-negative rate of 0.01.

Discussion: Our study demonstrates the utility of machine learning to predict falls in older persons using clinical, paraclinical, and demographic data already available in patients' files.

Conclusions: This new method, which could be easily integrated in medical software, could assist in the prediction of these catastrophic events that affect the quality of life of our older population.

Eligibility for Treatment with Disease Modifying Therapies for Alzheimer's Disease Among Individuals Assessed in a Tertiary Care Specialty Dementia Clinical Program in Calgary, Alberta

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Background: Potential disease modifying therapies (DMT) for Alzheimer's disease (AD) may become available in Canada although it is unclear what percentage of people presenting to specialty dementia clinics may be eligible for these treatments. We evaluated patient eligibility for potential DMTs among individuals in the PROMPT dementia research registry derived from a tertiary care cognitive clinic in Calgary, Alberta.

Methods: We analyzed all individuals included in the PROMPT registry from between July, 2010 to May, 2023 who were diagnosed with mild cognitive impairment (MCI) or possible or probable AD at their baseline assessment. The characteristics of PROMPT participants were then compared to the inclusion criteria used in recent trials of three DMTs. The proportions of individuals in the PROMPT registry who were potentially eligible for DMTs were then determined.

Results: Of the 1,900 individuals in the PROMPT registry, 1,107 were diagnosed with MCI or AD at their baseline visit (mean age 75 years and 54% male). Among this group, 54-80% met cognitive test score eligibility for different DMTs. Potential medical contraindications to treatment with DMTs were present in 29% of participants. Overall, approximately 23-34% of individuals in the PROMPT dementia registry could potentially be candidates for DMTs pending neuroimaging and biomarker confirmation of eligibility.

Discussion: Currently ~23-34% of individuals with MCI or AD referred to our tertiary care cognitive disorders could potentially be eligible for DMTs based on their initial clinic assessment. This information will help better define resource requirements for implementing AD DMTs should these become available in Canada.

Conclusions: Results from our study provide insights into the potential resources that may be needed to provide DMTs for the growing number of individuals with MCI or AD in Canada.

POSTERS

Investigating the Knowledge of Prebiotics, Probiotics and Synbiotics in Middle and Older Age Adults

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Background: The usage of gut biotics has showed substantial potential in managing diverse health conditions. Nevertheless, there exists limited comprehension concerning the knowledge and utilization of these gut biotics. Our aim was to assess understanding enhancement following an educational intervention.

Methods: A cross-over study encompassing a convenient sample of 161 in-patient and out-patient individuals aged 50 years and above was conducted at the University of Alberta Hospital from June to August 2023. Of these, 122 patients completed both the pre-intervention and post-intervention questionnaires. Knowledge regarding gut biotics was evaluated using a structured questionnaire comprising of 16 questions and involving six thematic areas. To ensure validity, the questionnaire was pretested on 10 individuals who were not part of the study. Subsequently, an educational intervention in the form of an information sheet was provided. After a two-week interval, all participants were contacted by phone, and the same questionnaire was administered again.

Results: The mean age of the participants was 72 years (SD: 10.8), with 57% comprising females, and 39% had less than a high school education. Following the intervention there was a noticeable enhancement in knowledge across all the themes, with statistical significance detected in 14 out of 16 questions as determined by a homogeneity test.

Discussion: The health benefits of microbiota in humans can occur through dietary changes. The outcomes of this study provided valuable insights for the development of targeted health education strategies focusing on gut biotics. This research underscored the importance of disseminating knowledge in this domain to empower middle-aged and older adults with informed choices regarding gut biotics.

Conclusions: Knowledge gaps regarding gut biotics were prevalent among the study participants, and the educational intervention effectively contributed to knowledge enhancement.

Does Influenza Vaccination Protect Against Long Term Care admission? A Report from the Canadian Immunization Research Network Serious Outcomes Surveillance Network

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Background: Influenza outcomes are often considered over short-term time horizons. Long-term outcomes are less well understood. We aimed to explore outcomes of older adults hospitalized with laboratory-confirmed influenza (LCI), focusing on changes in formal home care and living arrangements, including incident transfers to Assisted Living or Long-Term Care (AL/LTC) from baseline (prior to hospitalization) to 30 days post-discharge.

Methods: Using pooled SOS Network active surveillance data from influenza seasons 2011/2012 through 2018/2019, we identified individuals aged 50+ living in private residences who were hospitalized with LCI. We excluded individuals missing data on discharge residence, cases of in-hospital death, and transfers to other hospitals. We used Inverse Probability of Treatment Weighting (IPTW) to adjust regression models for confounding.

Results: Of 6,657 individuals with influenza, 45% required support for daily activities at baseline. Median age was 75 [IQR 64-83]; 58.5% had not received seasonal influenza vaccine. Median duration of hospitalization was 5 [IQR 3-9] days. Negative binomial regression modeling showed that influenza vaccination was associated with 13% shorter hospital stay (Incidence Rate Ratio [IRR]=0.87[95%CI, 0.83-0.92]; p <0.001). Some patients (4.2%) experienced incident AL/LTC admission. Risk of institutionalization was higher for those with prolonged hospital length-of-stay. Using Kaplan-Meier estimation, the likelihood of not needing AL/LTC was 94.1% (93%-95.3%) on day 14, which decreased to 87.9% (85.8%-90%) on day 21 and 78.5% (75.2%-81.9%) by day 30. Currently, we are investigating vaccine effectiveness in preventing AL/LTC.

Discussion: Older adults hospitalized with influenza are at risk of long-term poor outcomes, including persistent functional decline. Some are newly admitted to AL/LTC. Vaccination protects against hospitalization and appears to be associated with shorter length-of-stay, itself a risk factor for institutionalization.

Conclusions: Maintenance of functional independence through preventing influenza and severe illness/hospitalization is an important goal of influenza vaccination.

Day-to-day Experience of Managing Urinary Incontinence (UI)—A Photovoice Study

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Background: The prevalence of UI increases in association with increasing age. UI impairs the lifestyle and quality of life of older adults, yet its impact on day-to-day living and the coping mechanisms employed to manage the condition are not well documented. This study aimed to examine these factors.

Methods: This study used photovoice to explore lived experience. After completing an orientation to the study, five participants (age range 68–90 years) provided a diary record and twenty-five pictures each, depicting their experiences of living with UI. Semi-structured individual interviews and a focus group were conducted and analyzed using conventional content analysis. A pictogram was developed with participant involvement.

Results: Participants disclosed challenges with anxiety, being in groups, traveling/driving, taking jobs/volunteering, extra-clothing, financial and psychosocial impact of incontinence products, fluid intake management and physiotherapy. They identified these as barriers and handicaps to daily living. They also noted difficulty sharing concerns with physicians, family, and friends. Timed voiding, pre-planning bathroom breaks, proximity to washroom in the home, and opting for keyless home entry were noted as useful coping strategies.

Discussion: This study depicted significant lifestyle changes, health, and psychosocial impacts of UI in older adults; it caused considerable impact on quality of life. UI remains a taboo subject for older adults.

Conclusions: UI significantly impacts many aspects of daily life for older adults. Despite developed coping strategies, there remains a need for enhanced communication and ongoing support for individuals with UI.

Patient and Caregiver Perspectives on Social Admission Care in a Nova Scotia Tertiary Teaching Centre

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Background: Emergency departments are a last resort for some socially vulnerable individuals, colloquially known as ‘social admissions’ (SAs). Providing quality care to these patients—often vulnerable older adults with minimal social

supports and chronic health conditions—presents challenges in hospitals that are primarily focused on acute care. This study explored patient and caregiver experiences regarding how healthcare is (and is not) delivered to SAs in hospital.

Methods: Semi-structured interviews were conducted with 10 patients (and/or their caregivers) admitted under a SA pathway in a tertiary care center in Nova Scotia. Guided by grounded theory, transcribed interviews were inductively coded. Constant comparative analysis processes and intermediate coding in collaboration with our patient and clinical partners were used to develop themes and subthemes reflective of participants’ perspectives.

Results: Participants described four key themes important to their SA hospitalization: back story (their lives prior to illness and contextualizing their healthcare journey), inciting incidents (efforts to live at home and obstacles faced), hospital experiences (perceived reasons for admission and care perceptions) and recommendations (on hospital/community care and clinician training). Subthemes reflect emotions during this transitional time, ranging from pride in their identity to frustration with the system and caregiver guilt.

Discussion: This study highlights experiences of a population often overlooked because of frailty, cognitive and/or social vulnerabilities. It demonstrates the complex needs, diverse journeys, and emotions within this population, emphasizing the importance of understanding patients’ backgrounds and their struggles prior to hospitalization. Participants also identified gaps in communication, service provision and expectations once hospitalized.

Conclusions: Acknowledging the diversity of experiences, challenges and emotional burden faced by patients and their caregivers can help hospitals and healthcare systems develop effective and empathetic strategies for the care of ‘social admissions’.

Understanding the Quality of Death and Dying for Older Adults in Canada at the Canadian Longitudinal Study on Aging: A Cohort Study

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Background: As Canada’s population ages, comprehensively understanding the quality of death and dying (QODD) becomes increasingly critical. We conducted this study to provide a comprehensive description of the QoDD among older Canadians.

Methods: We conducted a cohort study analyzing decedent data from the Canadian Longitudinal Study on Aging (CLSA) in Canada. We interviewed the next of kin and proxies of deceased CLSA participants, who died between April 2017 to February 2022, to report on their End-of-Life (EoL) experiences. Respondents commented on the dying experiences of CLSA participants on four domains, pain at the time of death,

dignity of dying, peace maintained, and dying in place. We documented the proportion of deaths that were judged as poor quality of the four QoDD characteristics. We examined the frequency of poor QoDD differed according to location of death, cause of death, and EoL and health care arrangements.

Results: There were 3,672 total deceased participants at the CLSA and 1,287 had a completed decedent questionnaire. Approximately, 60% of those who died of dementia did not die in place, participants dying in hospitals experienced challenges with pain control (15%), and 50% of participants who died in Long-Term Care facilities did not pass away in their preferred location. Most deceased CLSA participants were 75 years old or older, male, and married. The frequency of responses to the four QoDD characteristics varied from 8-33%, with 47.4% of participants experiencing a poor QoDD in at least one of these categories.

Discussion: Further, a majority of the deceased patients with a completed decedent interview experienced a poor quality of QoDD in at least one domain.

Conclusions: These findings inform palliative care planning for older adults and policy changes to improve home-based EoL care.

Use of a Modified Delphi Process to Create a Clinical Care Pathway for Depressive Symptoms and Disorders in Long-Term Care

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Background: There is a lack of clear guidance on depression detection, diagnosis, and treatment in long-term care (LTC). The purpose of this study was to create an evidence- and collaborator-informed clinical care pathway focused on optimizing the identification and treatment of depressive symptoms and disorders in residents of LTC.

Methods: A modified Delphi survey was used to reach consensus amongst LTC healthcare provider, administrator, friend/family caregiver, and resident collaborators on statements forming the steps of a clinical care pathway for depression in LTC. Statements were developed based on evidence and expert opinion. Participants rated their degree of agreement with statements using Likert-scales in each survey round. Statements were revised between rounds based on participant feedback and median and interquartile range values. Survey rounds continued until agreement was reached among participants.

Results: Two rounds of the survey were required to reach a consensus among the 26 participants. Statements were organized into four categories: depression detection, identifying contributors to depression, symptom management, and coordinate care. Critical statements foundational to the operation of the pathway were identified.

Discussion: Each statement forms a step within the clinical care pathway targeting depression case finding, diagnosis, and management in LTC. Participants disagreed on statements about the timing of depression assessment, the role of validated depression assessment tools, and accounting for comorbidities and depressive history in management. Additional resources may be required for certain steps, particularly those outside of current practice, including staff education on depression detection and access to non-pharmacologic treatments.

Conclusions: The generated statements provide steps to managing depression in LTC that can prospectively be applied in practice Canada-wide to improve care for residents. Further research is required to understand the barriers to providing care for depression before pathway implementation.

Anxiety Symptom and Disorder Detection in Older Adults: A Diagnostic Accuracy Systematic Review

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Background: Anxiety is common in older adults and often goes undetected. A systematic review was completed to identify accurate anxiety tools to detect anxiety symptoms and disorders in older adults living in the community.

Methods: Medline, Embase, and PsycINFO were searched in March 2023 using the search concepts anxiety, older adult, and diagnostic accuracy. Included articles assessed anxiety in community older adults using an index anxiety tool and gold standard anxiety assessment and reported diagnostic accuracy outcomes. Pooled prevalence and diagnostic accuracy estimates were completed.

Results: Twenty-three anxiety tools were identified from 32 included articles. The pooled prevalence estimate for anxiety disorders was 27.7% for clinical and 14.8% for community samples and 36.9% and 15% for generalized anxiety disorder (GAD) for clinical and community samples, respectively. Pooled diagnostic accuracy outcomes were estimated for the Geriatric Anxiety Inventory (GAI)-20 (sensitivity=0.89, specificity=0.80) to detect GAD and for the GAI-20 (cut-off ≥ 9 , sensitivity=0.74, specificity=0.97), Beck Anxiety Inventory (sensitivity=0.70, specificity=0.60), and Hospital Anxiety and Depression Scale (HADS-A) (sensitivity=0.78, specificity=0.76) to detect anxiety disorders in clinical samples.

Discussion: The GAI-20 had the most supporting evidence of anxiety tools identified and had adequate sensitivity and acceptable specificity when identifying GAD and anxiety disorders. Brief, self-rated, and easy-to-use tools may be the best options for anxiety disorder detection in community older adults, given resource limitations. Clinicians may consider patient comorbidities and anxiety prevalence when selecting a tool and cut-off.

Conclusions: The GAI-20, GAI-Short Form, and HADS-A tools are supported in detecting anxiety in older adults in the community. Identifying tools that are accurate and feasible for use may help clinicians select appropriate tools. Future studies with populations with clinically relevant anxiety symptoms should be conducted to establish clinical cut-offs for well-studied tools.

Addressing Stigma of Dementia During the COVID-19 Pandemic: Implications and Mitigation Strategies

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Background: Stigma of dementia is one of the greatest barriers for people living with dementia and their family care partners. Despite this knowledge, little discussion examines stigma of dementia during the COVID-19 pandemic. This presentation aims to: 1) identify the implications of dementia-related stigma during the COVID-19 pandemic; and 2) describe mitigation strategies to reduce stigma towards people living with dementia.

Methods: Guided by Arksey and O'Malley's scoping review framework and PRISMA guidelines, a review was conducted to synthesize the peer-reviewed literature from January 13, 2020 to June 30, 2023. Six electronic databases were searched including: CINAHL, EMBASE, Google Scholar, Medline, PsycINFO, and Web of Science. Article screening and data extraction were completed independently by two reviewers. Inductive thematic analysis was used to identify key themes in the literature.

Results: From the initial 278 records, fifteen articles were included in the review. The implications of dementia-related stigma consisted of four main themes: 1) ethics and human rights issues (institutional confinement, social isolation, elder abuse, restraint use, overcrowding, understaffing, and overmedication); 2) cultural inequities and racism (systematic discrimination, issues of distrust, and institutional racism); 3) inequitable access to health services and supports (ventilators, acute care, life-saving resources, and respite services); and 4) COVID-19 stereotypes of dementia (highly vulnerable, suffering in pain, and near death).

Discussion: Although articles described the implications of COVID-19 related stigma of dementia, only a few articles identified strategies to reduce stigma. More specifically, these strategies ranged from a strength-based communication strategy to a social contact intervention between nursing students and people living with dementia.

Conclusions: Further research is needed to develop, implement, and evaluate strategies to address stigma of dementia during the COVID-19 pandemic and beyond.

Supporting Early Career Faculty in Geriatrics Through a New Mentorship Model: Development, Implementation, and Evaluation

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Background: Mentorship is crucial to supporting career advancement and professional growth for early career faculty members. Partnering with an international organization, we developed the Advancing Gerontology through Exceptional Scholarship (AGES) Program as a mentorship model to advance interprofessional collaboration, team-based science, productivity, and peer support for early career faculty. Guided by our experience with the AGES program, this presentation will identify key strategies for developing, implementing, and evaluating a high-quality mentorship program in geriatrics.

Methods: After a recruitment webinar and competitive application process, 5 participants were invited into the AGES Program. Participants consisted of early career faculty from various disciplines ranging from nursing to family medicine. From November 2022 to June 2023, monthly meetings were held to provide member updates, collaboration, and guest speakers. Each member led a journal article with support from the cohort.

Results: Drawing on our experience with the AGES Program, we identified four strategies that strengthened our AGES program: 1) Partnering with mentees to identify guest speakers and mentorship topics for monthly meetings; 2) Using regular meetings, emails, and SharePoint folder to support co-authorship during conceptualization, writing, and editing stages; 3) Establishing regular check-ins and accountability measures to enhance productivity; and 4) Using multiple evaluation methods (focus group and survey) to assess the mentorship model.

Discussion: Results from the evaluation (focus group and survey) show that the AGES Program was valuable in supporting early career faculty. More specifically, results indicate that the program was perceived as promoting team-based science, peer support, and productivity.

Conclusions: The AGES program provides a useful model for strengthening mentorship, peer support, and productivity by offering co-authorship opportunities. Mentorship models and programs are crucial for nurturing new and early career faculty in geriatrics.

Cross-Sectional Survey of Continence Assessment and Management of Older Adults (≥ 65 y) at the University of Alberta Hospital

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Background: Despite a high prevalence of incontinence in hospitalized older adults, care is often poorly delivered with an emphasis on containment, not active management and care practices promoting incontinence, rather than continence. This study's aim was to investigate assessment and management practices at the University of Alberta Hospital.

Methods: This study examined continence assessment, care planning and management for acutely admitted older adults (≥ 65 y). Patient and nursing staff participated in semi-structured interviews regarding assessment, management, use of containment products, and the rates of incident incontinence. Appropriate use of pads was defined using criteria from previous work.

Results: 115 patients were approached. 38 patients and 14 nursing staff (registered nurses 64.2% (N=9), Undergraduate Nurse Educators 14.3% (N=2), Licensed practical nurses 7.2% (N=1), and Unit Managers 14.3% (N=2)) were interviewed. Mean (standard deviation) age of patients was 76.3 (7.84). Mean age of patients interviewed was 75.6 (9.41) with 57.89% (N=22) being male.

Discussion: All staff included were female, working between 1-24 years. 63.1% (N=24) of inpatients used continence aids pre-admission. 36.8% (N=14) patients using a continence aid neither had nor used them pre-admission. Inappropriate use of continence aids occurred in 39.4% (N=15) of inpatients, 48.8% (N=16) reported inappropriate use of all-in-one pads ($p < 0.001$). Staff reported little formal assessment on admission and only 2.6% (N=1) of patients recalled any assessment on initial admission. An informal, unstructured assessment was variably reported.

Conclusions: Maintenance of continence is fundamental to well-being. A lack of formal, standard assessment was associated with high levels of incident incontinence and inappropriate use of continence aids.

Continuing to Improve Quality of Care Through Patient Centred Documentation in Dementia (and Beyond)

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Background: Grand River Hospital in Kitchener, Ontario implemented an electronic medical record (EMR) in 2019. One result was a decrease in qualitative information available to clinical team members. The seniors' unit of the Specialized Mental Health Program treats complex behavioural and psychological symptoms of dementia (BPSD), necessitating qualitative descriptions of behaviour from staff. This continuous quality improvement (CQI) project followed the implementation of a patient centred charting tool to replace the EMR tool.

Methods: The new PIECES charting tool was trialled on the senior's unit of the Specialized Mental Health Program, utilizing a Plan-Do-Study-Act (PDSA) framework. A paper version of the form was implemented on the unit and semi-structured interviews carried out with staff. Qualitative analysis led to subsequent versions and PDSA cycles until the final version was built into the hospital EMR. A qualitative comparison of the data for select patients in the new and old charting tools was also completed.

Results: Chart review showed more detailed examples of patient behaviour and elaboration on mental status exams with the new tool. Three-quarters of nursing staff were interviewed and all reported satisfaction in their ability to communicate effectively using the tool. All surveyed preferred the new tool to the previous standard.

Discussion: Implementation of a charting tool allowing for easier sharing of qualitative descriptions of patient behaviour resulted in increased staff satisfaction and interprofessional communication in caring for patients with BPSD in a tertiary mental health setting. Detailed descriptions of observed BPSD as well as staff interpretations of possible triggers were some of the major benefits in comparison with the original EMR tool.

Conclusions: A CQI process resulted in the successful implementation of a patient-centred charting tool on a specialized senior's mental health unit.

Spiral Integration of Cognitive Geriatric Competencies in a Pre-Clerkship Curriculum

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Background: Delirium, dementia and depression are crucial geriatric competencies for graduating medical students. Given their cross-disciplinary nature, teaching can involve geriatricians, geriatric psychiatrists and neurologists. At the Schulich School of Medicine and Dentistry (SSMD) it was unclear who taught these competencies in the pre-clerkship curriculum and if there was spiral integration. This project aimed to map and enhance the integration of these competencies.

Methods: Learning objectives on delirium, dementia and depression in older adults in the pre-clerkship curriculum at SSMD were mapped and evaluated for redundancy and

knowledge progression with the aim of revising and strengthening the curriculum.

Results: In 2020-21, all three competencies were covered in pre-clerkship courses. Geriatric medicine introduced them in year one and geriatric psychiatry in year two, all with similar learning objectives. Recognizing content duplication, educators met to adjust the sessions. The revised approach introduced foundational knowledge in year one, followed by increasing complexity in year two. Asynchronous cases emphasizing the application and integration of prior knowledge were collaboratively developed for the Transition to Clerkship course.

Discussion: Delirium, dementia and depression competencies were taught in the SSMD pre-clerkship curriculum but without meaningful integration. Barriers to integration included a lack of communication between specialties and between courses. Bringing together educators to collaborate allowed for spiral integration and the development of unique cross-disciplinary cases.

Conclusions: Spiral integration and collaborative development of geriatric and geriatric psychiatry content across the pre-clerkship curriculum is an opportunity to build on students' prior learning and prepare them for more complex cases.

Why Community Matters: Relationships Between Social Provisions, Community Sense of Belonging, and Depression Among Older Adults in Ontario, Canada

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Background: Depression places a significant burden of illness on Ontario's older adult population and is known to be associated with many adverse health outcomes. The objective of this study was to examine the relationships between social provisions, community sense of belonging, and depression among older adults in Ontario, Canada.

Methods: We conducted multivariate linear regression analyses using Canadian Community Health Survey data to analyze the associations between social provisions, community sense of belonging, and depression (measured using the Patient Health Questionnaire-9) among Ontario residents aged 65 and older. The social provisions measure included five subscales that examined different elements of one's social resources and supports: Guidance, Social Integration, Attachment, Reassurance of Worth, and Reliable Alliance.

Results: Social provisions ($B = -0.11$, 95% CI: $-0.15, -0.06$) and sense of belonging to one's community ($B = -0.50$, 95% CI: $-0.64, -0.35$) were each significantly associated with decreased depressive symptomology in this population when controlling for confounding factors.

Discussion & Conclusion: Low social provisions and sense of belonging to one's community are associated with depression among older Ontarians. Our findings suggest the importance of and potential for community-level and structural approaches in ameliorating the burden of depression on Ontario's older adult population. One such example is the development and funding of Naturally Occurring Retirement Communities (NORCs), including the provision of services (e.g., social programming and transportation) to these communities, which has been shown to increase sense of community and belonging among residents. We call for provincial policy and funding directed at ameliorating this complex health issue.

Nutritional Status of Inpatient Older Adults and its Association with Physical and Functional Performance—Preliminary Results of a Prospective Study

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Background: Malnutrition is associated with increased in-hospital complications, prolonged length of stay and increased mortality. This study aims to characterize the nutritional status of older adults hospitalized in medical wards and examine the association between nutritional status and physical and functional performance.

Methods: Prospective cohort of adults 75 years and older admitted to Montreal General Hospital's Internal Medicine clinical teaching units were recruited. Nutritional status was assessed using 1) Global Leadership Initiative on Malnutrition (GLIM) criteria, 2) the Mini Nutritional Assessment- Short Form (MNA-SF), and 3) anthropometric measurements. Physical performance was assessed with the Short Physical Performance Battery (SPPB) and handgrip strength. Functional status was assessed using Barthel Index. All measurements were performed within 72 hours of admission.

Results: Sixteen participants, aged 84.3 ± 6.2 years (7 men and 9 women), were recruited. Baseline median clinical frailty scale 6 (moderate frailty). Among the participants, 50% met the criteria for malnutrition according to GLIM. Based on MNA-SF, 62.5% were identified as being at risk of malnutrition or malnourished, while 37.5% had low body mass index (BMI).

Discussion: Using simple assessment tools, prevalent malnutrition was observed among hospitalized older adults, correlating with diminished physical performance.

Conclusions: Incorporating easy-to-use, routine nutritional assessment tools could help identify individuals with poor

physical performance and assist in the management of high-risk inpatients.

Experiences of Managing Continence for People Living with Obesity and Incontinence

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Background: Obesity is an established risk factor for pelvic floor disorders including urinary (UI) and fecal incontinence (FI). Whereas correction of obesity can lessen the impact of UI/FI, there remains a gap in the literature regarding day-to-day experiences of people living with obesity. The objective of this study was to examine the problems individuals with obesity encounter in managing their UI/FI and how these challenges are managed.

Methods: Community dwelling participants, 18 years of age and over, who had a diagnosis of UI, FI or both and a BMI over 30 were recruited from a continence and an obesity clinic. Semi-structured interviews were conducted and analyzed using conventional content analysis approach.

Results: The participants (n=9) ranged from 66 to 90 years of age and all were females. 7 categories and 3 themes, “Health Issues”, “Self Management and Personal Adaptations”, and “Experiences with Medical Management” were identified. Compounding health issues and mobility impairment posed difficulties in the management of incontinence. Participants reported alterations to lifestyle, containment products and changed daily habits as management strategies. Varied success with medical management and frustration in navigating management or treatment for incontinence was commonly reported by participants.

Discussion: There were unique elements in managing incontinence and in the methods used for the management of incontinence in those with obesity. However, the day-to-day management and issues with containment products and experiences with medical management are shared between those with and without obesity. Due to the complexity of both conditions and their bidirectional interactions, healthcare providers must be aware of these differences when considering management strategies.

Conclusions: People living with both obesity and incontinence face unique challenges related to their management of incontinence.

Empowering and Improving the Care of Older Adults Who Are Isolated or Lonely, Through Clinical Practice Change Across Canada

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Background: In Canada, older adults are facing growing rates of social isolation and loneliness. Almost 25% of people 65 years and older reported they would like to have participated in more social activities in the past year, 19% felt a lack of companionship, while 30% were determined to be at risk of social isolation. (Angus Reid, 2019; National Seniors Council, 2014 and 2017). Social isolation and loneliness can significantly impact both physical and mental well-being. Small changes of increased social connection have been linked to improvements in physical and mental health.

Methods: The Social Isolation and Loneliness in Older Adults project has created the first Canadian social isolation and loneliness clinical guidelines that can be used by health and social service providers to support their patients and clients.

Results: The clinical guidelines will help providers recognize, assess and treat isolation and loneliness among older adults. The project will also create a variety of tools and resources to support action across health and social professional fields.

Discussion: CCSMH will conduct an interactive workshop related to the recommendations. We will be seeking insights and perspectives from participants with respect to the integration of the recommendations and knowledge translation tools into clinical practice.

Conclusions: This workshop will result in increased about the current status of clinical guidelines related to social isolation and loneliness in older adults, different approaches for implementation and how to integrate recommendations and knowledge translation tools into clinical practices.

Clinical Factors that Predict Discharge Location in Older Adults with Hip Fractures Treated at a Level 1 Trauma Center

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Background: Approximately 20% to 30% of community-dwelling Canadian seniors will experience one fall each year. With our quickly aging population in Atlantic Canada, the number of adults at risk of hip fractures is rising. The aim of this study was to investigate the clinical factors that may

predict a change in discharge location for adults 65 years and older hospitalized for hip fracture.

Methods: Using the Discharge Abstract Database, a total of 659 subjects were included in this retrospective, observational study. The sample consisted of adults 65 years and older who had an isolated hip fracture and were admitted to the Saint John Regional Hospital. Descriptive statistics were applied. Predictive clinical factors affecting discharge location were identified using binary logistic regression.

Results: The average age of the patients suffering hip fracture was 82.7 years, with the majority being female at 71.5%. The binary logistic regression model showed that there was a higher likelihood of a change in discharge location in those over 85 years of age, total length of stay greater than 10 days and presence of complications in hospital.

Discussion: The hip fracture population from this study is similar demographically to other reported hospitalized hip fracture patients in Canada with the majority of patients being over the age of 75 and female. The majority of the patients at 72.2% were admitted from a private home, but only 36.6% were discharged back home to their private residence.

Conclusions: Focusing on the key clinical factors identified may help identify those at highest risk of being discharged to alternative locations that provide higher levels of care. This could optimize the discharge planning process and lead to better patient discharge outcomes.

Perspectives on Continuing Care (Home Care to Facility-Based Living) of Persons Living with Human Immunodeficiency Virus (HIV)

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Background: With more effective antiretroviral therapies (ART) available, persons living with HIV (PLWH) are living longer. Aging PLWH, may face challenges to independent living and require additional support, yet many hesitate to accept such support. This study sought the perspectives of older PLWH towards continuing care (CC) in Alberta.

Methods: Participants were patients ≥ 50 years followed at the Southern Alberta Clinic (SAC) and recruited during routine clinic visits. We conducted a confidential online survey between April-August 2023 to better understand the experiences, barriers, and facilitators to receiving CC among older PLWH in Alberta.

Results: 187 participants completed the survey. The median age was 61.5 years (+/-8.2). Most were men (81.5%), 17.4% were women, 1.1% were Two-Spirit (Indigenous), and 0%

were transgender. 44.3% were not familiar with CC options while 7.9% reported being extremely familiar. 10.3% felt that they would benefit from outside help, however, expressed financial (54.5%), independence (28.3%), and privacy concerns (26.2%). Of the 9.6% who currently receive outside help, cleaning (70.6%), cooking (64.7%), laundry (58.8%), shopping (58.8%), driving (52.9%), medications (29.4%), and managing finances (29.4%) were the most common activities where help was provided. Nearly 64% of 187 participants expressed worry about their HIV status not being adequately kept confidential among staff and other residents of facility-based living.

Discussion: The need for CC for older PLWH will continue to grow as patients age. Participants expressed various concerns about accessing CC, indicating the need to provide educational support to decrease the knowledge gap and ensure those with lived experiences feel safe and welcomed.

Conclusions: Providing continuing care to older PLWH that incorporates the values and opinions of those with lived experienced is imperative to creating an inclusive and accessible healthcare delivery.

Exploring Cognition and Dual-task Gait Costs over 6-months in a Group of Community Dwelling Alzheimer's Disease Participants

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Background: Alzheimer's disease (AD) is a progressive neurological disorder, with cognitive decline affecting activities of daily living and gait. Walking while talking is a simple assessment to test changes in working memory. The gait differences between just walking (single-task), and walking while talking (dual-tasking) indicate the dual-task costs (DTC) to perform the concurrent verbal task. Alternatively, other more direct tests of cognitive function exist, but only provide snapshots of cognitive state. The purpose of this study is to assess the association between cognition and DTC, and any changes over 6-months

Methods: Prospective observational study of community-dwelling AD participants over 6-months. Cognitive tests included Mini Mental State Examination (MMSE), Montreal Cognitive Assessment (MoCA), and two subsets of Cognigram Cogstate Brief Battery. Gait was assessed using the GAITRite electronic walkway under single-task (ST) and dual-task conditions (DT). Spatial and temporal measures of gait were assessed as percentage change between ST and DT. DTCs were correlated with performance on cognitive assessments.

Results: Eighteen community-dwelling AD participants, evaluated at baseline, 3 and 6-months. Cognitive tests indicated cognitive impairment in all participants in all cognitive

tests. DT versus ST showed significant changes ($p < .05$) in all gait measures, including means and coefficients of variation. All these changes were associated with poorer gait kinematics. Correlations between DTC and cognitive results were inconsistent between cognitive tests, with MoCA being most correlated with DTC. No significant changes in DTC or cognition were observed over 6 months.

Discussion: DTC provides information about function independent of cognitive scores. MoCA best predicts performance while dual-task walking.

Conclusions: Individually, cognitive scores and DTC may not be sensitive enough to capture changes over 6-months, but their relationship needs further investigation for monitoring and prognosis of disease progression.

Discharge Outcomes From a Combined Acute and Reactivation Unit for Older Adults with Frailty: Does Early Admittance Make a Difference?

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Background: A team from northeastern Ontario designed a 20-bed reactivation care unit (RCU) distinct from other transitional and reactivation programs: higher medical acuity and aimed at early identification and reactivation prior to alternate level of care (ALC) designation. The RCU integrates several best practice guidelines for older adults living with or at risk of frailty. The objective is to estimate differences in discharge outcomes for individuals identified early and admitted to RCU from the emergency department (ED) compared to those transferred from other acute care units (OAU).

Methods: This observational study used program evaluation data from patients admitted to the RCU 2021-04-01 to 2022-03-31, its first full fiscal year. We used 95% confidence intervals to compare proportions (ALC designation, discharge destination) and mean length of stay (LOS; total days including OAU before and/or after RCU, ALC days) of those admitted from ED to those admitted from OAU.

Results: There were 125 individuals admitted from ED and 190 admitted from OAU, average age 83. There were no significant between-group differences in age, sex, or reason for admission. Those admitted directly from ED had a lower LOS (ED mean 13.4 days, 95% CI 11.0, 15.8; OAU mean 20.6 days, 95% CI 18.5, 22.6). Fewer were designated ALC (ED=21/125; 17%, 95% CI 10%, 23%; OAU=61/190; 32%, 95% CI 25%, 39%), or to require post-acute inpatient rehabilitation (ED=8/125; 6%, 95% CI 3%, 13%; OAU=43/190; 23%, 95% CI 17%, 29%).

Discussion: While limited by its observational design, these results support ALC leading practices focus on early identification and intervention.

Conclusions: Early admittance to geriatric-focused acute care with integrated functional reactivation may result in reduced LOS, fewer ALC designations, and a higher level of function at discharge. Further investigation is warranted.

Understanding Underdiagnosis in Dementia: How May Material Deprivation Play a Role in Quebec?

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Background: Under-diagnosis of dementia is rampant in healthcare settings, with as many as two-thirds of people with dementia going undiagnosed. Evidence consistently demonstrates that lower socioeconomic status (SES) confers greater dementia risk and that it is associated with poorer outcomes. However, few studies investigate whether one of the poorer outcomes associated with lower SES is increased risk of missed diagnoses. Large-scale research is required to understand the association between under-diagnosis and SES: in this study, we describe incident dementia across SES.

Methods: We conducted a province-wide repeated yearly cohort study (2000-17) of community-dwelling people with incident dementia in Quebec. Data were sourced from the Quebec health administrative database and SES was assessed through an ecological material deprivation index, which provided a composite measure of the level of income, employment and education of one's residential area. People were assigned to 5 material deprivation categories, from least to most deprived: we then described incident dementia cases across each of these 5 categories.

Results: Among the 193,834 community-dwelling people with a new diagnosis of dementia between 2000 and 2017, the proportion of individuals diagnosed with dementia was similar across each material deprivation category: ranging from 18-22% on average over the years.

Discussion: Improving access to diagnostic services for all can improve quality of life and care, and paint a more accurate portrayal of SES-related disparities in dementia incidence in Quebec.

Conclusions: Despite the association between higher dementia incidence and lower SES, we found similar incidence rates across SES. These findings indicate that there is likely severe under-diagnosis of dementia in more materially deprived people in Quebec.

The Consideration of Social Determinants of Health and Related Inequities in National Dementia Strategies

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Background: In response to global increases in dementia prevalence, countries are developing national strategies to address dementia as a public health priority. These plans aim to improve dementia care to meet the needs of people living with dementia and their care partners. Social determinants of health (SDH) give rise to inequities that impact care and health outcomes in dementia: despite their impact on outcomes, it is unclear whether dementia plans address SDH and to what extent. This study described whether national dementia strategies considered inequities and identified them as targets of concern.

Methods: We conducted an environmental scan: we screened strategies for eligibility and synthesised information through thematic analysis. We included accessible national-level strategies in English and French from countries that are part of the Organisation for Economic Co-operation and Development (OECD).

Results: Of the 15 dementia strategies that met inclusion criteria, 13 mentioned at least one inequity related to: Race/Ethnicity; Religion; Age; Disability; Sexual Orientation/Gender Identity; Social Class; and Rurality. Age was the most, and religion the least, frequently mentioned. 11 strategies included general inequity-focused objectives, while only 5 had specific objectives (tangible goals, deadlines, or budgets) for achieving equity-related targets.

Discussion: To reduce inequities in the care of persons with dementia, countries must not only consider inequities at a surface-level; rather, they must put forth actionable objectives that intend to lessen the impact of inequities in dementia care.

Conclusions: While most included OECD countries dementia strategies mentioned at least one inequity, few had inequity-focused objectives: only a third included tangible objectives to mitigate SDH-related inequities to ensure equitable dementia care.

Coordinating Transitions from Hospital for Older Adults with Fractures: Qualitative Results Comparing the Experiences of Patients with Patient Navigators and Those Without

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Background: Fall-related injuries such as fractures are on the rise among older adults in New Brunswick. These injuries can lead to hospitalization and adverse health effects. Moreover, transitions from acute care can be complicated and overwhelming for patients and their families. Researching patient navigators as a means of enhancing inpatient care, while also ensuring successful transitions in care for patients, may have positive impacts and help older adults successfully age in place. The overall goal of this project was to investigate the impact of patient navigators working alongside the healthcare team, as compared to the usual standard of care for adults aged 65 and older admitted with a fracture to an Orthopedic Unit at one hospital in New Brunswick.

Methods: A concurrent embedded mixed methods design, in which the quantitative randomized control trial has an embedded qualitative component, was used. The results for the interpretive description qualitative component are presented.

Results: Semi-structured interviews were conducted and thematically analysed for 28 participants who received the standard of care (SOC) and 26 patients with the patient navigator (PN) intervention. Comparison between the thematic analyses of SOC and PN groups found there was considerable consistency in the themes between groups, however the PN group had unique themes, detailing the positive impact of the PN, particularly in relation to the provision of information and support.

Discussion: This study provides a better understanding of how support from a patient navigator can have positive impacts on older adult inpatient care and patient transitions.

Conclusions: The findings will be used to inform the development of practical recommendations for policymakers and clinicians on how to enhance inpatient acute care and successful transitions for older adults.

A Qualitative Exploration of the Factors Affecting Change in Antipsychotic Medication Use in Long-term Care Homes During the COVID-19 Pandemic

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Background: The objective of this project was to understand the factors underlying changes in antipsychotic medication prescription and use during the COVID-19 pandemic.

Methods: Participants were staff at long term care (LTC) facilities in Alberta who had worked in LTC during the pandemic, stratified by change in antipsychotic usage (decreased use, no change, or increased use based on the quality indicator for potentially inappropriate antipsychotic medication use). Virtual interviews were conducted using a semi-structured guide. Qualitative framework analysis was used to deductively code the data into a matrix based on the Capability, Opportunity, Motivation–Behavior and Theoretical Domains Frameworks, which served as our lens to understand the cognitive, affective, social, and environmental factors influencing change in medication use over the pandemic.

Results: Forty-one staff members participated. Almost half (44%) worked at sites that changed their antipsychotic medication use during the pandemic. Changes to visitation policies, requirements for personal protective equipment by staff and residents, and staff shortages resulting in caregivers unfamiliar with residents were select contributors to increased medication use. The requirement for isolation, where there were fewer responsive behaviours due to decreased inter-resident interaction and stimulation, resulted in decreased use. Participants highlighted challenges in maintaining scheduled medication reviews and difficulties in communication with prescribers to reduce or remove antipsychotic medication orders. There were examples where strong leadership and early planning positively influenced site preparedness, resulting in little disruption to the usual workflow and organization of care.

Discussion: These findings highlight the factors which influenced antipsychotic medication use among LTC residents during the pandemic.

Conclusions: The findings may inform future planning or response during similar situations.

Exploring Quality of Life of Continuing Care Home Residents in Alberta: An Analysis Using Health System Governance Data

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Background: In the absence of routine measurement of quality of life (QoL) of continuing care residents in Alberta, we sought to mine existing governance data as a starting point to inform system-wide improvement activities.

Methods: We used an existing system-level governance data source, the Feedback and Concerns Tracking (FACT) database, to explore dimensions of QoL reported in concerns raised to the Patient Relations Department. All concerns related to facility-based continuing care and reported in the past 5 years were included. Data were qualitatively coded into an omnibus QoL framework developed by cross-referencing validated QoL tools (n=6) and overviews (n=2) which produced 6 primary QoL domains with 28 nested sub-domains. Data were analyzed using descriptive statistics.

Results: There were 2,947 cases included in the analysis, of which 67% were related to resident QoL. Almost half (48%) of the complainants were the adult child of the continuing care resident, while 12% of concerns were raised directly by the resident. In the primary categorization of QoL domains, 32% of concerns were related to Care Relations, 27% to the Environment, and 16% to Personhood. The sub-domains contributing the greatest number of concerns were Staff Responsiveness, Physical Safety, Physical Environment, and Physical Comfort. When considering the potential change in QoL across the study timeframe, during the COVID-19 pandemic there was an increase in the relative proportion of concerns aligned with the Social domain.

Discussion: The results of this project provide a data-informed starting place for province-wide efforts to address QoL domains in Alberta's continuing care homes.

Conclusions: This approach may serve as a model for other jurisdictions seeking to use available data to explore resident QoL.

Perceived Barriers to Aging Well in Alberta: A Provincial Patient Engagement Study

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Services, ²Imagine citizens Network, ³Provincial Seniors & Continuing Care, Alberta Health Services & University of Alberta.

Background: As part of an overarching project to identify health service quality indicators relevant to older adults from their perspective, this study aimed to examine older adult's perceptions of barriers to aging well in Alberta.

Methods: In partnership with the Imagine Citizens Network, an Alberta-based community organization, a series of qualitative semi-structured interviews explored older adults' and their caregivers' experiences to remain independent, active, and healthy in their homes and communities. Conversations included ethnoculturally diverse people, people with experiences of income insecurity, people in Northern Alberta, and residents in assisted living. Participants were recruited via social media, through the ICN newsletter, ICN partner connections and word of mouth. Interviews were transcribed verbatim, de-identified and then thematically coded and analyzed by the project team.

Results: Twenty-four one-to-one, semi-structured interviews were conducted. Participants aged between 60 – 95 years and 21 were women. Three overarching themes were identified: Ageism, Person centred care and Staying in one's own home. Subcategories consisted of Access and Equity, Confidence and Trust, Continuity of care, System navigation, Self-determination, Needs and roles of essential caregivers, an Holistic approach and Isolation. The limitations of current health service provision were poorly understood. Participants expected a comprehensive, easy to navigate equitable system.

Discussion: This patient engagement project provided insight into the current perceptions of aging well in Alberta. The need to improve access and navigation within and across services was apparent. The prominent role of ageism in healthcare was clear, as was the need for a more person-centred approach to care provision, unhindered by organizational boundaries.

Conclusions: Identification of factors older adults perceived as barriers to aging well will be able to inform service development and approach in current planning.

Drivers of COVID-19 Deaths Among Older Adults in Long-term Care

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Background: This study aimed to identify the individual, organizational, and environmental factors which contributed to COVID-19-related deaths in long-term care facilities (LTCFs).

Methods: A systematic review was conducted to summarize and synthesize empirical studies using a multi-level analysis approach to address the identified influential factors. To be included in the review, studies had to be published in peer-reviewed journals or as grey literature containing relevant statistical data. The systematic search was conducted with the collaboration of a librarian scientist using OVID MEDLINE, EMBASE, EBSCOhost CINAHL, and the Wiley Cochrane Database of Systematic Reviews (May 23, 2023). The Joanna Briggs Institute critical appraisal tool was employed to assess the methodological quality of each article included in the study.

Results: Of 2,137 citations identified after exclusions, 99 records met the inclusion criteria. The primary individual, organizational, and environmental factors frequently linked to COVID-19-related deaths encompassed the presence of comorbidities (cognitive deterioration and dementia being the most frequently observed), and male sex; low quality and performance ranking and ownership types of the LTCF, including private and for-profit, chain membership; and higher occupancy metrics and outbreaks in surrounding counties and communities, respectively.

Discussion: This systematic review identified some potentially modifiable factors associated with COVID-19 deaths in LTCF. Systematic identification of the potentially modifiable influential risk factors will allow for development of interventions to mitigate the risk of pandemic-related adverse outcomes.

Conclusions: Identification of factors associated with COVID-19 outbreaks should allow evidence informed planning for future pandemics.

DPAT: An Itemized Tool to Increase Implementation of Non-Pharmacological Strategies in the Prevention and Treatment of Delirium

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Background: Delirium is known to occur in 29-64% of older adults in hospitals. Evidence based non-pharmacological interventions were often underutilized for the management of delirium in hospitals due to practical constraints. The aim of our quality improvement project was to understand and improve factors that could increase implementation of evidence based interventions.

Methods: A root cause analysis revealed multiple factors including competing clinical priorities and eligibility limitations of the Hospital Elder Life Program. We created the Delirium Prevention and Treatment (DPAT) tool which numerically lists non-pharmacological strategies that have high utility in a hospital setting. Categories include re-orientation, sensory and communication, functional and meaningful and reminiscence. Occupational Therapists (OTs) assign activities for OT Assistants (OTAs) to complete with the patient. A voluntary survey was conducted to understand pre and post DPAT implementation of non-pharmacological interventions.

Results: OT respondents (n=14) indicated that they assigned delirium prevention/treatment programs often or always 50% of the time prior to DPAT availability and 79% of the time following availability of the DPAT. OTA respondents (n=10) indicated that they received delirium prevention/treatment programs often or always 40% of the time prior to the availability of the DPAT and 70% of the time following availability of the DPAT.

Discussion: The DPAT tool has increased the frequency and quality of OT driven non-pharmacological delirium prevention/treatment strategies at a community hospital. Feedback from the surveys will be implemented into an updated version of the tool.

Conclusions: More hospitalized individuals with delirium have had access to evidence-based, non-pharmacological delirium interventions as a result of DPAT. Use of the tool could be expanded for use in other clinical scenarios, including providing actionable guidance to formal and informal caregivers.

Engagement and Empowerment Groups for People Living with Dementia: Supporting the Development of Dementia Friendly Communities

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Background: Dementia Empowerment Groups aim to give people living with dementia (PLWD) a voice within their communities to influence the things that affect them and to support their social inclusion. Engagement and Empowerment Groups led by PLWD were formed in Hamilton and Haldimand County, Ontario. Using their collective knowledge and experience, and with full agency, they designed and implemented localized awareness and advocacy efforts as part of a Dementia Friendly Community initiative. This study, funded by the Public Health Agency of Canada, assesses group member perspectives on their involvement in this initiative.

Methods: Group members (PLWD) were invited to participate in individual interviews offered via telephone or videoconference to assess their perceptions of being a member of these Empowerment groups. Questions were asked about their satisfaction with and impacts associated with group involvement. Interviews were conducted 18 months following the creation of the groups, as they were completing their local projects.

Results: Six interviews were completed with all active group members (100% response rate). Key themes generated from the interviews indicated that group membership provided: 1. An opportunity to contribute to something meaningful; 2. Acquisition of new knowledge and skills; 3. Meaningful use of their skills; 4. Regained sense of self and self-achievement; 5. New friendships and sense of community; and 6. Reduced stigma and social isolation.

Discussion: Membership in the Engagement and Empowerment groups had a profound impact on members, increasing their engagement with their community, providing the opportunity to contribute to something perceived as meaningful, reducing their social isolation, and helping them regain their sense of self and self-worth.

Conclusions: Engagement and Empowerment groups are a powerful tool for facilitating dementia friendly communities that promote the dignity, engagement, autonomy and self-determination of PLWD.

Risk Factors Associated with Homelessness in Older Adults: A Scoping Review

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Background: Homelessness is a spectrum that ranges from a person living unsheltered to being at risk of homelessness. Homeless persons are at an increased risk of poor health outcomes. As older adults are the fastest growing users of shelter systems, we aimed to identify risk factors associated with homelessness in older adults.

Methods: We conducted a scoping review including all study designs with no language restrictions that included older adults (defined as ≥ 50 years of age), assessing a risk factor for homelessness, which we defined as absolute homelessness (i.e. living on the street) or shelter users. Two reviewers independently screened abstracts and full texts, and extracted data. We reported according to the PRISMA Extension for Scoping Reviews (OSF registration <https://doi.org/10.17605/OSF.IO/A9TPJ>).

Results: Fifty-seven studies met inclusion criteria (39 quantitative studies, 13 qualitative, 5 mixed-method) from 7589 abstracts, which included 774,575 homeless individuals. Homelessness was identified via an ICD code, emergency shelter user, or a positive screen for unstable housing. Eleven studies identified the first age of homelessness (6 studies identifying ages primarily ≥ 50). Quantitative risk factors associated with homelessness and the number of studies identifying them included: male sex (12), African-American race (11), schizophrenia/psychosis (4), depression (3), and alcohol use/dependence (7). Qualitative studies identified structural factors (e.g. lack of community resources/housing), individual circumstances (e.g. spousal loss), and social exclusion as factors associated with homelessness. Only two studies measured functional status and three studies measured gender. Two studies measured dementia as a risk factor.

Discussion: Few studies identified first age of homelessness, number of homeless episodes, gender identity, Indigenous status, diverse ethnicities, frailty, and dementia as potential risk factors for homelessness.

Conclusions: Further research is required to understand risk factors associated with homelessness in older adults.

Updated Version of the Canadian Coalition for Seniors Mental Health Clinician Pocket Card for Delirium

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Background: Delirium is an acute disturbance in attention, and reduced awareness of the environment that can last from a few hours to days, weeks, or even longer. Because of its ubiquity, clinicians without specialized training in geriatrics have to be equipped to rapidly recognize the symptoms, diagnose delirium, investigate appropriately, and manage both its symptoms and underlying cause(s). During 2023 the Canadian Coalition for Seniors Mental Health (CCSMH) collaborated with experts from various disciplines to update a clinician pocket card to support these efforts.

Methods: The CCSMH guidelines for delirium first published in 2006 formed the basis of the Clinician Pocket Card for Delirium published in 2010 that has been a widely used resource for clinicians. Based on a narrative literature review, iterative conversations about the application of current evidence to clinical settings, and consensus decision-making, the CCSMH delirium working group has created an updated pocket card.

Results: The new version of the pocket card contains DSM-5-TR diagnostic criteria including delirium subtypes and the 3D-CAM flowchart to assist clinicians with the detection of delirium. Approaches to prevention, common causes, and investigations to elicit the underlying cause(s) are listed. Proposed management strategies include treating predisposing and precipitating factors and emphasising a non-pharmacological approach to symptom management. Aside from the management of withdrawal symptoms, pharmacological interventions should be limited to: managing severe psychological distress; for essential investigations or treatment; or, imminent risk of the patient harming themselves or others.

Discussion: This resource provides accessible and current information on the diagnosis and management of delirium.

Conclusions: The pocket card will be freely available to clinicians in print at in person events, and electronic formats at <https://ccsmh.ca/areas-of-focus/delirium/> and can assist with knowledge mobilization of evidence to practice in delirium.

Patient Experiences with the BEside Reconditioning for Functional Improvements (BE-FIT) Patient-led Rehabilitation Program: A Qualitative Evaluation

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Background: Despite evidence that early post-operative mobilization reduces the risk of a myriad of complications, mobilization targets are not being met. The BEside reconditioning for Functional Improvements (BE-FIT) program, a patient-led rehabilitation program, is designed to be completed independently by patients in addition to usual care. The program was implemented on surgical units to improve mobilization. We sought to understand the patient experience.

Methods: In this qualitative descriptive study, 33 patients over 65 years (21 males) completed semi-structured interviews; 3 completed follow-up interviews. Two coders used directed content analysis based on the COM-B (capability, opportunity, and motivation) behaviour model.

Results: Capability- Patients reported the instructions were easily understood. Most patients delayed mobilization due to individual (e.g. pain, weakness) and surgical factors. Many were worried about their ability to return to their baseline function. Opportunity- Inconsistencies were noted regarding the timing and type of information given to patients. Several patients did not recall instructions after surgery and requested more guidance from the healthcare team. Patients perceived they would have done the exercises more frequently if they better understood their importance and were reminded. Some were reluctant to mobilize independently. Motivation- The majority of patients thought the program was effective and understood that exercise enhances recovery; however, many favoured walking and did not recognize the importance of multi- component exercise.

Discussion: The BE-FIT program was well received by patients. The most significant barriers relate to the timing and format of program introduction and maintenance.

Conclusions: The BE-FIT program has significant potential to help improve patients' post-operative mobilization and patient outcomes. Further work is necessary to determine the ideal time and format to deliver and reinforce the program.

Implementation of Frailty Assessment to Prospectively Adapt Acute Care: A Scoping Review

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Background: Frailty measurement is challenging to operationalize in the acute care setting and its implementation

into clinical practice has been variable. This scoping review's objective was to map out how frailty is being measured and used to adapt care in the acute care setting.

Methods: We followed Arksey and O'Malley's methodological framework for scoping reviews. We searched MEDLINE, EMBASE, CINAHL, SCOPUS, and Google Scholar from inception to May 2023 for studies measuring frailty and applying assessments prospectively in acute care. Two reviewers independently conducted screening and data abstraction. We evaluated studies for frailty assessment methodology, application to clinical care, and health-related outcomes.

Results: Of 8,834 citations, 12 met inclusion criteria. Most studies were published in the last five years (75%) and measured frailty using the Clinical Frailty Scale (67%). Frailty measurement was used to adapt care most commonly in the emergency department (58%) followed by intensive care (16%), elective surgery (8%), cardiology (8%), and general medicine (8%). Across studies, frailty assessment appeared to be feasible. Various healthcare professionals including physicians, nurses, physiotherapists, occupational therapists, and social workers conducted the frailty assessments and used the results for patient care. Frailty measurement positively impacted clinical care in most studies (83%); it improved selection of elective surgery candidates, timely access to palliative care and care in the emergency department, development of patient centered treatment recommendations, and decision-making processes for hospital admission.

Discussion: Although there is abundant evidence demonstrating that frailty is associated with adverse health outcomes, there continues to be a disproportionately low number of studies prospectively assessing outcomes of frailty assessment.

Conclusions: Frailty assessment can be successfully used to improve patient care in the acute care setting. More studies prospectively evaluating its implementation and application are needed.

Cognitive Interventions Across Healthcare Settings for Older Adults with Traumatic Brain Injury: A Scoping Review

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Background: Every year, around half a million older (≥65-year-old) Canadians sustain a traumatic brain injury (TBI), which can accelerate cognitive decline. Cognitive interventions may preserve or improve cognitive health in people with TBI, but little is known about how they are implemented and their effectiveness in a diverse population across various healthcare settings (e.g. acute care, inpatient rehabilitation and outpatient clinics).

Methods: Using JBI methods guidance, we conducted a scoping review to examine and describe cognitive interventions encompassing nonpharmacologic and pharmacologic therapies to prevent or treat cognitive issues in older adults with TBI across different healthcare settings. We searched five electronic databases from inception until March 20, 2023. Eligible studies included adults ≥60 years with TBI and at least one cognitive outcome. Two reviewers independently reviewed titles, abstracts and full-text articles and completed data abstraction, including social determinants of health (SDoH), following the PROGRESS-Plus framework.

Results: We identified 7852 citations, reviewed 333 full texts and included 14 studies with 29,422 participants. Seven studies reported baseline comorbidities, and two reported any SDoH. The mean age of participants was 64 years, and most had moderate/severe TBI (number of studies [n]=10). Studies identified ten non-pharmacologic interventions, one pharmacologic intervention, two neuromodulations and one surgical intervention from 8 countries, conducted in acute care (n=5), inpatient (n=3) and outpatient (n=3) rehabilitation, and clinics (n=3).

Discussion: The interventions with positive results on cognitive outcomes were computer-based and in-person training, olfactory training, cognitive stimulation (including reality orientation), palliative care consultation, rehabilitation program, transcranial direct stimulation and burr hole with saline irrigation. Few studies included older adults with mild/moderate TBI or from diverse ethnic/racial backgrounds.

Conclusions: More studies are needed in these populations to improve patient outcomes and equitable access to cognitive interventions.

Indigenous Health Education in Medical Residency in Canada: A Needs Assessment

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Background: A pillar of the dementia strategy for Canada envisions improving dementia care for Indigenous communities. Indigenous older adults experience poorer health outcomes compared with non-Indigenous seniors and are less likely to access mainstream healthcare. Our study assesses postgraduate medical trainees knowledge of Indigenous health and their confidence in providing culturally appropriate care.

Methods: We recruited from all postgraduate medical and surgical residency programs at a large Canadian medical school. Participants (n=52) completed an online mixed methods anonymous survey.

Results: Sixty-five percent had formal education about Indigenous health during undergraduate medical education

and only 42% during post graduate medical education. While 96% felt they had fair to very good knowledge about health disparities experienced by Indigenous peoples, fewer felt they had knowledge about historical colonial events (77%) and how these link to current barriers and disparities faced by Indigenous peoples (50%). Seventy-one percent felt neutral to not confident at all about providing culturally safe and appropriate care to Indigenous patients. Online modules were perceived to be the least effective educational modality.

Discussion: Though physicians-in-training seem knowledgeable about Indigenous health disparities, knowledge gaps remain with respect to understanding the social, economic and political determinants of health. There is a lack of training, particularly at the postgraduate level, for how physicians can address these disparities in a culturally safe and appropriate way.

Conclusions: Further work is required, within geriatric residency training to improve care for Indigenous older adults.

Virtual Supporting Healthy Ageing with Peer Education and Support (SHAPES)

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Background: As the population of older adults (OA) is rising and many age with chronic conditions, there is a need to implement measures that empower OA to self-manage their health and improve overall well-being. SHAPES is a 12-week peer-led intervention designed to empower OA to practice healthy behaviours and covers topics such as nutrition, physical activity and social engagement. SHAPES has proved effective in empowering OA to maintain healthy behaviours over a medium term. This pilot project aimed to extend the benefits of SHAPES through a virtual program and to test the feasibility and acceptance of the virtual delivery of the SHAPES program by the OA.

Methods: The 12-week program was disseminated by a peer health coach via a virtual platform. The health coach and participants took part in qualitative interviews to share their experiences regarding the program. Data was analyzed through a conventional content-analysis approach.

Results: 11 OAs with a mean age of 76 years participated. 12 categories and 3 themes of communication, relationships and accessibility were identified. Regarding the themes, barriers to virtual communication were identified. In addition, relationship building and peer connection along with the accessibility of the online format were recurrent themes brought up by participants. Participants suggested the interactive nature of sharing stories with peers positively reinforced the healthy ageing material presented.

Discussion: The virtual format makes the program accessible to older adults who otherwise would not be able to attend

in-person health education programs. The pilot program has established the feasibility and acceptability of the virtual peer education program and prompts further investigation in an adequately powered study with an appropriate sample size.

Conclusions: The virtual delivery of the SHAPES program was accessible and acceptable to OAs.

Drivers of COVID-19 Outbreaks Among Older Adults in Long-term Care

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Background: This study aimed to identify the individual, organizational, and environmental factors which contributed to COVID-19 outbreaks in long-term care facilities (LTCFs).

Methods: A systematic review was conducted to summarize and synthesize empirical studies using a multi-level analysis approach to address the identified influential factors. The systematic search was conducted with the collaboration of a librarian scientist using OVID MEDLINE, EMBASE, EBSCOhost CINAHL, and the Wiley Cochrane Database of Systematic Reviews (May 23, 2023). To be included in the review, studies had to be published in peer-reviewed journals or as grey literature containing relevant statistical data. The Joanna Briggs Institute critical appraisal tool was employed to assess the methodological quality of each article included in this study.

Results: Of 2,137 citations identified after exclusions, 99 records met the inclusion criteria. The predominant individual, organizational, and environmental factors that were most frequently associated with the COVID-19 outbreak comprised older resident age; lower quality and quality performance ranking of the LTCF, racial ethnic minorities composition, lower staffing levels; and higher occupancy metrics and co-occurrences of outbreaks in counties and communities where the LTCFs were located, respectively.

Discussion: This systematic review identified some potentially modifiable factors associated with COVID-19 outbreaks in LTCF. Systematic identification of the potentially modifiable influential risk factors for COVID-19-related outcomes will allow for development of interventions to mitigate the risk of pandemic-related adverse outcomes.

Conclusions: Identification of factors associated with COVID-19 outbreaks should allow evidence informed planning for future pandemics.

Future-Proofing the Interprofessional Geriatric Team: Enhancing Knowledge to Improve the Care of Older Adults

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Background: An aging population requires deep understanding of the needs of older adults by health and social care professionals. However, undergraduate professional education programs may lack sufficient exposure to older adult care, inadvertently contributing to gaps in care faced by this demographic. In Ontario, organizations grapple with system strains such as the overrepresentation of older adults designated as Alternative Level of Care. To respond, Provincial Geriatrics Leadership Ontario introduced the Provincial Common Orientation. This session outlines the creation of the Provincial Common Orientation, a province-wide orientation to the care of older adults designed for non-physician health and social care professionals. Emphasizing everyone's role in recognizing clinical conditions particular to older adults, the program encourages appropriate individual and team responses that integrate geriatric evidence, senior-friendly principles and individual goals.

Methods: Through standardized training, developed and delivered by Ontario's specialized geriatrics community, participants engage in an 11-week interactive learning experience. The program combines asynchronous self-study supported by a robust online platform and facilitated synchronous sessions that allow time for reflection, case studies and discussion, while forging connections to local clinical supports.

Results: Since January 2023, approximately 500 professionals from 50 organizations, representing over 15 roles, have participated. Over 90% reported heightened professional satisfaction and improved quality in the care they provide to older adult patients.

Discussion: The success of the program is attributed to learner engagement, experienced facilitators, and organizational backing. Its immersive design allows for the incubation and integration of new concepts into practice. The mix of participants from diverse roles and organizations fosters collaboration and understanding among interprofessional teams.

Conclusions: The Provincial Common Orientation effectively enhances awareness, attitudes, and skills among health and social care teams, enriching the lives of older adults in Ontario.

The Effect of the COVID-19 Pandemic on Delirium Incidence in Ontario Long-Term Care Homes: A Retrospective Cohort Study

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Background: Long-term care residents are at an increased risk of developing delirium. In 2020, the COVID-19 pandemic added complexity to the execution of evidence-based delirium strategies for this population. Research regarding the implications of the pandemic on delirium incidence has mainly focused on the hospital setting, leaving much unknown about the effect in long-term care.

Methods: This retrospective cohort study included Ontario long-term care residents without baseline delirium or severe cognitive impairment, and who had been assessed between February 1, 2019, and March 31, 2021. Data was collected from the interRAI Minimum Data Set 2.0, where the outcome of interest was development of delirium based on the delirium clinical assessment protocol.

Results: The comparison sample consisted of 63,913 residents with a delirium incidence of 3.4%, compared to a total of 54,867 residents in the pandemic sample with an incidence of 3.2% (P=0.06). Residents who were older, cognitively impaired, and increasingly frail had greater odds of developing delirium. Residents who were newly admitted (OR 0.65, 95% CI 0.60-0.71) and those dependent for activities of daily living (OR 0.46, 95% CI 0.33-0.64) had lower odds of delirium development.

Discussion: The COVID-19 pandemic did not have an effect on delirium incidence. Irrespective of COVID-19, long-term care residents who were older, frail, cognitively impaired, or had unstable health were at an increased risk of delirium development and may benefit from targeted preventative interventions. In residents newly admitted or dependent for ADLs, delirium may go unrecognized.

Conclusions: This study suggests that strategies employed in long-term care during the COVID-19 pandemic to mitigate delirium may be effective in the case of a future pandemic. Particular patient populations should continue to be identified to undergo targeted interventions to prevent delirium.

Exploring the Impact of a Curriculum-integrated partnership Between HELP and Occupational and Physical Therapy Trainees

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Background: The Hospital Elder Life Program (HELP) is an evidence-based, client-centered program where interventions are delivered by trained volunteers to prevent delirium and functional decline in hospitalized older adults. This study synthesizes outcomes of an innovative curriculum-integrated partnership between a hospital's HELP program and physical and occupational therapy trainees in a Quebec university.

Methods: Data was collected through hospital databases, course evaluations, feedback cards, reflective formative

assessments, and research projects led by physical and occupational therapy master's students. These included one scoping review, one mixed method study and two qualitative studies.

Results: In 2022-23, 187 volunteers and students participated in HELP, resulting in 473 users seen for 4994 visits averaging 34 minutes each. When compared to users of a similar profile, those in HELP had a shorter length of stay by an average of 5.5 days. Data collected through course evaluations, feedback cards and reflections highlight the benefits of the partnership to service-users, students and staff. Results of the research projects continue to inform clinical practice and innovation.

Discussion: The curriculum-integrated partnership exposed students to an acute care setting and enabled interactions with older adults early in their academic career, supporting professional identity formation and an interest in working with an older population while promoting scholarly interests in future clinicians. The support and structured interventions provided to service-users contributed to a reduced length of stay and a more positive hospital experience. These are all important findings given our increasing aging population.

Conclusions: Integrating HELP into the university curriculum of future allied-health professionals can benefit healthcare and higher education institutions, service-users, and students. Further research is needed to examine the long-term impact of such partnerships on service-user outcomes and on the development of students' professional competencies.

Use of a Conversational Chatbot Within a Team-based Primary Care Program for Older Adults

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Background: In a strained primary care system, innovative approaches to effectively care for a growing population of complex older adults are needed. We explored the effectiveness of a conversational chatbot technology as a complementary tool to traditional clinician-led multidomain geriatric assessment (primary assessment), within a team-based primary care program for older adults, called the Seniors' Community Hub (SCH).

Methods: The study used a mixed-methods approach and included older adult patients receiving care within the SCH from December 20, 2020, to August 31, 2021. Patients/caregivers were given the option of completing the primary assessment using the chatbot or over the phone with a clinician. Engagement, satisfaction, empowerment, and timeliness were evaluated using data from time trackers, patient/caregiver surveys, and a focus group.

Results: In total 45 assessments were completed using the chatbot and 57 with a clinician. The time to complete the assessment was comparable (31 minutes), and patients/

caregivers reported high satisfaction with both assessment methods. Patients found the chatbot to be useful, but it provided the most impact when coupled with a clinician follow-up. Patients with caregivers were more likely to choose the chatbot than those without a caregiver (34% vs. 9%). SCH clinicians reported increased access and time savings with the chatbot but highlighted the added work of transferring data into their electronic medical record (EMR) system.

Discussion: Integration of chatbot technology for the care of older adults dispelled some myths. Findings on caregiver preference highlighted a potential benefit of the chatbot to decrease caregiver burden and enable collaborative care. Users provided recommendations to customize technology to specific program needs and improve efficiency with EMR integration.

Conclusions: Conversational chatbot technology can be used as an effective complementary tool to traditional clinician-led geriatric assessments.

Intention to Use Medical Cannabis to Treat Chronic Musculoskeletal Pain—Results from a Questionnaire Based on the Theory of Planned Behavior

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Background: Many older adults suffer from chronic musculoskeletal (MSK) pain. Available pharmacological options not always relieve this pain sufficiently. The analgesic properties of cannabis have been known for a long time but evidence on its efficacy and safety in treating such pain remains conflicting. Moreover, there is scarce knowledge on patients' perceptions of this therapeutic option. A questionnaire study based on the Theory of Planned Behavior (TPB) aimed to quantify and explore patients' perceptions and concerns on the use of medical cannabis to treat chronic MSK pain.

Methods: A prior, qualitative, study phase used semi-structured interviews with patients in Quebec and allowed developing a questionnaire to quantify which TPB elements, together with pain and patient characteristics affect the initiation or continuous use of medical cannabis to treat chronic MSK pain. We combined validated scales/questions on pain and patient characteristics with an established TPB based strategy. The questionnaire was online across Canada in 2022 in French and English,

Results: 226 persons self-selected to complete the questionnaire and 160 could be included in final analyses. The adjusted and reduced model explained 51% of the intention to use medical cannabis to treat chronic MSK pain, through exogenous factors related to a) current pain, b) pain reduction in last 24 hour and c) prior medical cannabis use, and to a greater extent, through normative, control and behavior beliefs. Factors and beliefs affect subjective norms, perceived ability, and attitude, which in turn affect the behavioral intention.

Discussion: Despite some limitations, the results of this study are relevant for decision making regarding the use of medical cannabis to treat chronic MSK pain.

Conclusions: They allowed developing a decision box, a tool to improve shared decision making between pain patients and physicians.

Quality Improvement Evaluation of an Order Set in the Electronic Patient Record for Deprescribing Proton Pump Inhibitors (PPIs) in a Geriatric-Medicine Unit

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Background: Inappropriate PPI use can be reduced using electronic patient record (EPR), alongside patient and provider education. Pharmacists also improve the efficacy of deprescribing. This is an evaluation of an order set including a deprescribing algorithm, prescriber guideline and patient handout in the EPR, facilitated by pharmacy team members in a hospital setting.

Methods: This is a single center study with retrospective design for baseline data collection, and prospective design for post-intervention. Baseline deprescribing rate was calculated between September 2021 and March 2021. For inclusion, patients had to be on medicine-geriatric unit and have PPI prescribed for at least 4 weeks. Between June 2022 and June 2023, two months after launching the order set in the EPR, a pharmacy team member screened patients on the medicine-geriatric unit on a PPI for at least 4 weeks. If appropriate and after discussion with prescriber, the PPI was deprescribed using the order set. The primary outcome was PPI deprescribing (PPI discontinued or dose reduced).

Results: Baseline PPI deprescribing rate was 16% (n=9) for total n= 55 (mean age 80 years); forty-four percent (44 %, n=4) had PPI dose reduced and 56% (n=5) had PPI discontinued. Post-intervention deprescribing rate was 33% (n=31) for total n=93 (mean age 79 years); thirty-two percent (32%, n=10) had PPI dose reduced and 68% (n=21) had PPI discontinued. Sixty-one percent (61%, n=19) were deprescribed using the order set. A Chi-square test showed significant increase in PPI deprescribing post-intervention ($X^2(1, n=148) = 5.0463, p = .025$).

Discussion: The pandemic likely affected deprescribing rate at baseline. Prescribers need education to encourage use of order set.

Conclusions: There was significant increase in PPI deprescribing after the implementation of the order set, facilitated by pharmacy team members.

Person-centred language for responsive behaviours associated with dementia: the Power of Words

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Background: The language acute care providers use to describe behaviours associated with dementia is often vague and can be stigmatizing. Words such as 'agitated' or 'aggressive' can influence care and become an enduring part of the health record. Objective: To increase the use of PCL acute hospital staff caring for older adults with behaviours.

Methods: An interprofessional team used a hub and spoke model to coach and educate staff. This was supported by enabling resources, sustainability planning and engagement of senior leadership. Charts for older patients at risk of responsive behaviours due to dementia were audited for non-PCL/PCL language pre- and post-intervention. Staff were surveyed for attitude and knowledge.

Results: 7038 staff were reached through education and coaching. 83 executives and managers were engaged. Baseline chart audit showed that 57.5% of occurrences of non-PCL had no accompanying descriptions of behaviour. The most commonly used non-PCL words were "confused" (54.13%), "agitated" (32.64%), and "aggressive" (7.56%). Post-intervention, the rate of non-PCL use decreased by 10%, 5%, and 12% at the three sites. The proportion of staff who felt confident using PCL, and could correctly identify PCL phrases increased from pre- to post-intervention ($p < .001$). 87.9% of staff surveyed plan to make changes to their practice after the PCL intervention.

Discussion: Person-centred language (PCL) that is objective, specific and respectful can enable more effective caregiving. The lack of specific descriptions of behaviours hinders our understanding that behaviours may be a response to inner or external stimuli. PCL can help combat unconscious bias toward older adults and people with dementia.

Conclusions: This knowledge-to-practice intervention improved the use of PCL related to responsive behaviours in three acute hospitals. Innovative enabling resources and sustainability plans are available to support spread.

Electronic Decision Support for Deprescribing in Older Adults Living in Nursing Homes: A Controlled Prospective Trial

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Background: Polypharmacy is common, harmful, and pervasive among residents of long term care (LTC). Deprescribing potentially inappropriate medications (PIMs) is a potential solution. Electronic decision support may help overcome some of the barriers.

Methods: This prospective, controlled trial took place in 5 LTC homes (3 clusters) in NB, Canada. Each cluster spent 3 months in a control phase and then every 3 months was randomly assigned to enter the intervention phase (total study duration: 12 months). The intervention was an electronically generated individualized report from the software MedSafer, with prioritized opportunities for deprescribing, paired with usual care (quarterly medication reviews [QMRs]). Reports were visualized in the Deprescribing App. Multivariable logistic regression was performed to evaluate the effect of the intervention adjusted for fixed effect of the study site, age, sex, and repeated measurements.

Results: A total of 743 residents (median age 84; IQR 14; 64.9% female) had one or more PIMs (median number of PIMs 3; IQR 2); 728 survived 3 months and were exposed to at least one QMR (usual care); 616 survived more than 3 months and were exposed to at least 1 QMR paired with the intervention. After adjustment, having one or more PIMs deprescribed was more common in the intervention than the control group (OR 3.56; 95% CI 2.72-4.67).

Discussion: In this large controlled trial of electronic decision support in LTC, we increased deprescribing compared to usual care. While the study had limitations (it lacked individual participant randomization), it was likely effective. Interventions that render the deprescribing process more feasible and scaleable, are needed.

Conclusions: Pairing deprescribing with QMRs in LTC should be standard of care. Future studies should examine the cost-effectiveness of electronic decision support for deprescribing in LTC.

Walking in Wet Pads: A Clinical Investigation on the Changes in Gait Variables Caused by Walking in Soaked Continence Containment Products in Older Women

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Background: Urinary incontinence (UI), particularly urgency incontinence, is associated with changes in gait and increased

fall risk. Walking in wet pads may introduce a mechanical factor influencing gait. This study aimed to examine potential changes in gait patterns associated with the wearing of saturated pads.

Methods: This exploratory cross-over study recruited women over 60 years of age with or without UI. Participants wore a validated Kinesis Gait analysis apparatus whilst wearing wet and dry pull-ups or briefs. Using a standardized protocol, all wet products were soaked with water to 70% capacity. Participants performed a timed up-and-go test over a 3-meter and a 10-meter distance. Gait variables in each state were compared.

Results: 10 women participated (mean age 75.1 years, SD 7.1; range 65-87 years-old). Trends in gait variability (GV), stride velocity variability (SVV), stride time variability (STV), and cadence between the “wet” and “dry” states were observed. Wet briefs were associated with the highest mean GV, SVV, and STV scores. Mean cadence had lower scores in “wet” pads, reaching the lowest score in the wet brief condition. Using the effect size for GV in wet compared to dry briefs, 95 women would be needed for an adequately powered study

Discussion: Consistent changes in gait patterns suggest that walking in wet pads could act as a risk factor for falls. Walking in a soaked brief with tapes, rather than a pull-up style brief, appeared to have the greatest impact. This exploratory study prompts further investigation in an adequately powered study with an appropriate sample size.

Conclusions: Consistent changes in gait patterns were observed when walking in soaked pads.

Frontline Staff Perceptions of the BEside Reconditioning for Functional Improvements (BE-FIT) Patient-led Rehabilitation Program

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Background: Post-operative mobilization is a foundational nursing intervention but is not always done due to competing challenges (e.g. staffing, patient acuity). The BEside reconditioning for Functional Improvements (BE-FIT) program is a patient exercise program that is provided and reinforced by the frontline healthcare team. The BE-FIT program was implemented in surgical units to improve post-surgical mobilization. In this study, we explored the perspectives of healthcare staff.

Methods: Semi-structured interviews were completed with 13 healthcare staff (5 Nurse Managers, 3 Nurse Educators, 1 Licensed Practical Nurse, 2 Registered Nurses, 1 Health Care Aide, 1 Unit Clerk). Two researchers inductively content analyzed the data.

Results: All participants recognized that the BE-FIT program could contribute to improved patient outcomes. Staff reported

that they had to use frequent visual and verbal reminders to implement the program. Many felt the phrasing used contributed to engagement. Several stated more visual cues were needed to prompt patients and staff. Nurses perceived that their time spent in educating and cueing patients was undervalued. Some reported that designating a champion to deliver the program would improve implementation. It was also thought that involving all healthcare providers and family members would be of benefit.

Discussion: All frontline staff recognized the importance of the BE-FIT program to augment current practice. They reported several challenges that can be categorized in 3 domains of change, including the need for 1) universal involvement of the entire healthcare team, 2) multicomponent reminders for patients and staff, and 3) reframing vocabulary used to promote BE-FIT.

Conclusions: The BE-FIT program is a valued resource to help improve post-operative mobilization. Frontline perspectives gained from this study will result in more resources and adjustments to implementation to improve utilization.

Healthcare Providers' Perspectives on Using the Driving and Dementia Roadmap

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Background: To address the gap in accessible resources to support people with dementia, family/friend carers as well as healthcare provider (HCPs), we developed a web-based resource/toolkit called the Driving and Dementia Roadmap (DDR) (www.drivinganddementia.ca). To ensure the sustainability and scale up of the DDR, we are exploring its acceptability, appropriateness and impact on how users manage driving cessation. In this poster, we report on early survey results of HCPs' perspectives of using the DDR.

Methods: All DDR users are invited to participate in a short online survey via a pop-up message. In the HCP survey, questions include participants perceptions about knowledge gained, changes in confidence, as well as their satisfaction with the DDR. A descriptive summary of survey responses to date was conducted.

Results: Twenty-seven healthcare/service providers (5 nursing professionals, 8 occupational therapists, 4 geriatricians, 2 family physicians, 2 Alzheimer Society staff, 2 social workers, 1 administrator and 3 non-disclosed) completed the survey. As a result of using the DDR, 44% of participants reported increased gains in "new knowledge" and 67% reported "somewhat" to "much more confidence" in having conversations about and managing the emotional impact of stopping to drive. The majority of participants (74%–85%) indicated being "satisfied" to "very satisfied" with all aspects of the DDR (e.g., usefulness, comprehensiveness, navigation, meeting their knowledge needs).

Discussion: Next steps will involve in-depth interviews with HCPs to further explore how they experience the DDR and its impact on their practice.

Conclusions: Early survey results indicate that the DDR is an acceptable and appropriate resource for HCPs, effectively meeting their knowledge needs in regards to driving cessation and dementia.

Knowledge, Training, Skills, and Current Attitudes of Care Aides Providing Continence Care to Older Residents in Continuing Care: A Scoping Review

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Background: Urinary and fecal incontinence affect over 50% of older adults living in care facilities. Care aides (CA), despite providing the majority of direct care, have the least amount of education, training, and authority in care. This scoping review aimed to examine existing evidence on the attitudes, knowledge, training, and skills of CA providing continence care to older residents in continuing care.

Methods: This review used the Joanna Briggs Institute (JBI) method for scoping reviews. We included all sources of evidence. Evidence sources including informal caregivers or from acute care were excluded. We used JBI's three-step search strategy, which included a preliminary search of Medline, a comprehensive database search (OVID MEDLINE, EMBASE, EBSCOhost, CINAHL), a search of reference lists of studies selected for full-text review, and grey literature. Two independent reviewers screened, selected, and extracted data from relevant literature.

Results: 11 studies (4 qualitative, 4 quantitative, and 3 mixed methods studies) were included in the final data analysis. 5/11 and 4/11 of these studies reported findings from North America and Asia, respectively. CA received the least training, education and had lower levels of knowledge about incontinence compared to regulated healthcare staff (nurses, licensed practical nurses). However, they had more positive attitudes towards continence care and were willing to participate in further training and education opportunities about incontinence. There are few data on care aide skills in continence care delivery.

Discussion: The evidence from this review indicates a need for education and training of CA in continence care. CA's positive attitudes to care may be employed to improve care in this under-recognized area of need.

Conclusions: There remains an education and training gap in continence care delivered by CA for older care home residents.

Supporting Older Indigenous People with Experiences of Homelessness in Calgary: Guidance from People with Lived Experience and Service Providers

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Background: Disproportionate and growing numbers of Indigenous (First Nations, Métis, and Inuit) older people are experiencing homelessness in Calgary. Intersecting structural drivers contribute to experiences of homelessness, challenges with mental and physical health, and substance use. This community-based participatory study's aim was to identify needs related to housing and substance use with Indigenous older people in Calgary.

Methods: Interviews were conducted with Indigenous older people with experiences of homelessness (n=5) and their service providers with knowledge of affordable supportive housing (n=12). Thematic analysis was authenticated with local Elders and Knowledge Keepers.

Results: Three themes were identified including the need for: 1. Opportunities to (re-)connect with Indigenous culture and traditional ways of being; 2. Indigenous-specific, low-barrier, supportive housing, informed by Indigenous harm reduction methodologies; and 3. Culturally safe, trauma-informed, and healing-centred services.

Discussion: Five recommendations to guide responses to the housing and substance use needs of Indigenous older people with experience of homelessness in Calgary include: 1. Ensuring access to culturally safe, affordable, and accessible housing; 2. Service providers facilitating access to Elders and Knowledge Keepers; 3. Enhancing Indigenous-led collaboration across sectors (healthcare, social services), not-for-profit agencies, and all levels of government; 4. Creation of sustainable funding streams for organizations working with Indigenous older people experiencing homelessness, to retain critical service and health providers; and 5. Respecting personal autonomy, including actively involving Indigenous older people in decisions relating to the direction of their own care and housing, as well as influencing system change.

Conclusions: This research provides insight into the housing and support needs for Indigenous older people with experiences of homelessness and substance use. This study affirms the need for Indigenous-led accessible housing, responsive to individual's unique housing, social, cultural, and healthcare needs.

Responding to Older Adult Homelessness: Co-design and Evaluation of Therapeutic Recreation Programming in Harm Reduction Supportive Housing

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Background: Mental and physical ill-health, substance use, frailty, and prolonged social exclusion while homeless, collectively threaten housing stability for older adults who are re-housed in permanent supportive housing (PSH). Strategies to sustain housing after homelessness in older adults are understudied. This study evaluated the impact of co-designing, implementing, and participating in therapeutic recreation programming for older adults (>55 years) and their care providers in PSH.

Methods: A mixed method participatory action research study, set in a PSH site (68 beds) with harm reduction programming for older people. Residents, staff and researchers collaborated in developing recreation programming between 2019-2022. Data collected: participant demographics, co-design meeting notes, program participation rates, goal-setting behaviours, resident quality of life (WHOQOL-Age; EQ-5D, EQ-VAS) at baseline and 18 months, and qualitative interviews with residents (n=19) and staff (n=20). Informed by theories of social capital, qualitative data were analyzed thematically and quantitative data reported descriptively.

Results: A resident advisory team ('The Exchange') guided program development and evaluation over 25 meetings. Recreation program participation was high (90%, n=61 residents) and residents identified 253 goals (social goals dominated). Individual EQ-5D domains worsened but EQ-VAS and WHOQOL-Age scores improved. Residents reported learning new skills and building a sense of connection. Staff described increasing understanding of residents' choices and behaviours.

Discussion: Co-designing and implementing recreation programming increased community connectivity, creating social and skill-building opportunities. Trust-building and relationship nurturing were central to project success, fostered by prioritizing recreation activities, connection, and community-building. A relational model of care was foundational to promoting health education, physical and mental wellness activities, substance use awareness and harm reduction.

Conclusions: Collaboratively and purposefully instigating social integration is central to supporting older adults with experiences of homelessness and complex needs in PSH.

A Cross-sectional Survey of Depression Screening Practices of Healthcare Workers in Eleven Residential Aged Care Facilities in Calgary, Alberta

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Background: Depression is three to four times more prevalent in residential aged care facility (RACF) dwellers than elderly living in their own homes. Depression was expected to rank number two in the global burden of illness by 2020, and the Canadian elderly population quadruple by 2031, making it a public health issue. Moreover, the physical and emotional alterations and economic burden associated with it are significant. Study Aim: To evaluate and compare healthcare workers (HCW) depression screening practices in RACF in Calgary, Canada.

Methods: Study design was quantitative cross-sectional survey with 650 eligible RACF HCW invited to participate via email containing link to online survey (or paper version). Calculated sample size was 249 with 143 respondents. SPSS was utilized for descriptive, bivariate and multinomial regression data analysis. 95% confidence interval and p-value.

Results: 56.6% respondents 'Always or Regularly screened for depression while 43.4% were inconsistent or did not screen at all. Also, 80% reported willingness to screen for depression, with a preference for shorter depression screening questionnaires. Additionally, Registered Nurses more frequently assessed depression than General Practitioners or Licensed Practical Nurses. Screening tool variability showed higher MDS-DRS utilization followed by formal questionnaire (n= 56, 38.4% vs.30.1%, n= 44). Furthermore, 57% (n=77) respondents reported Geriatric mental health team was the most appropriate service to deal with depression.

Discussion: Despite HCW willingness to screen for depression in RACF, inadequate time and training were barriers. Hence, mandatory depression screening training, with time allocated for assessments, are recommendations. Additionally, a consistent and clear referral pathway for elderly residents meeting depression criteria is crucial.

Conclusions: Addressing depression in elderly residents narrows inequity gap and makes economic sense.

Feasibility and Reliability of Chirp Artificial Intelligence Technology at Home

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Background: Chirp privacy-preserving radar sensors use artificial intelligence (AI) algorithms to continuously monitor

older adults' safety and mobility at home without cameras or wearables. The Fit between Individuals, Task, and Technology (FITT) framework was used to explore the feasibility and reliability of Chirp at home.

Methods: We recruited older adults (aged 60+) with frailty (FRAIL Scale Score >3) who lived in the community alone and had access to a smartphone or tablet with wireless internet. The study included a 1-hour clinical assessment visit at a hospital research centre and 14-day continuous Chirp monitoring in participants homes. Feasibility considered the installation success rate (user-oriented) and the technologies uninterrupted data capture capability across different rooms. Reliability was evaluated by measuring walking speed consistency between days 1-7 (week 1) and days 8-14 (week 2).

Results: Out of 35 participants (aged: 75.49(6.65), range: 60-89, 86% female) setting up Chirp devices, 60% successfully completed the setup, 26% could not recall home Wi-Fi or app store passwords, 6% had concerns about installation (using command strips on wallpaper), 6% lost interest, and 3% had unexpected surgery. Chirp maintained uninterrupted 24-hour monitoring in all homes. Analysis of 23,078 walks across 21 homes over 14 days demonstrated Chirps remarkable consistency in measuring walking speed between weeks, with excellent test-retest inter-device reliability (ICC(2,1)=0.926, 95% CI: 0.875-0.956).

Discussion: Overall, this study provides evidence that Chirp is a feasible and reliable AI technology at home.

Conclusions: This technology may be beneficial for older adults with frailty, concerns about declining mobility or fear of falling to age in place.

iTrain My Brain: A Pilot Study Evaluating the Effects of Multiple-object Tracking Training on Older Adults' Cognitive-motor Dual-task Performance

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Background: Many everyday activities involve processing visual scenes with multiple moving objects (e.g., pedestrians, cars) while walking or balancing (i.e., dual-tasking). Such divided attention poses a challenge for older adults due to age-related declines in attentional capacity and the need to compensate for vision and hearing loss. The use of multiple-object tracking (MOT) as a cognitive training tool has shown to improve older adults' dynamic attention (Legault *et al.*, 2012), but its impact on mobility is unknown. Seated executive function training can enhance dual-task mobility (Li *et al.*, 2010; Verghese *et al.*, 2010) but it remains unclear whether cognitive training administered in a cognitive-motor format is even more effective at improving mobility. In this

pilot study, we examined the effects of single versus dual-task MOT training on older adults' cognitive-motor dual-task performance.

Methods: Older adults (Mean age = 71.07, SD = 5.25 yr., 67% female) with and without hearing loss completed 12 MOT sessions (~20 min./session) over 4 weeks at home after being randomized to train while seated (n = 14) or standing (n = 13). At pre- and post- training, they completed tests of cognition (backwards counting, audiovisual working memory), gait mat walking and dual-tasking (walking and counting).

Results: Both training groups demonstrated improved dual-task gait velocity and cadence, single-task backwards counting, and single-task gait velocity. Training gains did not differ based on hearing acuity.

Discussion: Our results demonstrate the feasibility of MOT training in older adults' homes and provide evidence that MOT targets attentional resource allocation that transfers to improvements in cognitive-motor dual-tasking.

Conclusions: MOT training can be used as a cognitive-motor enrichment tool in older adults' homes. Future directions involve the inclusion of a larger sample and active control group.

Factors Underlying Choice and Change of Continence Containment Products in Women with Urinary Incontinence

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Background: Urinary incontinence (UI) is a common condition in women. For up to 77% of women, continence containment products remain a staple of day-to-day management. Despite the frequency of their use, there is limited research into the factors underlying women's satisfaction with containment products, choices of products and what motivates when to change them. We investigated these factors.

Methods: Women 65 and older with UI and using an incontinence product were recruited from the community. Participants kept a 3 day bladder diary and recorded reasons for each change for a period of 3 days following which, semi-structured qualitative interviews were conducted. Interviews were transcribed verbatim and were analysed using a conventional content analysis approach.

Results: Ten women ages 65-95 participated. Seven categories and 3 themes, "Product factors", "Lifestyle" and "UI and other health factors" were identified. Product factors such as wetness, heaviness and pad properties, lifestyle-related factors such as routines and activities, and UI type and severity, medications and other medical conditions were mentioned as reasons for pad change.

Discussion: Participants changed their containment products because of reasons unique to them. Lifestyle factors, type

of UI and factors related to the absorbent products (e.g. pad odour, heaviness, and cost) were frequently mentioned by participants. Pads were frequently changed at wetness far below advertised capacity.

Conclusions: Women using UI containment products appear to "overuse" pads and may benefit from more individualised education and support in usage.

Barriers and Facilitators to Pre-Operative Comprehensive Geriatric Assessments of Older Adults Undergoing Surgery: A Semi-Structured Interview Study of Health Care Provider Perspectives

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Background: Comprehensive geriatric assessments (CGA) improve outcomes of older adults undergoing surgery. However, few older adults receive CGA before surgery. We aim to describe the barriers and facilitators to implementation of pre-operative CGA.

Methods: Using the integrated knowledge translation approach and theoretical domains framework (TDF), we conducted semi-structured interviews of health care providers (HCP) of older adults undergoing non-cardiac surgery. We analyzed data in two stages: framework analysis and deductive coding to the TDF that links to the Behavior Change Wheel (BCW) to identify interventions that can address barriers to implementation.

Results: We included 5 geriatricians, 11 surgeons, and 5 internal medicine specialists. We identified eight themes: knowledge of geriatric preoperative care, value of preoperative CGA, complexity of surgical decision making for older adults, impact of frailty on surgical decision making, uncertain criteria for preoperative CGA, uncertain expectations from preoperative CGA, impact of clinic and surgical booking processes on integration of preoperative CGA, and impact of additional assessments on preoperative CGA uptake. Further, codes were assigned to a domain within the TDF, and we identified knowledge, beliefs in consequences, goals, memory, attention and decision processes, and environmental context and resources as key barriers and facilitators.

Discussion: Geriatricians, surgeons, and internal medicine specialists see value in preoperative CGA, but the challenge in identifying appropriate patients for preoperative CGA in surgical clinics is a key barrier to implementation. Additional assessments, role overlap with Internal Medicine, risk of canceling surgery, and lack of clear expectations from geriatric assessments were other identified barriers.

Conclusions: HCPs of older adults undergoing surgery believe there is a role for preoperative CGA. Next steps include using the BCW to identify and select interventions that will address the above barriers to support implementation.

Prioritization of Post-operative Outcomes from the Perspective of Health Care Providers: A Cross-Sectional Survey

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Background: Older adults face increased vulnerability to postoperative complications compared to younger adults due to increased prevalence of geriatric syndromes, such as frailty. As a result, older adults are faced with difficult decisions when balancing risks and benefits of surgery. To improve informed surgical decision making, we must evaluate surgical outcomes that matter most to health care providers, patients, and their care-partners. However, there is little known about what these outcomes are so that they can be evaluated in future research.

Methods: We distributed an online survey to key health care providers of older adults undergoing surgery where participants ranked pre-determined post-operative outcomes from most important to least important. There were 14 system-based outcomes and 15 patient-centred outcomes. Outcomes were obtained from the literature and expert opinion.

Results: Seventy-five participants responded to the survey, which included medicine-based specialists (n=10), anesthesiologists (n=5), surgeons (n=15), allied health/nurses (n=30), and nurse practitioners/clinician nurse specialists (n=15). The top two ranked system-based outcomes were risk of death (30%) and discharge home (21%), and the top two ranked patient-centred outcomes were quality of life (57%) and functional trajectory (29%). There was variation in prioritized outcomes by health care provider subgroup.

Discussion: System-based outcomes valued most by health care providers are routinely evaluated in current literature; however, outcomes of post-operative quality of life and functional trajectory are under-evaluated and should be incorporated in future perioperative care research to ensure we are properly evaluating the success of surgery.

Conclusions: Future perioperative research needs to incorporate more patient-centre outcomes, specifically outcomes of quality of life and functional trajectory after surgery, to help improve surgical decision making of older adults undergoing surgery.

Predictors of Successful Inpatient Rehabilitation Among Frail Geriatric Patients: A Retrospective Chart Review

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Background: Geriatric rehabilitation aims to optimize the medical, psychosocial and functional abilities of older adults. Rehabilitation may improve the quality of life for both patients and caregivers, reduce mortality and decrease the likelihood of nursing home placement. Understanding the factors associated with reduced progress in rehabilitation and the need for placement is essential for program optimization.

Methods: A chart review was completed with the Geriatric Program at the Glenrose Rehabilitation Hospital. Data extraction included demographic variables, Charlson Comorbidity Index, Edmonton Frail Scale (EFS), cognitive testing and physical therapy outcomes including the Berg Balance Score, gait velocity and two-minute walk test. Univariate analyses and logistic regression using a backward elimination were used to explore variables associated with successful discharge home.

Results: A random selection of 321 charts was reviewed. The mean age was 78.4 (SD=6.7) and 48.9% of individuals were female. The mean length of stay was 43.2 days. In total, 89.7% completed their rehabilitation program, 7.8% required readmission to acute care and 2.5% left against medical advice. Compared to individuals who were discharged home, those who required placement were significantly older (81.0 vs. 78.0, p=0.03), had higher rates of dementia (92.3% vs. 33.9%, p<0.01) and depression (73.9% vs. 48.3%, p=0.02), lower Berg Balance Scores at discharge (29.2 vs. 41.7, p<0.01), increased frailty (EFS of 11.1 vs. 8.2, p<0.01) and more medical comorbidities (6.9 vs. 5.7, p=0.01). Logistic regression found that dementia and the Berg Balance score were significantly associated with placement (p<0.001 and p<0.01, respectively).

Discussion: Significant factors that influenced the outcomes of rehabilitation included the presence of dementia, depression, physical frailty, and medical comorbidities.

Conclusions: Continued understanding of both modifiable and non-modifiable factors affecting progress in rehabilitation is needed.

Identifying pre-, post-, and in-Hospital Utilization of Benzodiazepine Receptor Agonists in Older Adults Admitted to Alberta Acute Care Facilities (ID BZRA)

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Background: Guidelines recommend avoiding or limiting use of benzodiazepine receptor agonists (BZRA) due to risks such as sedation and falls. Hospital admission has been associated with changes in medications however there is a paucity of data regarding BZRA utilization in hospitalized older adults. Objective: Describe the pre-, post-, and in-hospitalization

dispensations of oral and sublingual BZRA in adults 65 and older admitted to hospital in Alberta.

Methods: A retrospective administrative data cohort study was done to evaluate pre-, post-, and in-hospitalization dispensations of BZRA in hospitalized adults 65 years or older in Alberta, Canada. The primary outcome was the proportion of patients with newly prescribed, changed, continued, or discontinued BZRA during hospitalization and 90 days post-hospitalization.

Results: Of 39224 patients, 12.6% filled a BZRA pre-hospitalization, 14.2% during hospitalization, and 14.0% post-hospitalization. Pre-hospitalization, 4.4% of patients filled a BZD, 3.7% during hospitalization, and 4.7% post-hospitalization. For Z-drugs, 9.0%, 11.4% and 10.2% filled a Z-drug pre-, during and post-hospitalization, respectively.

Discussion: Hospitalization may be a setting where there is opportunity to address prescribing of sedative hypnotics, with a focus on discharge medication review or deprescribing strategies.

Conclusions: This study suggests that overall the number of patients who filled a BZRA increased from pre-hospitalization to post-hospitalization.

Evaluation of Pharmacist Care Plans—Do they Reduce Benzodiazepine and Benzodiazepine-related Drug Use in Alberta?

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Background: Benzodiazepine receptor agonists (BZRA, benzodiazepines and z-drugs), are potentially inappropriate medications (PIMs) due to risk. In Alberta there is a pharmacy billing code for a medication review, Comprehensive Annual Care plan (CACP). The purpose of our research was to evaluate any changes to BZRA after a CACP.

Methods: Administrative data was used to identify older adults who had a BZRA dispensed and had received a CACP. Control patients were those who had the same characteristics but without a CACP. A controlled interrupted time series analysis was conducted comparing the CACP to non-CACP group for BZRA use before and after the CACP.

Results: We identified 137,178 CACP cases and 241,658 matched controls. There was no significant difference seen in the proportion of BZRA users in the month following CACP. However, a significant change in users month-to-month was seen in the 12 months following a CACP (-8.8 users per 10,000 patients; $P < 0.01$). In patients age 18-64 years, an absolute overall reduction of 86.8 per 10,000 patients in BZRA use was observed 12 months after CACP (-86.8 per 10,000 patients; 95% CI: -95.3 to -78.3). Comparatively, patients 65-74 did not have any absolute changes in use 12 months after CACP (89.9 per 10,000 patients), while patients ≥ 75 years had a significant

increase in absolute use after CACP (55.6 per 10,000 patients, 95% CI: 6.2 to 105.0 per 10,000 patients)

Discussion: Medication reviews may have other benefits, and some older adults may have legitimate indications for long-term use of a BZRA, but increased use after a review remains a concern.

Conclusions: The pharmacist care plans conducted in Alberta pharmacies are not associated with a reduction in BZRA use in older adults.

Retrospective Chart Review to Assess Appropriate Prescribing of Medications: A Quality Improvement Educational Project

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Background: Polypharmacy is a growing global issue, increasing the risk of adverse drug events. Deprescribing is a crucial practice that addresses this concern, involving the reduction or cessation of medications that cease to provide benefit. Medication review is a structured process, encompassing careful medication evaluation to optimize pharmacological management. To understand the current prescribing practices, we conducted a retrospective chart audit focused on quarterly medication reviews of long stay patients at Baycrest.

Methods: A retrospective chart review was conducted for 30 randomly selected Complex Continuing Care patients from 2015-2018 with stay > 180 days. Exclusion criteria:

Results: Average age: 76 years, 63% males and 37% females, case mix index: 1.2, all patients had multi-morbidity, mean number of prescribed scheduled meds: 12.4(5.1), PRN meds: 5.4(1.7). The needs assessment revealed 95% had 3 completed medication reviews of which 68% of medications had an indication identified; patient GOC identified in 57%, calculation of life expectancy in 0%, with no standardized assessment tool used. Only high-risk medications such as benzodiazepines and antipsychotics without indication were deprescribed quickly, with under-prescribing being very low.

Discussion: The findings from this retrospective chart review highlight current gaps in utilization of standardized screening tools and the need for more routine, comprehensive medication assessments for older patients.

Conclusions: These results reinforce the importance of structured medication reviews as a critical component of patient care and will inform the development of an educational program to promote safe, appropriate prescribing practices amongst healthcare providers.

A Qualitative study on Caregiver Stress amongst Immigrant Tamil Caregivers of Patients with Dementia(PWD)

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Background: Dementia care is complicated by the cultural diversity of patients and their informal caregivers. According to 2021 Statistics Canada report, over 152,850 Tamil immigrants call Canada their home. In this community, family caregiving for PWD is often preferred despite high caregiver stress. The purpose of this study was to understand the impacts of caregiving on Tamil family caregivers of PWD, identify the factors influencing caregiver stress and assess the barriers and facilitators to accessing support services.

Methods: 15 caregivers were recruited using purposive sampling in the Greater Toronto Area. Virtual, semi-structured individual interviews were conducted for all caregivers until saturation was reached, from May–Aug 2022. Interviews were transcribed, translated as needed, coded using an inductive deductive approach and thematically analyzed. We also quantified caregiver stress using the Kingston Caregiver Stress Scale (KCSS). We used descriptive statistics for KCSS scores and demographic information.

Results: 2/3 of the caregivers were females, 50% of them daughters of PWD. Caregivers' ages ranged from 31 to 80 years; most common age group was 41 to 50 years. Five primary themes were identified: motivations for informal caregiving, division of caregiving duties, daily caregiving stressors, impacts on caregiver's lifestyle and barriers and facilitators to accessing timely support services. Mean KCSS score was 25.4, indicating severe caregiver stress.

Discussion: This study identified significant caregiver stress amongst the family caregivers impacting the social, psychological, and physical well-being. Timely support is not accessed due to systemic, cultural, societal, and language barriers. We also identified community relations, caregiver education, and culturally tailored care as positive influences on these caregivers.

Conclusions: Study emphasizes the need for culturally sensitive, language concordant dementia care models, which will have local, national and international implications.

Feasibility, Reliability, and Validity of an Electronic Frailty Index Based on Comprehensive Geriatric Assessment (Efi-CGA) in Primary Care: A Prospective Cohort Study of 100 Patients with 6-Month Follow-up

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Background: To promote early management of frailty, we developed a Comprehensive Geriatric Assessment (eCGA) form and an electronic Frailty Index based on deficit accumulation (eFI-CGA) in the electronic health records. Here, we examined the feasibility, reliability, and validity of the eFI-CGA by primary care providers (PCP).

Methods: We enrolled community-dwelling older adults with mild/moderate frailty under the care of Fraser Health and Nova Scotia Health (n=100). A PCP and a geriatrician assessed each patient independently at baseline and six months. PCP and geriatrician inter-rater agreements were tested using the intraclass correlation coefficient (ICC). The eFI-CGA characteristics were also examined.

Results: Ninety-eight percent of participants completed both PCP and geriatrician assessments at baseline (84 years, 62% women, 59% currently married). The mean eFI-CGA assessed by PCP and geriatricians was 0.28±0.11 and 0.29±0.12, respectively, which changed insignificantly at follow-up (0.28 ± 0.12 for both PCP and geriatrician assessments, completed by 82% of patients). The eFI-CGA scores were correlated with the Clinical Frailty Scale (CFS) at baseline and follow-up ($r \geq 0.61$ by PCP, $r \geq 0.70$ by geriatrician, $p < .001$) and with age ($r \geq 0.44$ by PCP, $r \geq 0.45$ by geriatrician, $p < .010$). The ICC value between the eFI-CGA by PCP and geriatrician was 0.91 at baseline and 0.87 at follow-up, higher than that for CFS (0.76, $p < .001$ at each time point).

Discussion: The frailty assessments based on deficit accumulation in the eCGA by PCP and geriatricians were highly comparable, suggesting it is reliable and feasible to assess frailty in primary care using the eFI-CGA.

Conclusions: Our study supports the role of eFI-CGA in promoting geriatric primary care with early assessment and management of frailty. Ongoing research is aimed at scaling up the eFI-CGA implementation and application.

Appropriate Antipsychotic Use in Older Adults: APS Preprinted Order Sets

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Background: Current guidelines recommend against the use of neuroleptics for delirium management unless patients pose a threat to the safety of self or others and non-pharmacologic options are not sufficient. At Sunnybrook Hospital, haloperidol is included as an antiemetic on the Acute Pain Service (APS) preprinted order set. We sought to determine the frequency and indications for haloperidol administrations associated with the APS order set.

Methods: We retrospectively reviewed 50 charts from 2019 and 2021. We included patients over 70 years old, who received a haloperidol order from APS.

Results: The mean age of patients was 76.5 years (range 70-98); 48% were female; 8% had a past history of dementia. There were 185 haloperidol orders, of which 102 (55.1%) originated from the APS order sets, and 83 (44.9%) from other prescribers. In 87.6% of overall haloperidol orders, the dose prescribed was 0.5-1mg, consistent with the antiemetic protocol. Nineteen (38%) patients received at least one dose of haloperidol. Of these patients, 15 were administered doses of 0.5-1mg, 10 patients in 2019 and 5 patients in 2021. At least 51% of overall doses given were for responsive behaviours.

Discussion: The Senior Friendly Team began assessing the APS orders set in 2019, with consideration to removing prn haloperidol for nausea. Decreased patient exposure in 2021 may reflect increased provider awareness and the impact of other antipsychotic stewardship initiatives. Given the low number of overall haloperidol administrations, the removal of haloperidol from the order set is unlikely to negatively impact workload or patient care.

Conclusions: Removing haloperidol from preprinted APS order set is feasible and could decrease risks of patient harm. Other preprinted order sets that include neuroleptics should be evaluated in the future.

Reducing the Rates of *Staphylococcus Aureus* Bacteremia in the Medicine of Elderly Directorate

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Background: The medicine of elderly (MOE) directorate at the Royal Infirmary of Edinburgh had a surge of *staphylococcus aureus* bacteraemias (SAB) amongst patients in 2022. This quality improvement project included a review of current practice with peripheral vascular catheter (PVC) care, educating staff on the importance of using the PVC bundle and educating staff on SAB. Multiple changes and interventions to practice were implemented in order to increase the use of PVC bundles and reduce the rates of SAB within the directorate in order to improve patient safety and clinical care.

Methods: Over a period of 6 months, various change interventions were implemented. These consisted of providing teaching at departmental meetings, induction training and face to face on the wards. Instructional pdf summary sheets were emailed to staff to outline the process for completing PVC care plans. Informational posters and QR codes linking to the pdf were distributed around departments and the departmental induction booklet was updated to highlight the importance of preventing SAB.

Results: There was a reduction in SAB by over 80% within the directorate from 2022 to 2023. There was a departmental wide change in culture and a pro-active approach to reducing and preventing SAB was observed.

Discussion: This project highlighted a gap in knowledge and awareness among health care professionals. There was scope

to increase the understanding of *staphylococcus aureus* bacteraemias including how to reduce the risk of this infection and the consequences this has on elderly frail patients.

Conclusions: SAB should be preventable and this projected demonstrated areas where the system was failing patients. This large scale quality improvement project highlighted the importance of a multi-professional approach and ownership of responsibility for reducing the risk and subsequent harm of SAB.

Assessing the Content and Usability of an Online Health Information Resource for Care Partners and Health Care Providers

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Background: The Behaviours in Dementia Toolkit is a free, online library of information resources to help care partners and healthcare providers effectively and compassionately respond to dementia-related changes in mood or behaviour. To optimize its usefulness and accessibility, we assessed the usability of a beta version.

Methods: We recruited Canadian care partners and health care providers to participate in an electronic content survey (n=81) and online structured interviews (n=12). In surveys, we presented sample website content and participants scored friendliness, trustworthiness, and desirability. In interviews, we administered content and usability evaluations after participants completed a series of concurrent think-aloud activities.

Results: A descriptive statistical analysis of survey data confirmed content friendliness, clarity, and trustworthiness. Mean scores were 3.9 to 4.4 on a 1-to-5 scale. Mean Single Ease Question (SEQ) for three usability tasks ranged from 4 to 5.91, while the industry average is 5.5. Median System Usability Scale (SUS) scores were 86.25 for health care providers (n=6) and 56.25 for care partners or older adults (n=6), while the industry average is 68.

Discussion: The website was perceived to balance trustworthiness and friendliness. Clinical terms that signaled a person-centered philosophy (i.e. "non-pharmacological approaches") were well-received by health care providers but often made care partners feel excluded unless they were clearly defined. Care partners found our beta website more difficult to use than health care providers. Information overload, small text, medical jargon and unclear calls-to-action resulted in greater error rates and frustration.

Conclusions: Usability results were used to make significant improvements to website design and content. Our findings include principles for accessible writing and process recommendations for testing the usability of digital health information interventions designed for a mixed audience of health care providers and care partners.

PTSD in Tamil Older Adults with Dementia

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Background: Behavioural and psychological symptoms of dementia can mask underlying Post-Traumatic Stress Disorder (PTSD) and can make diagnosis challenging. The purpose of this study is to evaluate if older Tamil adults with dementia have underlying PTSD from their experiences with the Sri Lankan Civil War.

Methods: This was a prospective, multi-centered, qualitative study with patients from the Greater Toronto Area. Eight participants previously diagnosed with severe dementia were enrolled. Semi-structured interviews developed around the DSM-5 PTSD Checklist (PCL-5), were conducted with the primary caregiver of the enrollee, to evaluate symptoms of PTSD. Interviews were conducted in English or Tamil, as preferred. A thematic analysis was used to evaluate the most common themes.

Results: Six participants met DSM-5 criteria for a diagnosis of PTSD, which was previously undiagnosed. The highest scoring PCL-5 domains common to all participants were: “feeling very upset when reminded of the stressful experience”, “avoidance”, “having negative beliefs”, and “trouble experiencing positive feelings”. Thematic analysis yielded two superordinate themes: “continued hypervigilance regarding military threats to self or loved ones” and “storytelling as a mechanism of protecting loved ones from future trauma”.

Discussion: To our knowledge, this is the first study to evaluate PTSD in Tamil adults with dementia. The social, cultural, and psychological context to the progression of dementia may be further understood with detailed history taking. Traumatic memories are often preserved by storytelling; caregivers are an invaluable corroborating source to diagnose PTSD in patients with dementia.

Conclusions: Undiagnosed PTSD can have a negative effect on the quality of life in patients with dementia. An early trauma history and diagnostic assessment involving the patient and their family may lead to earlier interventions in the management of patients with comorbid PTSD and dementia.

Building Awareness and Skills to Meet More Culturally Diverse End-of Life Preferences Among Dying People and their Families Across Canada

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Background: In Canada, 334,623 deaths occurred in 2022. As 80% were elderly, geriatricians often provide end-of-life care. Increasingly, this care is provided outside of hospital.

Moreover, greater cultural diversity is impacting what dying people and their families ask for or expect to occur as death nears, at the time of death, and immediately after the death when the family is grieving but must attend to the body. One in five Canadian citizens now was born in another country, with many arriving as adults who are familiar with end-of-life customs in their home country.

Methods: A literature review identified culturally-appropriate and inappropriate activities in the pre-death, time of death, and immediate post-death time periods for 10 growing new immigrant groups: the Philippines, India, China/Hong Kong, Pakistan, Vietnam, Mexico, Korea, Nigeria, Ethiopia and Lebanon. After repeated library database searches and Google searches were concluded, the information gained for each group was confirmed or corrected by cultural leaders in Canada.

Results: Major differences but some similarities across the 10 groups were noted. Many dying people and their families may have adapted to what is commonly done in Canada, while others continue to hold to what was practiced in the home country. As such, there is no certainty about what dying people who immigrated to Canada and their families expect from formal care providers such as physicians.

Discussion: These findings highlight the importance of routinely asking dying people and their families about preferred cultural practices and taboos, and other culturally-based considerations of importance to the dying person and their family.

Conclusions: With growing cultural diversity, geriatricians need to be open to differences and also routinely ask about end-of-life preferences.

Acceptance of Artificial Intelligence-Enabled Technology for Caregiving: Insights from a Survey of Family Caregivers

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Background: Artificial intelligence (AI)-enabled technology is growing rapidly; however, few studies have examined the factors predicting the acceptance of AI among family caregivers (FCGs) for older adults. We aim to evaluate factors influencing FCGs intentions to use AI.

Methods: We designed a theory-informed cross-sectional online survey targeted toward middle-aged (45-64 years old) FCGs from Quebec. We adapted the Unified Theory of Acceptance and Use of Technology for our survey. Using R, we

employed a machine learning method, i.e., random forest, to identify the relative importance based on the increase in mean-squared error (IncMSE) and the direction of association of the following nine variables in predicting FCGs' acceptance: performance expectancy, effort expectancy, social influence, facilitating conditions, technology anxiety, perceived trust, perceived cost, confidence in the source of advice for care (healthcare professional vs. AI), and confidence in healthcare professionals' advice for the use of AI.

Results: Out of 201 completed surveys, 199 were eligible and analyzed. The random forest models explained 56% to 83% of the variance in FCGs AI acceptance. Among the nine variables, the IncMSE ranged from 15-34%, with social influence having the highest relative importance. There were varied associations, as some had a positive (n=6), negative (n=2), or quadratic (n=1) association with FCGs intentions to use AI.

Discussion: Our findings revealed the complementary interplay among the nine variables, with social influence as the most important factor in shaping FCGs intentions to use AI. Additionally, some variables acted as either facilitators or barriers to FCGs' intention to use AI.

Conclusions: Consequently, stakeholders in AI and healthcare sectors should prioritize interventions that mitigate barriers and leverage FCGs' social networks to promote their acceptance of AI for caregiving.

Delirium Quality Standard Implementation: An Interdisciplinary Quality Improvement Project-Gap Analysis Survey

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Background: Health Quality Ontario (HQP), Canada, published seven quality standards for delirium. We designed this pre-implementation survey to identify gaps in clinician knowledge and understanding of care practices as outlined in the Quality Standard, on the High Tolerance Rehabilitation Unit at Baycrest.

Methods: Using the HQO Standards as a guide, we created a survey with closed- and open-ended questions for staff regarding: knowledge, current practice and processes with respect to delirium risk factors, screening tools, detection, management, and patient/ caregiver education. A total of 26 staff, including nurses, allied health professionals and physicians on the HTR, completed the survey between Sept. 2022 and Feb. 2023. A thematic analysis of the open-ended survey responses was conducted using both inductive and deductive approaches.

Results: Several major themes were identified. Risk Identification, Screening, Detection: Challenges: Insufficient knowledge regarding clinical features of delirium; difficulties

in: identifying delirium when patients baseline is unclear, distinguishing delirium from dementia with BPSD, differentiating from other conditions that might have similar features to delirium; workflow challenges. Enablers: Training and resources for identifying delirium; increased communication with the inter-professional team; completion of the delirium checklist/screening tool; knowing the patients baseline. Prevention, Management: Challenges: Communication between team members; unavailability of a designated location to communicate the care plan in the EMR; not being informed when patients have delirium; lack of team coordination to identify and develop a care plan. Enablers: Coordinated care plans for management of delirium; increased communication regarding delirium among the inter-professional care team.

Discussion: This informed the need for education and training, clear team communication, and development of coordinated care plans.

Conclusions: We will use this information to develop, implement and evaluate strategies to improve recognition and management of delirium.

Safety of Cannabis Products in Rheumatology Patients

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Background: Cannabis use in patients with rheumatologic conditions is increasing, and this may pose a safety concern due to the older age, number of comorbidities, and medication complexities of patients in this cohort. This study aims to identify patient characteristics influencing cannabis product choices among rheumatology patients, and assess the impact on efficacy and safety outcomes, focusing on patient-reported side effects.

Methods: An invitation to complete a provincial online survey was mailed through Alberta Health Services to patients with rheumatology disease coding on their profiles in Alberta. The questionnaire encompassed demographics, medical history, medication use, and views regarding cannabis. Correlation matrices analyzed cannabinoid content and formulations against co-variables of interest. Side effects were grouped into nerve-activating, nerve-dampening, and sensory symptoms.

Results: 3525 patients completed the survey. 1049 respondents indicated cannabis use. Average age was 62 yrs. Older age was associated with less use of THC-CBD balanced products, dried cannabis and edibles, OR(CI95%)=0.98(0.97-0.99), OR=0.96(0.95-0.99) and OR=0.96(0.94-0.97) respectively. THC-dominant cannabis users experienced increased high nerve-dampening and sensory symptoms, OR=3.29(2.23-4.86) and OR=2.56(1.74-3.78) compared to no symptoms,

respectively. Odds of high sensory symptoms, nerve dampening and activating symptoms were all increased with dried cannabis, OR=12.92(8.06-20.70), OR=3.12(2.16-4.48), and OR=2.61(1.82-3.74) respectively, compared to other formulations.

Discussion: Our results showed no age-related differences in selection of CBD-dominant or THC-dominant products and marginal differences with use of dried and edible

products, despite THC-dominant and dried cannabis products posing more side effects which can be of greater concern in older adults.

Conclusions: Clinicians should be aware of the cannabinoid content and formulations of cannabis used among older adult rheumatologic patients, and should be cautious of THC-dominant and dried cannabis products which are associated with greater risk of side effects.