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On Demand Presentations

BOOK OF ABSTRACTS

CAHSPR 2021

ID: 1

How the impact of patient portals is captured based on the Quadruple Aim and the Benefits Evaluation frameworks: Scoping review

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Background and Objectives: Despite continuing extensive research in the area of patient portals, measuring the impact of patient portals remains to be a convoluted process. This study aims to explore what is known about patient portal evaluations and provide recommendations for future endeavors. The focus is on mapping the measures used to assess the impact of patient portals on the dimensions of the Quadruple Aim (QA) framework and the Canada Health Infoway's Benefits Evaluation (BE) framework.

Approach: A scoping review was conducted using the methodological framework of Arksey and O'Malley. Reporting was guided by the PRISMA extension for scoping reviews. A systematic and comprehensive search was conducted using Ovid MEDLINE, EMBASE, PsycINFO. CINAHL on the EBSCO platform, and Web of Science for studies published between March 2015 and June 2020. A systematic gray literature search was conducted using the Google search engine. Extracted data was tabulated based on a coding template developed to categorize the literature into themes and areas of interest.

Results: From the patients' perspective, it was determined evaluations focused on benefits and barriers to access, access to test results, medication adherence, condition management, medical notes, and secure messaging. From the population perspective, the evaluations focused on the increase in outreach, decrease in disparities, and improvement in quality of care. From the healthcare workforce perspective, the evaluations focused on the impact of patients accessing medical records, impact on workflow, secure messaging, and virtual care. From the health system perspective, the evaluations focused on decreases in no-show appointments, impact on office visits and telephone calls, impact on admission and readmission rates and emergency department visits, and impact on health care use. Most of the studies mapped on the BE framework evaluated more than one subdimension.

Conclusion: The QA and BE frameworks provided guidance in identifying the gaps in the current literature by providing a way to show how the impact was assessed. This study highlights the need to appropriately plan how the impact will be assessed and how the findings will be translated into effective adaptations.

Primary Theme: Health Informatics

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Synthesis

AuthorNames: Melita Avdagovska

ID: 2
Gender and depressive symptoms in patients with advanced cancer

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Background and Objectives: Patients with advanced cancer commonly report depressive symptoms. Examinations of gender differences in depressive symptoms in patients with advanced cancer has yielded inconsistent findings. This work investigates whether the presence and correlates of depressive symptoms differ by gender.

Approach: Patients with advanced cancer were recruited from outpatient oncology clinics at a comprehensive cancer center for a psychotherapy trial. Patients completed measures assessing sociodemographic and medical characteristics, disease burden, and psychosocial factors (including the Death and Dying Distress Scale, Demoralization Scale, Quality of Life at the End of Life Cancer Scale, and Patient Health Questionnaire-9). A cross-sectional analysis examined the univariate and multivariate relationships between gender and depressive symptoms.

Results: 305 patients were included in the data analysis (40% men and 60% women). There were no significant difference between depressive symptoms in men (M=7.09, SD=4.59) and women (M=7.66, SD=5.01), t(303)=1.01,p=.314. Women were significantly more likely to report greater death anxiety, dysphoria and disheartenment; and less likely to report feeling prepared for the end of life (all p

Conclusion: Women with advanced cancer are not more likely than men to report depressive symptoms but the pathways to depression may differ by gender. These differences suggest the potential for gender-based preventive and therapeutic interventions in this population.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Mental Health and Addictions

Methods: Experimental or Quasi-experimental Methods

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ID: 7

The Association between Long-Term Care Resident Characteristics and Transfers to the Emergency Department: A Population-Level Retrospective Cohort Study

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Background and Objectives: Long-term care (LTC) residents require complete or extensive support, including 24-hour nursing and personal care. LTC residents contribute a greater number of emergency department (ED) visits when compared to community-dwelling older adults. Little is known about which resident-level characteristics at admission are predictive of ED transfers from LTC. We set out to identify which admission characteristics are associated with ED transfers, potentially preventable ED transfers, and low-acuity ED transfers in Ontario, Canada.

Approach: We conducted a population-level retrospective cohort study on LTC resident data collected using the Resident Assessment Instrument Minimum Data Set Version 2.0. The cohort included 56,433 LTC resident admission assessments from January 1, 2017, to December 31, 2018. Logistic regression and 10-fold cross-validation were used to identify adjusted associations and predictability between characteristics routinely collected during LTC admission assessment and ED transfers. Model performance was assessed using the area under the receiver operating characteristics curve (AUC). Outcomes of interest included overall ED use, potentially preventable, and low acuity ED transfers.

Results: A recent change in medical orders, previous ED visitation, female sex, the presence of an indwelling catheter, and the need for oxygen therapy were informative predictors for overall, potentially preventable, and low acuity ED transfers. Deterioration in cognitive status and change in behavior was influential to all ED transfers only. Urinary tract infections, pneumonia, indictors of delirium, and change in mood are unique to potentially preventable ED transfers, and antibiotic resistance is unique to low acuity ED transfers. A similar discrimination was reached for overall ED use (AUC = 0.630), potentially preventable transfers (AUC = 0.659), and low acuity transfers (AUC = 0.645).

Conclusion: The factors associated with ED transfers may be modifiable, and closer attention to these factors may help reduce ED transfers. Although the discriminability of the models was poor, advanced knowledge of informative characteristics can also support upstream decision-making for clinicians to prioritize their attention.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health Informatics

Methods: Data Mining/Big Data Analytics

AuthorNames: Komal Aryal, Andrew Costa, Lauren E. Griffith, Michelle Howard, Andrea Gruneir, Aaron Jones, Amina Jabbar, Fabrice Mowbray

ID: 8

Use of health services for mood and anxiety disorders: a population-based study on the role of neighbourhood marginalization using linked data

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Background and Objectives: While a growing body of literature suggests that neighbourhood environments are associated with physical health, little is known on the features of local communities that may shape differences in health services use for mood and anxiety disorders. This study aims to assess the association between neighbourhood environments and mental health visits in the province of New Brunswick, Canada, as a driver for prevention.

Approach: We linked person-based administrative health datasets with geospatial datasets to examine associations between neighbourhood environments and use of medical and hospital services for mood and anxiety disorders among the population aged 1 year and older in 2015/16. We used multiple logistic regression to estimate the risk of healthcare use by measures of neighbourhood marginalization and active living environments, controlling for individuals' age, sex, and place of residence (urban/rural). Neighbourhoods were delineated as census dissemination areas. The de-identified data were accessed in the secure facilities of the New Brunswick Institute for Research, Data and Training.

Results: Data linkage allowed us to analyze administrative health records for 707,575 persons aged 1 year and older residing in 1,374 neighbourhoods. Among these residents, 10.7% had used health services for a mood or anxiety disorder at least once in 2015/16 which 66% of those were females. The regression results indicated that the odds of healthcare use were significantly greater among patients living in neighbourhoods characterized with high material deprivation (OR: 1.067 [95%CI: 1.046-1.089]) and the risk was even more pronounced for females (OR: 1.096 [95%CI: 1.069-1.124]). Local environments with higher residential instability also had higher odds ratios for patients using healthcare usage due to mood and anxiety disorder (OR: 1.074 [95% CI: 1.056-1.093]) compared to those residing in more stable neighbourhoods.

Conclusion: Results suggest that selected features of neighbourhood environments may be associated with differential burden to the healthcare system for mood and anxiety disorders, and highlight the importance of built environments in supporting healthy public policies. More research is needed examining the socioenvironmental factors influencing acute mental health care needs.

Primary Theme: Mental Health and Addictions

Secondary Theme: Equity and Vulnerable Populations

Methods: Statistics/ Econometrics

AuthorNames: Ismael Foroughi, Neeru Gupta, Daniel Crouse

ID: 10
Trends in chronic disease prevalence and multimorbidity in Ontario, Canada

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Background and Objectives: New Canadian case-mix tools from CIHI offer a novel way of exploring chronic disease prevalence and multimorbidity using diagnostic data. We took a comprehensive approach to determine whether prevalence of chronic disease and multimorbidity have been rising in Ontario, Canada.

Approach: In this observational study, we applied case-mix methodology to a population-based cohort. We used 10 years of patient-level data (2008/09 to 2017/18) from multiple care settings to compute rolling 5-year prevalence of 85 chronic diseases and multimorbidity (co-occurrence of 2 or more diagnosis). Diseases were further classified based on type and severity. We reported both crude (unadjusted) and age- and sex-standardized trends.

Results: The number of patients with chronic disease increased by 11.0% over the 10-year study period to 9.8 million in 2017/18 while the number with multimorbidity increased 12.2% to 6.5 million. Age- and sex-standardized estimates exhibited slight declines as 70.2% (47.1%) had one (two) or more chronic conditions in 2008/09 compared to 69.1% (45.6%) in 2017/18. This downward trend was concentrated in minor and moderate diseases, whereas prevalence of many major chronic diseases rose along with instances of extreme multimorbidity (8+ conditions).. Age- and sex-standardized resource intensity weights—reflecting relative expected costs associated with patient diagnostic profiles —increased 4.6%.

Conclusion: Evidence of an upward trend in chronic disease prevalence was decidedly mixed. However, the change in case mix from fewer less-serious to more serious conditions, along with increasing patient resource intensity weights overall, may portend future need for population health management and increased health system spending.

Primary Theme: Chronic Disease Management

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Economic Analysis or Evaluation

AuthorNames: Mitch Steffler, Yin Li, Sharada Weir, Shaun Shaikh, Farshad Murtada, Jim Wright, Jasmin Kantarevic

ID: 14

Association of differences in household size, employment status, and amount paid for services with distance traveled for inpatient care in Kenya

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Background and Objectives: Distance to a healthcare facility for inpatient care in developing countries has been a significant hindrance toward achieving Sustainable Development Goal 3. The United Nations encourages countries to research access to inpatient care to formulate healthcare policies based on data. Thus, this study aims to understand what covariates are best associated with distance traveled for inpatient care in Kenya.

Approach: Data on 481 participants in Kenya who sought inpatient care in 2018 were analyzed. Distance to a healthcare facility was captured as a continuous variable and was self-reported by the respondent. The responses exhibited a discrete mass at zero and continuous characteristics; therefore, a Tweedie distribution was adopted for modeling. Due to the correlation nature of clustered data, we embraced the generalized estimating equations approach with an exchangeable correlation. Because no standard software was available to analyze this problem, we developed R functions. We assessed the best model fit using the QICu and R-Squared

Results: Low-income people tend to have large households and are more likely to live in rural areas and slums, and are thus forced to travel long distances to access inpatient care. Compared to the unemployed, the employed could have better socioeconomic status and possibly live within reach of inpatient healthcare facilities, therefore requiring shorter distance travel to access them. These results indicate a need for policymakers to support equal access to inpatient services in Kenya, by prioritizing the rural areas and slums, opening up job opportunities, and encouraging smaller families.

Conclusion: Differences in employment, ability to pay for the service, and household size are associated with the distance covered to access government healthcare facilities

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Statistics/ Econometrics

AuthorNames: ngugi mwenda

ID: 16
Using the CIHC National Interprofessional Competency Framework to Capture Collaboration in Long-Term Care

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Background and Objectives: Personal support workers, registered practical nurses, and registered nurses comprise the primary workforce in long-term care. Holistic and effective care depends upon their collaboration. However, little research exists exploring how these professions collaborate in long-term care. An understanding of how collaboration occurs in long-term care could inform strategies to improve and support collaboration and, thus, strengthen resident care.

Approach: We used a qualitative descriptive approach informed by the CIHC National Interprofessional Competency Framework to examine how personal support workers, registered practical nurses, and registered nurses enact collaboration in long-term care. Interview data collected from personal support workers, registered practical nurses, and registered nurses in two long-term care facilities were categorized according to the CIHC framework and themes identified to capture how collaboration occurs.

Results: We found evidence that collaboration was enacted according to five of the six competencies: (interprofessional communication, collaborative leadership, role clarification, team functioning, and patient centred care). Data did not support conflict resolution. In our proposed presentation we will discuss four of the seven themes we identified: order of communication, leadership based on resident condition, (mis)understanding of roles, and respect within team functioning. We present these themes because they are modifiable organizational aspects of care that would be of interest to those designing interventions to improve and support collaboration in long-term care.

Conclusion: Personal support workers, registered practical nurses, and registered nurses enact interprofessional collaboration in long-term care in a manner that closely aligns with aspects of the Interprofessional Health Collaborative framework for Interprofessional Competencies. Our findings contextualize the framework to long-term care and could be used to inform strategies to support collaboration.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health Human Resources

Methods: Qualitative Research Methods

AuthorNames: David Thompson, Alison Thompson, Brett Caccamo

ID: 18

Home Again: Supporting Older Adults to Transition from Hospital to Home

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Background and Objectives: Within Canada, approximately 10 percent of newly admitted long-term care residents could have potentially been cared for at home. Without adequate support from transitional health care services to return home, older adults often lack access to appropriate services when they are needed in the community. The purpose of this study was to identify factors that contribute to older adult patients being assessed as requiring long-term care when they could potentially return home with enhanced supports.

Approach: Through a retrospective case study design, this study was conducted within an acute care unit at a hospital in Nova Scotia, Canada. Case studies were comprised of three focal older adult patients that were hospitalized and waiting for placement in long-term care, their family caregivers, and healthcare professionals directly involved in the care of the focal patient. A total of 9 interviews were conducted and data were analyzed to identify factors influencing potentially inappropriate assessment of each patient for long-term care.

Results: Findings indicate that home care services for older adults are being sought too late, often when family caregivers are already experiencing caregiver burnout or when older adults are re-admitted to hospital due to a rapid decline in health status. Limitations in home care services ultimately led to barriers preventing family caregivers from continuing to care for older adults at home, such as absence of overnight services. Family or friend caregivers also lack information about home care services and knowledge to navigate resources required to continue caring for older adults at home. The experiences and challenges of patients, family or friend caregivers, and healthcare professionals revealed potential ways to reduce healthcare costs and improve the delivery and quality of home care services.

Conclusion: This study contributes knowledge about gaps within home care and transitional care services. The results highlight the significance of investing in additional home care services for rehabilitation and the prevention of rapidly deteriorating health for older adults after hospital discharge.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Brittany Barber, Lori Weeks, Elaine Moody, Grace Warner

ID: 24

The Cost of Chronic Pelvic Pain in Women: A Systematic Review of the Literature

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Background and Objectives: Chronic pelvic pain affects 15-20% of women and exerts an economic burden on patient and society. To systematically assess the literature to determine the costs related to chronic pelvic pain (CPP) for women.

Approach: The electronic databases MEDLINE, EMBASE, PubMed, and Cochrane Library were searched for studies published 1990-2019. Costs related to chronic pelvic pain symptoms (cyclical and acyclical pain, dysmenorrhea, dyspareunia, dysuria, and dyschezia) were assessed.

Results: Of 1135 papers screened, 66 were screened in full-text, with a total of 13 studies included in final analysis. The majority was based in North America (n=8), and others (n=1 each) from Australia, Germany, Japan, Taiwan, and UK. Study designs included cross-sectional (n=6), retrospective and prospective cohort (n=6), and randomized controlled trial (n=1). Costs were categorized into healthcare (n=13), out-of-pocket (n=5), productivity loss (n=5), and total (n=6). Estimated healthcare costs ranged from $1,367 to $7,043 per woman per year (USD). The out-of-pocket costs ranged from $193 to $2,457 per woman per year. Productivity loss ranged from $4,216 to $12,789 per woman per year. Total costs ranged from $1,820 to $20,898 per woman per year. The yearly costs of CPP varied according to the country.

Conclusion: The literature suggests that chronic pelvic pain represents a considerable economic burden on women and international healthcare systems, with productivity loss contributing a significant portion of total costs.

Primary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Secondary Theme: Chronic Disease Management

Methods: Economic Analysis or Evaluation

AuthorNames: Ai-Lien Le

ID: 25
Women's Health Inequities During Covid-19: A Rapid Scoping Review

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Background and Objectives: The unprecedented circumstances of the Covid-19 pandemic have impacted women disproportionately in all biopsychosocial domains. To determine the extent of impacts to women's health during the pandemic.

Approach: A rapid systematic scoping review was performed using Arksey and O'Malley methodology. Electronic bibliographic databases (EMBASE, CINAHL, Epistemonikos, MedRxiv, BioRxiv, and PsyArXiv) and the grey literature (pre-prints; websites for WHO, UN, CDC, NICE, SIGN, SOGC, ACOG, RCOG, RANZCOG) were searched for articles reporting Covid-19's impact on women's health. Findings were organized thematically with narrative synthesis.

Results: Of 1,490 abstracts identified using electronic databases, 87 studies were included, along with 88 from grey literature search for final analysis. Most studies were based on a single country (n=82), while others were international from Asia, Europe, North America, and South America (n=5). The majority were original studies in scientific journals (n=83), and others were policy papers (n=4). Six major themes were identified to include the reported health impacts on women: [1]increased proportion of Covid-19 infections, frequency of symptoms, and hospitalization duration (n=8); [2]worsening mental health and substance misuse (n=37); [3]restricted women's health services (family planning, breast/gynecologic cancer, sexual health, and transgender health) (n=7); [4]increased healthcare worker harassment, stigmatization, and burnout among women (n=21); [5]pregnancy specific vulnerabilities (n=10); and [6]increased gender-based violence (n=2).

Conclusion: Our review provides a global assessment of Covid-19's impact on women's physical and mental health, and access issues to health services. Our results will inform future quantitative and qualitative research, as well as health system policies and decision-making for women's health during the pandemic.

Primary Theme: COVID-19

Secondary Theme: Equity and Vulnerable Populations

Methods: Qualitative Research Methods

AuthorNames: Ai-Lien Le

ID: 27

Control Rooms in Publicly-funded Health Systems: Reviving Value in Healthcare Governance

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Background and Objectives: In 2016, the Quebec's Ministry of Health and Social Services mandated the national implementation of control rooms, through which health system actors were accountable to implement value-driven performance management. To this day, little is known about how healthcare managers have appropriated control rooms in both their design and use, and what the resulting effects are. We aim to explore how organizational actors appropriate control rooms at large scale towards value-driven performance in healthcare in real

Approach: We conducted qualitative multi-site organizational ethnographic case study to explore the lived-experience of organizational actors with the appropriation of control rooms. Cases included two (N=2) regional directorates embedded in different Integrated health and social services centers in Quebec. Qualitative data were collected by a single investigator (first author) over 13 months of fieldwork (September 2018-2019) through document review (N=143), non-participant observations (N=163 hrs) of management meetings and individual semi-structured interviews (N=34). Qualitative data were triangulated and iteratively analysed through a multi-level narrative process approach, and guided by an aggregated theoretical framework building on sociomateriality, institutional theory and work-studies.

Results: Appropriating mandated integrated performance management tools (control rooms) in public health systems unfolds into three appropriation paths (cognitive, structural, technical) over three appropriation phases: implementing (2016-2018), testing (2018-2019), and adapting (2019-today). Ways appropriation paths move and interact over time varies according to transformative mechanisms. Implementing tools both produces and emerges from the level of improvement capacities within healthcare organizations. Testing tools reveals that incompatibilities between tools, structures and values give rise to value-driven distributed clinical leadership. Adapting tools relies on the adaptability of organizations towards the value system driving the tools, rather than on the adaptability of tools towards organizations' design. Appropriating control rooms at large-scale can revive value in healthcare governance at clinical, organizational and strategic levels, through value-driven capacity building, sense-making and accountability.

Conclusion: There is no "one-size-fits-all" framework to design and support the successful appropriation of tools at large-scale in healthcare. Yet, we believe that taking into consideration the distinct phases of appropriation and leveraging the right mechanism in support of each phases, is a significant step towards reviving value in healthcare governance.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

AuthorNames: Élizabeth Côté-Boileau, Mylaine Breton, Jean-Louis Denis

ID: 28

Key informants' perspectives on Implementing Patient Navigator Programs within Hospital Settings

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Background and Objectives: Patient navigation can serve as an approach to improve the integration of care by addressing the challenging nature of navigating health, community, and social services. Currently, there are pilot patient navigation programs being implemented for senior and/or medically complex patients. The objective of this study is to gain insight from key informants — hospital and community staff— to identify organization and system level barriers and facilitators influencing the implementation of Patient Navigator programs.

Approach: The current study design is a qualitative descriptive study informed by the Consolidated Framework for Implementation Research. Data is being collected through in-depth interviews with hospital staff (any profession) and community agency staff (any profession) who have interacted with a Patient Navigators. Data collection explored perceptions of the need for Patient Navigator programs, the ideal Patient Navigator role, and barriers, facilitators and factors that may affect their implementation. Transcripts are being coded and analysed using inductive thematic analysis.

Results: Twenty-eight key informants participated in interviews (10 from community, 18 from an acute care hospital), including 16 front-line clinicians, 11 program directors, healthcare leaders and managers, and 1 physician. Preliminary results suggest that the implementation of Patient Navigator programs are dependent on: (1) a clear consensus on the need for Patient Navigators as part of the healthcare system and what the role entails; (2) a collaborative process to engage stakeholders, such as clinicians, and to identify champions to promote patient navigation (3) the need for certainty regarding responsibility for implementation (4) the need for integration with current practice and existing workflow processes.

Conclusion: Patient navigation models of care are believed to increase patient and caregiver satisfaction and decreasing barriers to care for seniors. Future implementation strategies to adopt Patient Navigator programs into acute care clinical practice should incorporate evidence on the value of the program and consider collaborative communication and existing workflow processes

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Collaborative Healthcare Improvement Partnerships

Methods: Qualitative Research Methods

AuthorNames: Kristina Kokorelias, Naomi Ziegler, Stacy Landau, Tracey DasGupta, Amanda Knoepfli, Robin Baker-Kuhn, Lina Gagliardi, Dan Cass, Sander Hitzig

ID: 29

Value-based integrated performance management tools in healthcare: A sociomaterial work story

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Background and Objectives: In 2016, the Quebec's Ministry of Health and Social Services mandated the national implementation of control rooms, through which health system actors were accountable to implement value-driven performance management. To this day, little is known about how healthcare managers have appropriated control rooms in both their design and use, and what the resulting effects are. We aim to explore how organizational actors appropriate control rooms at largescale, as a form of legitimate sociomaterial work.

Approach: We conducted qualitative multi-site organizational ethnographic case study to explore the lived-experience of organizational actors with the appropriation of control rooms. Cases included two (N=2) regional directorates embedded in different Integrated health and social services centers in Quebec. Qualitative data were collected by a single investigator (first author) over 13 months of fieldwork (September 2018-2019) through document review (N=143), non-participant observations (N=163 hrs) of management meetings and individual semi-structured interviews (N=34). Qualitative data were triangulated and iteratively analysed through a multi-level narrative process approach, and guided by an aggregated theoretical framework building on sociomateriality, institutional theory and work-studies.

Results: Our analysis reveals three types of legitimate sociomaterial work emerging from appropriating control rooms: 1) reformulating performance management work; 2) disrupting accountability work and; 3) effecting value-based integrated performance management. Each actor (tools, institutions and people) follows recurrent institutional and organization work-paths: tools consistently engage in disruptive and technology work; institutions consistently engage in maintaining and strategy work, and; people consistently engage in creation and boundary work. We present a refined multi-faceted theoretical framework of appropriating tools in healthcare as sociomaterial work, building on the aggregated lenses of sociomateriality, institutional theory and work-studies, and working on three intersected levels: actors who appropriate ("Who"), units of appropriation ("What"), and the work of appropriating ("How").

Conclusion: This research offers a new understanding of health services management practice as dynamic, inclusive and value-based (people-centred). It also offers actionable knowledge on how to create better health and organizational value with tools. Finally, it provides a new multi-faceted theoretical framework to inform the successful appropriation of tools in healthcare.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

AuthorNames: Élizabeth Côté-Boileau, Mylaine Breton, Linda Rouleau, Jean-Louis Denis

ID: 31
Investigating the Characteristics of Retirement Homes Associated with the Provision of a Dementia Care Program in Ontario, Canada: A Population-Based Cross-Sectional Study

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Background and Objectives: The literature describing the characteristics of retirement homes that provide specialized care for older adults living with dementia (i.e., a dementia care program) is scant. Improving the understanding of dementia care in retirement homes informs the sector and national dementia care strategies. The objective of this study is to identify the characteristics of retirement homes that provide a dementia care program compared to retirement homes that do not provide such a program.

Approach: Population-based cross-sectional study in Ontario, Canada on all licensed retirement homes in 2018 (n = 757). Retirement home-level characteristics (e.g., resident and suite capacities, co-location with a long-term care home, etc.) and the provision of other regulated care services (e.g., continence care, skin and wound care, pharmacist and medical services, etc.) attributed to licensed retirement homes were exposures of interest. The outcome of interest is whether the retirement home provided a dementia care program. Multivariable Poisson regression with robust standard errors was used to model the characteristics of retirement homes associated with the provision of a dementia care program.

Results: There were 123 retirement homes that provided a dementia care program (n = 123). Nearly half had a resident capacity exceeding 140 older adults (n = 55) and more than 115 suites (n = 57). All retirement homes that provided a dementia care program also provided nursing services, meals, assistance with bathing and hygiene, and administered medications. After adjusting for facility characteristics and care services, the prevalence of retirement homes that offered assistance with feeding was nearly three times greater to provide a dementia care program (Prevalence Ratio [PR] = 2.91, 95% Confidence Interval [CI] 1.98-4.29), and the prevalence of retirement homes that provided medical services was almost twice as great to provide a dementia care program (PR = 1.78, 95% CI 1.00-3.17).

Conclusion: Retirement homes that provided a dementia care program housed many older adults, had many suites, and provided at least six of the 12 regulated care services in Ontario, Canada. These findings deepen the understanding of specialized care for dementia in retirement homes.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Data Mining/Big Data Analytics

AuthorNames: Derek Manis, Ahmad Rahim, Jeff Poss, Susan Bronskill, Jean-Eric Tarride, Julia Abelson, Andrew Costa, Iwona Bielska

ID: 35

A longitudinal analysis of income-related inequities in physician visits among older Canadians

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Background and Objectives: Equity in health care is an important policy goal of universal health care systems in many developed countries, including Canada. Previous cross-sectional evidence indicate that wealthier Canadians use more health care services compared to their poorer counterparts despite their same level of need. This study aimed to examine trends in income-related inequities in the probability and intensity of general practitioner (GP) and specialist visits among the individuals aged 65+ years between 1998/99 and 2010/11.

Approach: This study used longitudinal data from the National Population Health Survey (NPHS) of Canada. The random effect probit and negative binomial models were fitted to predict the probability of visit and number of visits, respectively. The concentration index-based horizontal inequity (HI) approach was used to measure inequities in GP and specialist visits. Sensitivity of the HI estimates was assessed using Wagstaff's and Erreygers's methods. Additionally, the mobility index (MI) was employed to compare short-run and long-run estimates of inequities in physician visits. Finally, the decomposition technique was applied to explain the contributing factors of the observed inequities.

Results: The HI estimates show significant pro-inequities in both the probability and the number of specialist visits. Inequity in the likelihood of a GP visit was slightly pro-rich. There was no evidence of significant change in the extent of inequity in physician visits over the study period. The MI estimates suggest that the extent of long-run inequity for both probability and number of specialist visits were higher than the short-run estimates. This result implies that upwardly income mobile individuals contribute to inequity in specialist care in the long run. Education was the most important contributor of inequity in specialist visits, while unobserved heterogeneity explained most of the pro-rich inequity in the probability of GP visit. Sensitivity analyses revealed no change in the findings.

Conclusion: Although physician services are free at the point of use in Canada, this study found poorer older adults utilizing fewer physician services than richer older adults for the same level of health care need. Specific policies are needed to ensure equity in health care use among older Canadians.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Statistics/ Econometrics

AuthorNames: Mohammad Pulok, Mohammad Hajizadeh

ID: 36
Development and Validation of the Fracture Risk Scale Home Care (FRS-HC)

Background and Objectives: Fractures are a major source of morbidity and mortality for home care recipients. Current fracture risk assessment tools require assume 10-year, when many die within one year. Therefore, the purpose of our work was to develop and validate a scale that predicts one-year incident hip fracture using the resident assessment instrument (RAI-HC).

Approach: This is a retrospective cohort study of linked population data of 2011-2015 Ontario HC recipients (n=317,626). Clinical data were obtained from the RAI-HC, linked to the Discharge Abstract Database and National Ambulatory Care Reporting System to capture fractures. 75% of the sample were randomly assigned to a derivation and 25% to a validation sample. A decision tree was created using known fracture risk factors, the final nodes were collapsed into 8 risk levels, and logistic regression was performed to determine odds of fracture for each level. c-Statistics compared the discriminative properties of the full, derivation, and validation samples.

Results: The proportion who experienced a hip fracture in the next year ranged from 0.3% in the lowest to 5.2% in the highest risk level. People in the highest risk level had 18.8 times higher odds (95% confidence interval, 14.6 to 24.3) of experiencing a hip fracture within one year than those in the lowest. c-Statistics were similar for the full (0.658), derivation (0.662), and validation (0.645) samples.

Conclusion: The FRS-HC is valid scale that predicts hip fracture in the next year. Tailored to the HC context and embedded within routine assessments, physiotherapists can use the FRS-HC to identify HC recipients at high fracture risk without additional testing or documentation.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Chronic Disease Management

Methods: Data Mining/Big Data Analytics

AuthorNames: Caitlin McArthur, George Ioannidis, Micaela Jantzi, Jonathan D. Adachi, Lora Giangregorio, John Hirdes, Alexandra Papaioannou

ID: 37

Blood recipient patients' perspectives on changes to blood donor screening and deferral criteria in Canada

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Background and Objectives: Currently, men who have sex with men (MSM) are routinely deferred from donating blood in Canada due to an elevated incidence of HIV in this population. However, behavioural risk among MSM is not uniform: some subgroups of MSM are unlikely to acquire HIV. An alternative gender-neutral donor screening system has been recommended by the Parliamentary Standing Committee on Health. This study sought to examine the acceptability of gender-neutral donor screening among Canadian blood recipient patients.

Approach: We conducted 37 semi-structured interviews with individuals (or parents of children) who had received blood in Canada within the past two years. Participants required blood due to disorders such as sickle cell disease, cancer treatment, or surgery, and represented a range of ages and racial identities. Participants were recruited using social media, patient advocacy groups, and snowball sampling. Interviews addressed recipients' sense of safety receiving blood in Canada, their thoughts on the current MSM deferral policy, and their views on a potential change to a gender-neutral behaviour-based donor screening system. Interviews were audio-recorded, transcribed verbatim, and thematically analyzed.

Results: Several themes were identified in participants' views on gender-neutral donor screening questions. The majority of participants supported a change, and a few preferred the current policy. Among participants who supported a change, themes included wanting to see the evidence upon which a change would be based, wanting clarification on the details of a new policy, and feeling that a change would maintain or increase their overall sense of safety. Several expressed surprise that a gender-neutral approach was not already part of the donor screening process. Among those who preferred the current policy, their responses fell into three themes: concern about the rationale for a change, concern about the incidence of HIV among MSM, and questions about the effectiveness of gender-neutral screening.

Conclusion: These findings indicate that a policy change to a gender-neutral donor screening system would likely have widespread support from blood recipients in Canada, and would be unlikely to decrease recipients' sense of safety when receiving blood. Concerns could be addressed through awareness campaigns and direct communication with blood recipients.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Patient and Public Engagement

Methods: Qualitative Research Methods

AuthorNames: Karyn Fulcher, Katherine Hogan, Meriah Drabkin, Nathan Lachowsky

ID: 39

Essential Requirements for Establishing and Operating Data Trusts: Practical Guidance Based on a Working Meeting of Fifteen Canadian Organizations and Initiatives

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Background and Objectives: Increasingly, the term "Data Trust" is being used to refer to a repeatable mechanism or approach to sharing data in a timely, fair, safe and equitable way. However, Data Trusts can take many forms, and there is no consensus on what a Data Trust must include or how it should be established.

Approach: In December 2019, we convened a working meeting of 19 people representing 15 Canadian organizations/initiatives most of which focus on public sector health data. Our objective was to identify a small set of essential and practical requirements for Data Trusts, regardless of the form that a Data Trusts takes. We used a series of "min specs" facilitated discussions and live internet polling to capture individuals' input throughout the day. Preliminary findings were presented and discussed during the meeting, then refined through the development and publication of a Feature Paper in the International Journal of Population Data Science.

Results: Twelve (12) min specs requirements for data trusts were identified. The foundational min spec is that data trusts must meet all legal requirements, including legal authority to collect, hold or share data. In addition, there was agreement that data trusts must have (i) an accountable governing body which ensures the data trust advances its stated purpose and is transparent, (ii) comprehensive data management including responsible parties and clear processes for the collection, storage, access, disclosure and use of data, (iii) training and accountability requirements for all data users and (iv) ongoing public and stakeholder engagement. We are now beginning to implement and refine the min specs in partnership with data holders and other organizations including Canada's CIO Strategy Council, GovLab at NYU, and others.

Conclusion: Participants from 15 Canadian organizations/initiatives identified multiple agreed-on essential elements and characteristics for Data Trusts. Continued exchange of insights and experience is recommended on this evolving topic.

Primary Theme: Health Informatics

Secondary Theme: Patient and Public Engagement

Methods: Knowledge Translation and Exchange (KTE) Methods

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ID: 41

Trends and Outcomes of Serious Complications associated with Non-Fatal Opioid Overdoses in Ontario, Canada

Background and Objectives: Canada's opioid overdose crisis has escalated over the past decade, and has been exacerbated by the social and economic consequences of the COVID-19 pandemic. Non-fatal opioid overdoses can lead to serious complications and consequently, long-term health effects for survivors. We sought to characterize the trends of hospitalizations for serious complications associated with opioid overdoses in Ontario, Canada and report health services utilization and mortality rates in the year following hospital discharge.

Approach: We conducted a population-based cross-sectional study of all individuals who experienced a serious complication (required intubation, rhabdomyolysis, or a brain injury) associated with an opioid overdose between January 1, 2010 and December 31, 2019 in Ontario, Canada. We used the Canadian Institute for Health Information Discharge Abstract Database to define inpatient opioid toxicities and related serious complications. We examined inpatient characteristics at the time of admission and examined health services utilization and mortality in the year following hospital discharge.

Results: Overall the rate of serious complications associated with opioid overdoses increased by 60.5% between 2010 and 2019, rising from 1.8 per 100,000 population to 3.0 per 100,000 population. Among hospitalizations where an individual was discharged alive, there was high health services utilization in the year following discharge; 71.2% (N=953) visited the emergency department (ED), 34.2% (N=458) were admitted to hospital, and 16.4% (N=219) were treated in hospital for an opioid overdose. Finally, 8.0% (N=127) of hospitalizations resulted in death within 1 year.

Conclusion: We found an increasing rate of serious complications associated with opioid overdoses and a high demand of health care services in the year following the event. These findings highlight an ongoing need for support and harm reduction services in communities to allow for early intervention to avoid these serious complications.

Primary Theme: Mental Health and Addictions

Secondary Theme: Equity and Vulnerable Populations

Methods: Statistics/ Econometrics

AuthorNames: Sophie Kitchen, Tara Gomes, Daniel McCormack, Dan Werb, Diana Martins, Flora Matheson, Alexander Caudarella

ID: 42

Adoption of a Laboratory EMR System and Inappropriate Laboratory Testing in Ontario: A Cross-Sectional Observational Study

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Background and Objectives: Electronic medical record (EMR) systems have the potential to facilitate appropriate laboratory testing. We examined three common medical tests in primary care—hemoglobin A1c (HbA1c), cholesterol, and thyroid stimulating hormone (TSH)— to assess whether adoption of a laboratory EMR system in Ontario had an impact on the rate of inappropriate testing among primary care physicians.

Approach: We used FY2016-17 population-level laboratory data to estimate the association between adoption of a laboratory EMR system and the rate of inappropriate testing. To overcome the problem of potential endogeneity of physician choice to use the EMR, the EMR penetration rate in the physician's geographical area of practice was used as an instrumental variable in an OLS regression. We then simulated the change in the rate of inappropriate testing, by payment model, as the EMR penetration rate increased from the baseline percentage.

Results: The simulation models showed that an increase in the rate of EMR penetration from a baseline average was associated with a statistically significant decrease in inappropriate hbA1c and cholesterol testing, but a statistically insignificant increase in inappropriate TSH testing. The impact of EMR penetration also varied by payment model.

Conclusion: This study demonstrated a positive association between availability of an EMR and appropriate service utilization. Varying impacts of EMR availability by primary care model may be reflective of different incentives inherent in these models. Policies encouraging physicians to increase laboratory EMR use could improve quality and continuity of patient care.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Primary Healthcare

Methods: Statistics/ Econometrics

AuthorNames: Nadine Chami, Silvy Mathews, Sharada Weir, Jasmin Kantarevic, Jim Wright

ID: 43

Effect of Strict and Soft Policy Interventions on Laboratory Diagnostic Testing in Ontario, Canada: A Bayesian Structural Time Series Analysis

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Background and Objectives: Applications of behavioral economics targeted at optimizing laboratory utilization among physicians have been implemented in Ontario through different types of nonfinancial interventions. This study evaluates the effectiveness of these interventions in terms of changing physician ordering behavior for eight tests that were subject to a strict or soft policy intervention during the study period: ferritin, thyroid stimulating hormone (TSH), vitamin B12, chloride, creatine, vitamin D, folate, and serum glutamic-oxaloacetic transaminase (aspartate aminotransferase) (SGOT(AST)).

Approach: Strict policy interventions restrict Ontario Health Insurance Plan (OHIP) payment for tests to patients with specific conditions or limit ordering to particular physician specialties, while soft policy interventions involve modifications to the laboratory requisition form. We use a Bayesian structural time series model applied to Ontario laboratory claims data for FY2006 through FY2017 to estimate the impact of soft and strict policy interventions on the number of laboratory tests performed.

Results: Results for soft policy interventions showed a statistically significant 36% decrease in chloride testing, 28% decrease in creatine testing, 9% decrease in vitamin B12 testing, and 8% decrease in ferritin testing. Results for strict policy interventions showed a statistically significant 75% decrease in 1,25-dihydroxy vitamin D testing, 73% decrease in 25-hydroxy vitamin D testing, and 16% decrease in folate testing. TSH and SGOT testing showed a drop of 14% and 21%, respectively, though the decrease was not statistically significant.

Conclusion: Although the overall magnitude of change was smaller for soft policy interventions, interventions designed with soft or strict policy mechanisms addressing laboratory utilization management are effective at influencing physicians’ test ordering behavior.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Statistics/ Econometrics

AuthorNames: Nadine Chami, Yin Li, Sharada Weir, Jim Wright, Jasmin Kantarevic

ID: 45
Multimorbidity and use of reversible contraception: Results from a Canadian cross-sectional survey

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Background and Objectives: Contraception provides an opportunity to plan the timing of pregnancies and address preconception risk factors. Such pregnancy planning is particularly important for women with chronic conditions, who are at risk for perinatal complications and could benefit from preconception interventions. However, while the prevalence of co-occurring chronic conditions—i.e., multimorbidity—is increasing among reproductive-aged women, little is known about their contraception use. We examined reversible contraception use among women with multimorbidity, one chronic condition, and none.

Approach: We used data from the 2015-2016 Canadian Community Health Survey on 15 to 49-year-old women who were sexually active and did not intend to become pregnant (n=12,741). Women with multimorbidity were those with ≥ 2 long-term chronic conditions diagnosed by a health professional (17.6%), compared to those with one chronic condition (24.5%) and none (57.9%). We used modified Poisson regression to derive adjusted prevalence ratios (aPR) for any reversible contraception and emergency contraception use, and—among reversible contraception users—multinomial logistic regression to derive adjusted odds ratios (aOR) for highly effective and moderately effective vs. less effective contraception use.

Results: Compared to women with no chronic conditions, women with multimorbidity were less likely to use any reversible contraception (aPR 0.93, 95% CI 0.88-0.98) and slightly but non-significantly more likely to use emergency contraception (aPR 1.37, 95% CI 0.96-1.96). Among reversible contraception users, women with multimorbidity were more likely to use highly effective contraception (aOR 1.27, 95% 1.05-1.52), but not moderately effective contraception (aOR 0.96, 95% CI 0.84-1.10) (vs. less effective contraception). There were no statistically significant differences between women with one chronic condition and no chronic conditions. There was a clear inverse dose-response relationship between the total number of chronic conditions and use of any reversible contraception in unadjusted analyses, but this was attenuated after adjustment.

Conclusion: Contraception use is a key indicator of reproductive health care access. The lower overall rate of contraception use among women with multimorbidity reflects an overall need for better family planning efforts in this population, with continued promotion of highly effective contraception options also being important.

Primary Theme: Maternal and Child Health

Secondary Theme: Primary Healthcare

Methods: Survey Research Methods

AuthorNames: Hilary Brown, Amira Aker, Susitha Wanigaratne

ID: 48

Improving transitions from pediatric to adult healthcare for youth with complex care needs (CCN) and their families in New Brunswick

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Background and Objectives: Care providers across sectors are often ill-equipped for the successful transition of youth with complex care needs (CCN) from pediatric to adult healthcare. We aim to 1) examine existing interventions and programs available in New Brunswick that support this transition; 2) explore the experiences and needs of youth and young adults with CCN, their families, and care providers during and after transitions in care; and 3) develop a province-wide transition strategy for youth with CCN.

Approach: To accomplish these goals, we conducted an environmental scan to explore what existing programs and services are available in New Brunswick for youth with CCN transitioning to adult healthcare. Next, we distributed a province-wide survey to youth, young adults, caregivers, and care providers to collect data on experiences with transitions from pediatric to adult healthcare in New Brunswick. Finally, we collected qualitative data using semi-structured interviews with youth, young adults, caregivers, and care providers to explore the experiences and needs of these individuals prior to, during, and after youth/young adults' transition from pediatric to adult healthcare in New Brunswick.

Results: Analysis for this project is ongoing and is expected to be complete by April 2021. Forty-one individuals have completed the online survey (14 young adults; 27 caregivers) and semi-structured interviews have been conducted with 10 youth/young adults, 15 caregivers, and 15 care providers. Preliminary analysis of 5 caregiver interviews indicates that families caring for youth with CCN are experiencing major challenges during the transition from pediatric to adult healthcare.

Conclusion: This study will provide information on what programs and policies could support transitions from pediatric to adult healthcare; support the development of tools to better facilitate convenient and integrated care during these transitions; and provide future direction to improve services through a healthcare transition strategy for youth with CCN.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Chronic Disease Management

Methods: Mixed Methods

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ID: 49

Integrating Care from Home to Hospital to Home: Using Participatory Design to Develop a Provincial Transitions in Care Guideline

Background and Objectives: Patients with complex, chronic diseases frequently have unmet care needs and experience care gaps as they as they undergo transitions in care (TiC). To improve patient outcomes and system integration, in 2017/2018, healthcare leadership in Alberta mandated the development of a provincial guideline outlining core components of effective TiC. In response, Alberta Health Service's (AHS) Primary Health Care Integration Network (PHCIN) led the development of the Home to Hospital to Home (H2H2H) Transitions Guideline.

Approach: Over a one-year period, the PHCIN led a collaborative process with more than 750 stakeholders to design the content for the H2H2H Transitions Guideline. The PHCIN utilized a participatory design and an iterative mixed-methods approach where stakeholder perspectives from one phase are used to inform the next phase. After developing an initial iteration from an environmental scan and literature review, key stakeholders were continually engaged and Guideline content was established through the following activities: i) learning collaborative; ii) design-team; iii) targeted online surveys; iv) primary care stakeholder consultation; v) modified Delphi panel; and vi) patient advisory committee.

Results: The result of the process led by the PHCIN was Alberta's first provincial guideline for supporting patients as they transition from their community, to hospital, and back home. The Home to Hospital to Home Transitions Guideline bridges connections between hospitals, primary care, and community services, with patients, families and caregivers at the center. The final version of the Guideline contains 6 elements: 1) Confirmation of the Primary Care Provider, 2) Admit Notification, 3) Transition Planning, 4) Referral and Access to Community Supports, 5) Transition Care Plan, and 6) Follow-up to Primary Care. Each element also includes leading operational practices (for hospital team, primary care provider/team, patients, families, and caregivers; and community supportive care team(s)), tools and resources, additional information, and change management tips.

Conclusion: The guideline developed used an integrated approach where multi-disciplinary providers and patients collaborated and informed the design of a provincial standard for shared transition planning. The participatory design provided the opportunity to translate feedback collected from multiple stakeholders, create shared ownership of common goals, decision-making processes, and integrate professional knowledge/expertise.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Primary Healthcare

Methods: Mixed Methods

AuthorNames: Staci Hastings, Robin Walker , Charles Cook, Ceara Cunningham, Lisa Cook, Judy Seidel, Scott Oddie, Jodi Cullum, John Hagens

ID: 50

Young Adults’ Perspectives on the Use of Symptom Checkers for Self-Triage and Self-Diagnosis: Qualitative Study

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Background and Objectives: Young adults often browse the internet for self-triage and diagnosis. More sophisticated digital platforms such as symptom checkers have recently become pervasive; however, little is known about their use. The objective of this study was to understand young adults’ (18-34 years old) perspectives on the use of the Google search engine versus a symptom checker, as well as to identify the barriers and enablers for using a symptom checker for self-triage and self-diagnosis.

Approach: A qualitative descriptive case study research design was used. Semistructured interviews were conducted with 24 young adults enrolled in a university in Ontario, Canada. All participants were given a clinical vignette and were asked to use a symptom checker (WebMD Symptom Checker or Babylon Health) while thinking out loud. Following this exercise, participants were asked questions regarding their experience. With informed consent by participants, interviews were audio-recorded, transcribed, and imported into the NVivo software program. Inductive thematic analysis was conducted independently by two researchers.

Results: Using the Google search engine was perceived to be faster and more customizable (ie, ability to enter symptoms freely in the search engine) than a symptom checker; however, a symptom checker was perceived to be useful for a more personalized assessment. After having used a symptom checker, most of the participants believed that the platform needed improvement in the areas of accuracy, security and privacy, and medical jargon used. Given these limitations, most participants believed that symptom checkers could be more useful for self-triage than for self-diagnosis. Barriers (n=24) and enablers (n=39) for symptom checker use were categorized into individual-, disease-, health system-, and symptom checker-level factors. The main barrier for use is lack of awareness regarding the platform's existence.

Conclusion: Awareness related to the existence of symptom checkers and their integration into the health care system are required to maximize benefits related to these platforms. Mitigating barriers and amplifying enablers identified in this study are likely to increase the acceptance and use of symptom checkers by young adults.

Primary Theme: Health Informatics

Secondary Theme: Patient and Public Engagement

Methods: Qualitative Research Methods

AuthorNames: Stephanie Aboueid, Samantha Meyer, Jim Wallace, Shreya Mahajan, Ashok Chaurasia

ID: 51

Gender specific factors associated with the utility of physical distancing, health related quality of life and change in psychological distress during the COVID-19 pandemic in older adults in the province of Quebec.

Background and Objectives: The COVID-19 pandemic and physical distancing measures imposed have been associated with increased population mental health needs. Few studies have been longitudinal and focused on older adults. The objectives were to assess the socio-demographic, psychosocial, lifestyle factors and perceived threat of COVID-19 associated with utility of physical distancing, health related quality of life (HRQL) and change in psychological distress (PD) from before to during the first wave of the pandemic.

Approach: The sample included n=501 older adults having participated in 3 existing Quebec cohorts reflecting primary care, specialised care and institutionalised individuals. Respondents completed a telephone survey between April and June 2020 capturing information on study factors. Utility associated with distancing measures was ascertained with a standard gamble approach. HRQL was assessed with the EQ-5D. PD was assessed with the Kessler Psychological Distress Scale (K-10) and the change in the K-10 from prior (Nov 2015 to Jan 2017) to during the pandemic was carried out for the primary care cohort.

Results: Utility was associated with perceived risk of COVID-19 in men and women; alcohol consumption and # physical conditions in women; and country of birth, education, satisfaction with life (SWL), PD in men. HRQL was associated with having a caregiver, memory problems, # physical conditions, difficulty in accessing health services, SWL, PD, and COVID-19-related post-traumatic stress (PTS) symptoms in women; and risk of infection, # of medications and PD in men. Increase in PD during the pandemic was associated with PTS in women; and memory problems, perceived risk of COVID-19, and difficulty in accessing health services in men. Reduced PD was associated with the presence of caregivers and support. Past mental health problems decreased the worsening of PD during the pandemic.

Conclusion: Individuals with physical disorders, memory problems, COVID-19 PTS symptoms and reporting difficulty in accessing health services and the presence of a caregiver significantly impacted health outcomes. Future intervention studies aimed at a better follow-up of older adults with these risk factors can mitigate the negative consequences related to the pandemic.

Primary Theme: COVID-19

Secondary Theme: Mental Health and Addictions

Methods: Survey Research Methods

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ID: 52
Children and youth with medical complexity in Canada

Background and Objectives: Children and youth with medical complexity represent a diverse group of children with a spectrum of conditions, needs, limitations and medical fragility. Although children and youth with medical complexity are a small proportion of all children, their unique needs translate into substantial use of health care services. The objective of the study is to offer a population-based overview to understand how these children and youth use the health systems across Canada.

Approach: This study identified children and youth, from newborns to 24 years old, who had at least one hospital stay or day surgery in 2015-2016. Children and youth were included in the study if they had a complex chronic condition or neurological impairment recorded in any hospital stay or day surgery between April 2010 and March 2016. The analyses uses data from the Canadian Institute for Health Information on primary health care, specialty clinic visits, hospital stays, emergency department care, community drug claims, and home care. A 2-year follow-up was applied for most analyses.

Results: This study provides the first pan-Canadian overview of this population. The main findings are: • In 2015-2016, the age-adjusted rate of medical complexity was 948 per 100,000 children and youth, similar to that found in other research. • There were wide provincial variations in the rates of medical complexity. • Children and youth with medical complexity used a large proportion of primary health care services, hospital care, and emergency care. Rates of hospital care and emergency department visits were even higher among those with medical technology assistance. • Data about children and youth with medical complexity who receive home care is very limited. On average, children and youth received 44 hours per week of informal care. More than one-third had caregivers who were distressed.

Conclusion: Children and youth with medical complexity are a diverse group, with uncommon diagnoses, unique needs and varying access to supports. Their extensive medical needs correspond to a higher required use of health care services and medications.

Primary Theme: Maternal and Child Health

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Statistics/ Econometrics

AuthorNames: Alexey Dudevich, Andrea Foebel, Katherine McKenzie, Alicia Costante, Xikuan Chen

ID: 54
A snapshot of the health system experience by Canadians with mental health conditions

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Background and Objectives: Mental health conditions affect many Canadians and individuals with mental health conditions may require a range of services to meet their health care and social needs. The objective of this study is to examine the interactions that Canadians with mental health conditions have with the health system.

Approach: The data source is the Commonwealth Fund's 2020 International Health Policy Survey, which reflects experiences of adults from random samples in Canada and 10 of its peer countries. 5,297 respondents in Canada were interviewed by phone (landline and cell) in spring 2020. Data was weighted by age, gender, jurisdiction, education and knowledge of French/English to ensure representativeness. Significance tests were performed to compare responses for provinces/territories and Canada against the average of all 11 countries.

Results: 26% of Canadians have had been told by a doctor they have depression, anxiety or other mental health conditions. 21% of Canadians reported that they wanted professional help about their mental health in the past year. Of those who have a mental health condition or who wanted professional help, only 43% had received services (similar to the international average of 41%) and this varied by jurisdiction, income and rurality. Compared to those without a mental health condition, those with a mental health condition were more likely to report cost barriers to care and financial distress. When they were able to access services, those with a mental health condition (79%) felt less supported by health professionals compared to those with other types of chronic conditions (88%).

Conclusion: Canadians with mental health conditions experienced more financial distress and barriers to access, they also felt less supported by health professionals. To ensure the needs of Canadians with mental health conditions are met, improvements in access and quality of care are needed.

Primary Theme: Mental Health and Addictions

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Survey Research Methods

AuthorNames: Grace Cheung, Sandra Milicic, Katherine McKenzie, Alison Ytsma, Liudmila Husak

ID: 57

Missed vaccination in 26 middle- and high-income countries during the COVID-19 pandemic

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Background and Objectives: The COVID-19 pandemic has disrupted vaccination services and raised the specter of a global resurgence of preventable diseases. We assessed the extent of and reasons for missed vaccinations in middle- and high-income countries in the early months of the pandemic.

Approach: Participants were 28,429 adults from 26 middle- and high-income countries. From May to June 2020, participants completed an online survey on missed vaccination. We stratified analyses by country income and whether a child or adult missed vaccination.

Results: Overall, 9% of households had missed a vaccine, and 13% were unsure. More households in middle- than high-income countries missed vaccination for children (7.6% vs. 3.0%) and adults (9.6% vs. 3.4%, both p

Conclusion: Missed vaccination was common and more prevalent in middle- than high-income countries. Missed vaccination could be mitigated by emphasizing COVID-19 safety measures in vaccination clinics, ensuring free and accessible immunization, and communicating a clear healthcare provider recommendation.

Primary Theme: COVID-19

Secondary Theme: Primary Healthcare

Methods: Data Mining/Big Data Analytics

AuthorNames: Gilla Shapiro, Nisha C. Gottfredson, Julie Leask, Kerrie Wiley, Francine E. Ganter-Restrepo, Sarah P. Jones, Lisa Menning, Noel Brewer

ID: 58

Forecasting COVID-19 health care resource demand with Health System Capacity Planning Tool

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Background and Objectives: We aimed to create an accessible, customizable, and flexible Tool to model SARS-CoV-2 transmission in the population to support health system decision-makers in planning their response to the COVID-19 pandemic. Stakeholders can build best- and worst-case scenarios for their region, and plan for the possibility of the health care system being overwhelmed.

Approach: Our Tool is implemented in Microsoft Excel for speed, ease of customization and ease of interpretation. It has three components: 1) The Epidemiological module simulates the potential spread of COVID-19 cases using a deterministic compartmental SEIR model. Users can explore scenarios based on public health measures and their effect on the disease reproduction number, as well as the impact of imported infectious cases and super-spreader events; 2) The Capacity module estimates hospital resources required to treat COVID-19 patients; 3) The HCW/PPE module estimates the number of health care workers and personal protective equipment required to care for COVID-19 patients.

Results: The Tool allows users to simulate the effects of public health interventions on hospital capacity, health workforce staffing and personal protective equipment (PPE). Using the Tool to create scenarios of community disease transmission, users can obtain estimates for the number of people requiring acute care or critical care hospital beds and ventilators, and for the number of health care workers and PPE required. The Tool’s accessibility, highly customizable parameters, and dynamic visualizations allow all levels of health authorities to understand the epidemiological transmission of COVID-19 in their jurisdiction and its potential effects on health care resources. Our stakeholders at the federal, provincial and local hospital levels are now successfully using the Tool to inform their health planning decisions and communicate possible scenarios to the public.

Conclusion: Our Tool offers an intuitive and user-friendly interface to simulate the COVID-19 epidemic trajectory and project health care demand, allowing users to explore the effects of public health measures such as social distancing, lockdown or de-escalation in a variety of scenarios.

Primary Theme: COVID-19

Secondary Theme: Health Human Resources

Methods: Healthcare Service or Policy Initiative

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ID: 61
An Evidence Review of the Impact of Virtual Visits in Primary Care

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Background and Objectives: As a result of the COVID-19 pandemic, access to in-person ambulatory visits and procedures have been limited and virtual care has been recommended where clinically appropriate. In June 2020, the Alberta Health Services (AHS) Scientific Advisory Group (SAG) requested an evidence review of the impact of virtual visits (VV) in team-based primary care, including a focus on vulnerable or marginalized populations.

Approach: AHS Knowledge Resource Services (KRS) conducted a literature search. KRS searched Medline, CINAHL, PubMed, TRIP Pro/Google Advanced Search databases and included peer-reviewed studies published between 2010-2020-current. 106 articles that explored direct communication (asynchronous or synchronous) between patients and a primary care provider and team using video, telephone, text or email were included for review. All medical conditions and patient populations who presented to primary care were included. Common outcomes examined across studies included acute care utilization, patient/provider satisfaction and experience, access to care, and chronic disease management.

Results: Findings indicate that VV in primary care are as effective as face-to-face visits in terms of patient outcomes and healthcare utilization; however, there were specific patient populations and contexts that facilitated improved outcomes (e.g., when and where VV was conducted). VV improved access to care and patient satisfaction. Synchronous communications provided chronic disease patients the opportunity to engage in more direct communication with primary care providers and teams. Mixed results were reported for physician satisfaction, antibiotics prescribing rates, laboratory testing, and whether there were increases/decreases in visits to primary care. Studies focusing on vulnerable or marginalized populations demonstrated positive effects (e.g., patient satisfaction, access to services) using telephone, email or video visits to address healthcare needs for low-income communities, older adults or ethno-cultural populations.

Conclusion: Given the current COVID-19 context, the use of VV as an alternative to face-to-face care has risen and is anticipated to grow. To ensure primary care providers and teams are providing safe, quality care to Albertans virtually, determining appropriateness of VV should be based on medical condition and context.

Primary Theme: Primary Healthcare

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Synthesis

AuthorNames: Staci Hastings, Ceara Cunningham, Charles Cook, Lisa Cook, Mary Modayil, Alka Patel, Robin Walker , Judy Seidel, Richard Golonka, Meaghan Lunney

ID: 62
Palliative home care and emergency department visits in the last 30 and 90 days of life: a retrospective cohort study of cancer patients.

Background and Objectives: Evaluate the association of specialist palliative home care (HC) on emergency department (ED) visits in the 30 and 90 days prior to death.

Approach: : This retrospective cohort study using administrative data identified 6976 adults deceased from cancer between 2008 and 2015, living ≥ 180 days after diagnosis of cancer, and residing in the urban Calgary Zone of Alberta Health Services. All palliative HC and generalist HC services were examined. Regression analyses examined the relationships of HC type to ED visits in the last 30 or 90 days of life.

Results: In the last 30 days of life, compared to patients receiving palliative HC, patients receiving only generalist HC, or no HC, were more likely to visit the ED (odds ratio (OR)generalist-HC 1.19; 95%CI 1.06 to 1.34; ORno-HC 1.54; 95%CI 1.31 to 1.82). In the last 90 days of life, compared to patients receiving palliative HC, those receiving generalist HC (OR 1.48; 95%CI 1.32 to 1.67) and no HC (OR 1.66; 95%CI 1.39 to 1.99) had increased odds of visiting the ED.

Conclusion: Receiving generalist HC and no HC was associated with increased odds of visiting the ED in the last 30 and 90 days of life, when compared to patients receiving palliative HC. Improving access to palliative HC for patients at high risk of visiting the ED may reduce ED visits and

Primary Theme: Primary Healthcare

Secondary Theme: Cancer

Methods: Statistics/ Econometrics

AuthorNames: Jennifer Mracek, Madalene Earp, Aynharan Sinnarajah

ID: 68
In-home Electronic Medication Dispensing System: A Pilot Randomized Controlled Trial

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Background and Objectives: Medication adherence is challenging for older adults due to factors such as the number of medications, dosing schedule, and the duration of drug therapy. The objective of this study was to examine the effectiveness of an in-home electronic medication dispensing system (MDS) on improving medication adherence and health perception in older adults with chronic conditions.

Approach: A pilot Randomized Controlled Trial (RCT) was conducted using a two-arm parallel assignment model. The intervention group used the an MDS as their medication management method. The control group continued to use their current methods of medication management. Block randomization was used to assign participants into the intervention or control group. The inclusion criteria included 1) English speaking 2) age 50 and over 3) diagnosed with one or more chronic condition(s) 4) currently taking five or more oral medications 5) City of Calgary resident. Participants were recruited from a primary care clinic in Alberta, Canada.

Results: A total of 91 participants were assessed for eligibility and 50 were randomized into the two groups. The number of participants analyzed for ITT was 23 and 25 in the intervention and control group, respectively. Most of the demographic characteristics were comparable in the two groups except mean age of the intervention group, which was higher compared to the control group (63.96±7.86 versus 59.52±5.93, p-value=0.03). The average recorded adherence over 26 weeks was significantly higher in the intervention group than the control group (98.35%±2.15% versus 91.17%±9.76%, p

Conclusion: MDS can be an effective, long-term solution to medication non-adherence in older adults experiencing chronic conditions and taking multiple medications. The technology induces better consistency and improvement in medication taking behaviour than simple, non-technological intervention.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Pharmaceutical Policy

Methods: Experimental or Quasi-experimental Methods

AuthorNames: Mubashir Arain, Armghan Ahmad, Venus Chiu, Lorena Kembel

ID: 71
Intervening in Workplace Harassment with Health Care Workers

Background and Objectives: Workplace harassment is a pressing occupational health and safety problem. Healthcare workplaces in Canada have especially high prevalence rates. Most interventions addressing workplace harassment are top-down strategies (eg workplace policies, legislation). In contrast, Participatory Theatre is an embodied activity that aims to empower individuals to become protagonists in their own lives. The objective of this paper is to report on a Participatory Theatre project addressing workplace harassment with workers in Saskatchewan's healthcare system.

Approach: The paper makes explicit the challenges, dilemmas, and potentials of Participatory Theatre. The study's intervention included scenarios from the participants' lived experience of harassment. The aim of the scenarios was not to portray 'good' guys and 'bad' guys, but to illustrate harassment as a behavioural manifestation of relations of power and to investigate what prevents well-intentioned people from changing the conditions that give rise to the harassment. The paper's analysis is based on data from intervention workshops and follow-up interviews with the participating healthcare workers, conducted 6-8 months following the workshops to capture sustained outcomes.

Results: The scenarios developed by the intervention's participants reflected the underlying stories of their everyday lived experience and energized them to become competent contesters of dominant discourses, heighten their reflexivity, and generate group solidarities. The Participatory Theatre intervention nurtured the development of empathetic bonds between the participating health care workers, fostered by the relational aesthetics of their creative outputs. The study's results provide compelling evidence for the value of involving participants in the co-creation of knowledge that has immediate utility in their workplaces.

Conclusion: The paper concludes by advocating for participatory theatre as a 'bottom up' approach of intervening in complex social problems, empowering participants to become protagonists in their own lives by recognizing that social problems, such as workplace harassment, can be experienced individually but have structural antecedents.

Primary Theme: Health Human Resources

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Participatory or Action Research Methods

AuthorNames: Elizabeth Quinlan

ID: 82

The current and potential use of Electronic Medical Record (EMR) data for primary health care performance measurement across Canadian jurisdictions

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Background and Objectives: As Canadian primary health care (PHC) Electronic Medical Records (EMRs) mature, there is increasing potential use of EMR data for performance measurement. This study explores current uses and considerations to further its potential.

Approach: Qualitative descriptive assessment across Canada triangulating reporting, consultations with policy-makers, and semi-structured interviews with system leaders (n=41) and clinician/researchers (n=20).

Results: Six initiatives of EMR data use for performance measurement were identified: one multi-jurisdictional; five jurisdiction-specific. EMR data uses were predominately for micro-level physician and team performance improvement. Indicator sets varied in number, though share emphasis on care processes, chronic diseases, prevention and disease management. Key considerations for governing, resourcing and implementing EMR data for performance measurement were identified.

Conclusion: The extent of EMR data use for performance measurement varies across Canada. To further leverage its potential, pan-Canadian data and privacy standards, performance intelligence competencies and renewed core PHC indicators should be prioritized.

Primary Theme: Primary Healthcare

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Erica Barbazza

ID: 84
Development and testing of quality indicators for palliative care in Canada using interRAI data

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Background and Objectives: The need for palliative care (PC) will continue to increase in Canada with population aging. Many older adults prefer to 'age in place' and receive care in their own homes. Currently, there is a lack of standardized quality indicators (QIs) for PC delivered in the community in Canada. To address this, the main goal of the project is to develop a set of QIs for palliative home care using interRAI data.

Approach: The QI development included three stages, including a one-day workshop with 30 stakeholders from Ontario to identify potential priority measures of PC quality. Following this, one-on-one interviews with nine caregivers from BC, Alberta, Ontario, Nova Scotia and Yukon were completed to elicit opinions on what constitutes good quality PC. Interviews/focus groups were also held with 11 decision makers from these same regions. Finally, a group of 21 PC experts from Canada, the US and Belgium evaluated the potential list of QIs using a modified RAND/UCLA Delphi process. Each QI was rated on importance, validity, evidence of improved outcomes and usability.

Results: From these efforts, a list of 22 potential QIs was developed and operational definitions (i.e., numerator and denominator) were created based on existing interRAI data elements. These preliminary QIs cover multiple domains including physical symptoms (e.g., pain control, fatigue), psychosocial issues (e.g., loneliness, caregiver distress) and health service use (e.g., hospital admissions, emergency department visits. A technical working group, within the research team, is currently evaluating these QIs in order to finalize their definitions and create a risk adjustment strategy for each one.

Conclusion: Having a standardized set of QIs will enable health care professionals and decision makers to target areas for improvement, implement interventions to improve the quality of care, and ultimately, optimize the health and well-being of individuals with a serious or life-limiting illness.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Mixed Methods

AuthorNames: Nicole Williams, Dawn Guthrie, Kathryn A. Fisher, Donna Goodridge, John Hirdes, Aynharan Sinnarajah, Peter Tanuseputro, Christina Vadeboncoeur, Anja Declercq, Joachim Cohen, Brant Fries

ID: 88
COVID-19 – An opportunity to improve access to primary care in Quebec?

Background and Objectives: Quebec ranks poorly for access to primary care: 18% of its population is unattached to a family physician (≥35% in some regions) and timely access remains a major challenge. COVID-19 catalyzed a rapid and substantial reorganization of primary care, accelerating the spread of existing strategies and fostering a proliferation of new innovations. We aimed to describe organizational innovations aiming to improve access to primary care and related contextual changes, during COVID-19 in Quebec.

Approach: As part of the multiprovince "Problems Coordinating and Accessing Primary Care for Attached and Unattached Patients in a Pandemic Year" (PUPPY) study, we conducted semi-structured e-interviews (n=28) with key primary care stakeholders in Quebec between October and December 2020. Participants included provincial and regional stakeholders (e.g., policymakers, decision-makers, family physicians) involved in reorganizing primary care in the face of COVID-19. We recruited a diverse range of stakeholders, using purposeful sampling (e.g., role, region). Interviews were transcribed verbatim and thematic analysis was conducted in NVivo12. Emerging results were discussed by Quebec team members to identify salient themes.

Results: Innovations included: triaging patient to predesignated "hot" (COVID-19-like symptoms) and "cold" clinics, favoring teleconsultations, increased use of centralized online booking system to coordinate supply/demand (e.g., reorient low acuity patients from emergency departments to primary care), new regional hotlines to help patients navigate primary care and COVID-19 testing, new pathways between unattached long-term care patients and primary care, expanding transition clinics for unattached patients, redirecting avoidable family physician visits to other services to free up appointments for unattached patients. Innovation spread and proliferation was attributed to: a strengthened sense of community amongst providers, decreased patient demand, renewed policy and provider interest in populational access (vs. attached patients only), suspended performance targets (e.g. continuity ≥80%), increased scopes of practice, modified fee codes and greater regional leeway.

Conclusion: In Quebec, COVID-19 accelerated the uptake and creation of innovations to improve access to primary care, removing longstanding barriers. Many stakeholders believed this reorganization would have positive impacts on access to primary care after COVID-19. Next steps include evaluating the impact of COVID-19 on primary care access using administrative data.

Primary Theme: COVID-19

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Mylaine Breton, Mélanie Ann Smithman, Véronique Deslauriers, Benoît Cossette, Line Guénette, Claire Godard-Sebillotte, Nadia Sourial, Catherine Hudon, Maude Laberge, Caitlyn Ayn, Eliot Frymire, Jennifer Isenor, Michael Green, Sue Nesto, Emily Marshall

ID: 89
Mandatory reporting legislation in Canada: improving patient safety or just a framework for data collection?

Background and Objectives: Patient safety remains a major public health challenge. A systems-thinking approach views patient safety as an outcome of the entire healthcare system; in other words, aspects of the system itself cause most patient safety incidents. Legislation is one aspect that is poorly understood in relation to impact on patient safety. In this study, we examined and compared Canadian provincial and territorial (PT) legislation that explicitly requires and governs mandatory patient safety incident reporting.

Approach: This study explored mandatory reporting legislation and patient safety outcomes in hospital settings. Data collection (January-May 2019) followed a multi-methods approach: a literature review to understand what is known regarding associations between patient safety legislation and outcomes; consultations with senior health system leaders; a jurisdictional review and assessment of the comprehensiveness of PT mandatory reporting legislation; and assessment of the extent to which patient safety outcomes are associated with variations in legislative frameworks. We mapped our results by jurisdiction and against a conceptual framework built upon the essential elements of patient safety legislation, as described in academic literatures.

Results: Current available evidence regarding any potential impact of mandatory reporting legislation on patient safety outcomes is limited. Eight jurisdictions have mandatory reporting legislation (BC, SK, MB, ON, QC, NB, NL, NT), but we found no clear patterns between legislation and outcomes. However, our results suggest existing legislation is designed to gather information about—rather than respond to and prevent—patient safety incidents. System- and learning-oriented legislation should contain provisions for investigation and analysis by experts, maintenance of a system-wide repository of data, regular review and sharing of lessons learned, and accountability. Strong patient safety culture and communication, with balance between the needs for privacy, confidentiality and sharing information, are foundational to enacting a cycle of learning to prevent future harm.

Conclusion: Legislation is one strategy among many to improve patient safety outcomes, with potential to play a major role as a framework for evidence-based interventions, learning and change in healthcare. Our results provide a starting point for deeper examination of impacts of mandatory reporting legislation on patient safety measures in Canada.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Policy Case Study

AuthorNames: Crystal Milligan, Sara Allin, Matthew Farr, Elina Farmanova, Allie Peckham, Ross Baker, Gregory Marchildon, Jan Byrd, Renee Misfeldt

ID: 90

Improving the Quality of Hospital Morbidity Data Globally: Development of Data Quality Indicators

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Background and Objectives: Hospital visits are collected and coded into the hospital morbidity database using the International Classification of Diseases (ICD). The quality of ICD-coded data is affected by multiple factors, which can hinder meaningful comparisons of morbidity data across countries. Assessing data quality is therefore essential for the ultimate goal of improving it, yet currently, there is no standardized approach. We aimed to develop an international method for assessing hospital morbidity data quality: Data Quality Indicators (DQIs).

Approach: To identify a set of candidate DQIs, an environmental scan was performed, in which we reviewed grey and academic literature on data quality frameworks, and existing methods to assess data quality. Once synthesized, these indicators were appraised and selected through a 3-round Delphi process. The first round was for idea generation through face-to-face group and individual meetings, while the second and third rounds were conducted remotely for online rating of the proposed indicators. Participants included international experts with expertise in administrative health data, data quality, and ICD coding. Final DQIs were selected based on the panelists' quantitative and qualitative feedback.

Results: The resulting 24 DQIs encompassed five dimensions of data quality: Relevance, Accuracy and reliability, Comparability and coherence, Timeliness, and Accessibility and clarity. Some examples include: "Audits and chart re-abstraction processes are in place to ensure the accuracy of codes" within Accuracy and reliability; "Differences across jurisdictions (e.g., health authorities, provinces, states) impacting data analysis and interpretation are documented for data users" within Comparability and coherence; or "Process and requirements for data access and release are clearly documented for data users" within Accessibility and clarity. This set of indicators will help stakeholders (e.g., World Health Organization, Organization for Economic Cooperation and Development) to assess data quality using the same standard across countries and to highlight areas in need of improvement.

Conclusion: The DQIs will be valuable to compare healthcare system performance nationally or internationally in terms of data quality. As well, this novel area of research could serve as a guidance for policy-and decision-makers worldwide, and could also further future studies and initiatives aimed at improving data quality.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Informatics

Methods: Knowledge Synthesis

AuthorNames: Lucia Otero Varela, Robin Walker , Cathy Eastwood, Hude Quan

ID: 93
Empty Emergency Rooms During the Pandemic? - Impact of COVID-19 Pandemic on Pediatric Emergency Department Visits

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Background and Objectives: COVID-19 and public health measures to contain it, have had significant impact on health systems, including pediatric emergency departments (EDs). We aimed to describe variations in pediatric ED visits during the first three months of the COVID-19 pandemic in Canada, compared to a historical control period.

Approach: We performed a retrospective cohort study of children presenting to two academic pediatric EDs in Quebec. The main exposure of interest was the period during which the patient was seen: pre-COVID period (March-May 2015-2019) vs. COVID period (March-May 2020) and the primary outcome was the overall number of weekly ED visits. This was conducted first in a bivariate analysis, then in a multivariate Poisson regression model, adjusting for hospital and baseline trend. The same analyses were subsequently used to estimate the impact of the COVID period on other covariates: patient age, CTAS levels, shift of the visit, and ED disposition.

Results: From 2015 to 2019, the two EDs had a median of 1,632 visits per week [interquartile range (IQR) 1,548; 1,703]; in 2020, this number decreased to 536 visits per week [IQR 446; 744]. In multivariable analyses, this represented a 53.3% (95%CI: 52.1, 54.4) reduction in the number of ED visits. The reduction was larger among visits triage categories 4 and 5 (lower acuity) than categories 1, 2 and 3 (higher acuity): -54.2% vs. -42.0% (p

Conclusion: In the first wave of the pandemic (March to May 2020), there was a 53.3% decrease in visits to pediatric EDs compared to historical control. It is important to monitor trends in ED visits, including the acuity and the diagnostics, as they provide insight into collaterals effects of the pandemic.

Primary Theme: COVID-19

Secondary Theme: Maternal and Child Health

Methods: Data Mining/Big Data Analytics

AuthorNames: Pierre Fontaine, Olivier Drouin, Jocelyn Gravel, Antonio D'Angelo, Esli Osmanlliu, Ariane Boutin, Evelyne D. Trottier, Nathalie Orr Gaucher

ID: 94

Characteristics to consider in a Knowledge Translation Theory, Model or Framework for Health Technology Reassessment

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Background and Objectives: Health Technology Reassessment (HTR) is a structured evidence-based assessment of an existing technology. The process results in four outputs: increase use, decrease use, no change, or de-adoption. However, implementation of these outputs remains a challenge. Knowledge Translation (KT) can be applied to implement findings from the HTR process. This study sought to identify which characteristics of KT theories, models, and frameworks (TMFs) could be useful, specifically for decrease use or de-adoption of a technology.

Approach: A qualitative descriptive approach was used to ascertain the perspectives of international KT and HTR experts on the characteristics of KT TMFs for decrease use or de-adoption of a technology. One-to-one semi-structured interviews were conducted with KT and HTR experts from September to December 2019. Interviews were audio recorded and transcribed verbatim. Themes and sub-themes were deduced from the data through framework analysis using five distinctive steps: familiarization, identifying an analytic framework, indexing, charting, mapping and interpretation. Themes and sub-themes were also mapped to existing KT TMFs.

Results: Thirteen individuals from Canada, United States, United Kingdom, Australia, Germany, Spain, and Sweden participated. Three themes emerged as ideal characteristics of a KT TMF: i) principles foundational for HTR: evidence-based, high usability, patient-centered, and ability to apply to micro, meso, macro levels; ii) levers of change: characterized as positive, neutral, or negative influences for changing behaviour; and iii) steps for knowledge to action: build the case for HTR, adapt research knowledge, assess context, select, tailor and implement interventions, and assess impact. Of the KT TMFs that were mapped, the Consolidated Framework for Implementation Research had most characteristics, except ability to apply to micro, meso, macro levels. Consideration of these characteristics may guide users in choosing which KT TMF(s) to use for HTR.

Conclusion: Application of KT TMFs to the HTR process has not been clearly established. This is the first study to provide understanding of characteristics within KT TMFs that could be considered by users undertaking projects to decrease or de-adopt technologies. Characteristics to be considered for implementing HTR outputs have been identified.

Primary Theme: Knowledge Translation & Exchange (includes KTE methods)

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Translation and Exchange (KTE) Methods

AuthorNames: Rosmin Esmail, fiona clement, Daniel Niven, Jayna Holroyd-Leduc, Heather Hanson

ID: 95

Reduce the time to prepare discharge summary at Burnaby Centre for Mental Health & Addiction (BCMHA)

Background and Objectives: Every patient from the BCMHA is provided with a brief discharge summary at discharge. A more comprehensive multidisciplinary discharge summary is compiled from multidisciplinary teams at the earliest possible time. This discharge summary includes the reason for admission to BCMHA, diagnosis at intake and all the investigations, assessments, consultations and procedures provided to patients during their stay.

Approach: A project team consisting of BCMHA staff and stakeholders (community providers, case workers, patient, family physician, mental health team & nursing unit assistant) collaborated to: 1) Analyze current workflow and design future work flow; 2) Develop a driver diagram, 3) Develop a fishbone diagram; and 4) Apply PDSA cycles. These information are collected in the period of their stay (9 months) at BCMHA which makes it very complicated to review and extract all the required information. Our objective was by September 2019 to reduce the average time to complete discharge summaries by GP/NP by 70%.

Results: Average time from discharge to the community receiving an interdisciplinary discharge summary was 59 days for GP/NPs with a range of 1 to 400 days. After the implementation, this turnaround time was reduced to an average of 2 days (range 1-7 days). For sustainability purposes, patient charts were audited for all units across BCMHA. Only 7 charts out of 90 did not have a template included. This was communicated with stakeholders to ensure that the templates are implemented at intake so that they capture all the crucial information in a real-time basis.

Conclusion: Our results indicated that a well-designed change strategy requires continuous multidisciplinary stakeholder engagement and support from the executives' leadership team across BCMHA. The success of project requires clear communication and team commitment. In this presentation, we will discuss the details of designing and implementing a Quality Improvement project.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Primary Healthcare

Methods: Program or Policy Evaluation

AuthorNames: Siavash Jafari, Chow Sandra, Chisato Ito, Sara Vazirian

ID: 96
Reducing over-prescription of Melatonin among patients with mental health and substance use.

Background and Objectives: Melatonin is commonly used for treatment of insomnia. At BCMHA, a pre-written protocol includes an order of 1-4 tablets (3-12 mg) for all patients on admission. As a part of the dose reduction trial, we did an extensive review of the evidence and decided to start all patients on 3 mg (1-tablet) only and adjust their dose if medically indicated. We decided to investigate the impact of this dose reduction on patients.

Approach: We collected data on prescribed as well as utilized doses of melatonin for 71 patients, every day, for a period of 14 days. We reviewed the total dose prescribed and the total dose actually utilized by each patient. Data was inserted to an excel spread sheet. No patient identifiers were collected.

Results: Of the total 71 patients, 45 (63%) were on 3mg of Melatonin, 19 (27%) on 6mg, and 7 (10%) on 9mg. None needed 12mg (4 tablets). Of clients who were on 3mg , 6mg and 9mg does, only 56% ,71% and up to 95% of the clients consumed their full dose respectively. In other words, 20% of the clients on 3 mg dose, 10% of the clients on 6 mg dose, did not use any melatonin. Clients on 9mg dose, used their doses at least 11 nights in 2 weeks. Pre-post comparison indicated that the 3976 melatonin tablets typically prescribed over a 2 weeks period was reduced to 1456, out of which only 815 were utilized.

Conclusion: In conclusion, majority of patients with mental health and substance use problems need no more than 3 mg melatonin for treatment of insomnia. The decision to reduce Melatonin PRN dose from 12 mg to 3 mg was a safe decision and in the best interest of our patients and centre.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Primary Healthcare

Methods: Mixed Methods

AuthorNames: Siavash Jafari, Sara Vazirian

ID: 97

Implementation of Formal Peer Support Workers' Role in Mental Health Settings: A Multilevel Review

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Background and Objectives: Experts in research, practice, and policy domains have argued that peer support workers (PSWs) could help deliver effective recovery-oriented mental health services, however, studies consistently show that PSWs remain underutilized. Formal PSWs are individuals with lived experience of mental illness and recovery, who integrate into mental health teams to provide services and help clients recover. This paper reports on a literature review of multi-level factors that influence PSWs' role implementation in mental health care settings.

Approach: Methods include an integrative literature review that allows holistic conceptualization of factors at the health system, organization and practice levels that influence PSWs' role implementation. Using a multilevel conceptual framework, researchers also examined interlevel interactions that have been overlooked in the literature. First, a preliminary review was conducted to identify key influencing factors/constructs pertaining to PSWs' role implementation. The results served as an instrument for data extraction. Database literature search followed by an iterative process of paper screening resulted in 40 eligible papers for analysis. A qualitative thematic analysis was performed and an iterative comparison across emerging themes allowed

Results: A multilevel conceptual framework is offered to depict influencing factors. Results showed that the implementation was most successful when an embedded peer support program existed. The organizational culture was a major theme that determined an organization's mission to endorse/promote recovery-oriented services in professional teams and assign PSWs as the representatives of such services, value service users' satisfaction, provide well-being support to PSWs and allocate funding for training, remuneration, and regular supervision of PSWs. Policy mandates and leadership in support of PSWs' role was highlighted as a cross-cutting theme at team, organization, and health system levels. Finally, economic uncertainty and prioritization of medical services over recovery inhibited budgetary decisions in favor of PSWs' employment, hence it has been a persistent risk to the role's sustainability.

Conclusion: Multilevel factors need evaluation prior to PSWs' employment. Qualitative inquiries to understand organizational preparedness at the levels of leadership and professional teams are essential to plan and assess the feasibility of an embedded peer support program. Otherwise, it is likely that PSWs only hold temporary positions and face unnecessary challenges.

Primary Theme: Mental Health and Addictions

Secondary Theme: Health Human Resources

Methods: Qualitative Research Methods

AuthorNames: ELMIRA MIRBAHAEDDIN, Samia Chreim, Peyman Varshoei

ID: 98

Barriers and Facilitators of Cost Awareness in Aortic Valve Replacement (AVR) Surgery: A Qualitative Study on Provider Perspectives

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Background and Objectives: The awareness of cost drivers surrounding aortic valve replacements (AVR) has been shown to be low among cardiac health care providers. We sought input from cardiac health care providers about their level of intraoperative cost awareness, cost decision making and potential motivators that would encourage cost decision-making in the OR in an effort to reduce overall costs in AVR surgery.

Approach: Separate focus groups were held for cardiac surgeons (n=5), cardiac anesthesiologists (n=5), cardiac perfusionists (n=8), OR nurses (n=5) and cardiac residents (n=4). Semi-structured interviews were used to elicit provider perspectives on the barriers and facilitators to implementing intraoperative cost decision making. Transcribed audio data was iteratively analyzed through the use of thematic analysis to develop a core set of common and comprehensive themes.

Results: Five main themes were identified: cost awareness, intraoperative decision making, influence surrounding intraoperative cost decision making, provider-based motivation for implementing intraoperative cost decision making, and cost drivers for an AVR. Providers expressed a willingness to engage in cost decision making if patient outcome would not be negatively influenced. Providers had low cost awareness and felt uncertain in which intraoperative decisions would actually lower overall cost. Non-surgeon groups felt they had minimal influence on intraoperative decisions. Providers suggested motivators such as a punishment-reward system, receiving cost feedback and listing the price of drivers in the OR.

Conclusion: Health care providers demonstrated low cost awareness regarding cost drivers of AVRs. They expressed interest in engaging in cost decision making, yet expressed uncertainty in which decisions would lead to lower cost. Listing the price of cost drivers in the OR could potentially encourage engagement in cost decision making.

Primary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Sophia Roy

ID: 100
The development and preliminary evaluation of an interdisciplinary intervention on the optimal management of BPSD on the health care team's feeling of distress in CHSLDs: A pilot study

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Background and Objectives: Behavioural and psychological symptoms of dementia (BPSD) are a group of disruptive behaviours in dementia patients. Most caregivers don't have the knowledge to adequately assess and intervene with this clientele. The objectives of this project are the development of an interdisciplinary training on the optimal management of BPSD, the evaluation of the feasibility and acceptability of this intervention, and of the methodology to assess its effects on caregivers in Residential and Long-Term Care Centres (CHSLD).

Approach: A mixed methodological approach in two successive phases based on the CReDECI II recommendations will be used. Phase 1: Development of the intervention consists of 1) a scoping review to identify the best clinical practices and theoretical bases on the optimal management of BPSD and of interdisciplinary interventions, and; 2) two focused discussion groups of 6 to 8 participants (panel of experts and caregivers). Phase 2: Evaluation of the feasibility and acceptability of the intervention using 2 to 3 consecutive convenience samples of 8 to 10 caregivers working in the CIUSSS de l'Estrie - CHUS CHSLDs receiving the training.

Results: The focused discussion groups in phase 1 will allow the identification of the training needs in the management of BPSD, the definition the parameters of the development intervention, and the determination of the indicators and the tools aiming to measure the potential effects of the intervention on the staff. This will result in the proposition of the interdisciplinary training. After the training, the focused discussion groups in phase 2 will allow the evaluation the acceptability and feasibility of the training, the identification the barriers and facilitators of its deployment, and the collection of suggestions to allow its improvement. Validated and reliable questionnaires administered before and after the intervention will allow the estimation of its impacts on the staff outcomes identified in phase 1.

Conclusion: This study will presumably result in the creation of a validated interdisciplinary training intervention designed for caregivers working with users suffering from dementia in nursing homes. This intervention should enable them to manage BPSD more effectively and should prove itself beneficial to both the caregivers and the users.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Chronic Disease Management

Methods: Mixed Methods

AuthorNames: Daphnée Carrier, Elodie Toulouse, Didier Mailhot-Bisson, Christian Rochefort

ID: 102
Factors that influence the uptake of Virtual Care Adoption

Background and Objectives: While the concept of virtual health care is not novel, the efforts and interest in the last year due to the COVID-19 pandemic has offered a great opportunity for sustainable virtual care delivery in the future. The enhancement of virtual care, however, is not without its challenges within the health care system. Much still needs to be understood regarding what barriers are in place at a policy, institution, and individual level that impede successful implementation.

Approach: We took a two-pronged approach to understand the potential influences of virtual health adoption. First, a scan of policies of Canadian jurisdictions outlining the practice of telemedicine in primary care, and second, a review of literature exploring the barriers to virtual care at a physician and patient level.

Results: The practice of virtual care outlined by regulatory bodies of physicians across the country have many similarities. Firstly, physicians are held to the same standard as if they are providing in person care. Secondly, most jurisdictions allow physicians to provide virtual service to patients who are in a different province or territory, however, they must follow the standard of practice of that jurisdiction. In the review, it was found that physicians often reported cost and time associated with setting up a virtual practice was a major barrier to offering such services. Barriers identified by patients were found to be access to devices and internet services, as well as a lack of virtual services offered by their health providers.

Conclusion: The barriers identified in this review demonstrate a need to enhance access and equity issues experienced by both health care providers and patients. Broadband expansion, specifically in rural and remote communities, is a critical first step and many jurisdictions, including the federal government has invested significantly in these efforts.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Synthesis

AuthorNames: Jenna Roddick, Sam Hunter

ID: 110
Supporting pediatric rehabilitation service decision needs with multiple criteria: A rapid review

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Background and Objectives: Due to the COVID-19 crisis, rehabilitation providers have nimbly and rapidly re-designed their services. To navigate ongoing decisions about service design, providers could benefit from methods that support decision making by incorporating client and family preferences and comparing and weighing various priorities. This rapid review of multi-criteria decision analysis (MCDA) methods in rehabilitation aimed to determine the appropriateness of these methods for supporting decisions regarding paediatric rehabilitation service provision and design.

Approach: We conducted a rapid review of MCDA methods in rehabilitation following World Health Organization methodological guidelines, making strategic decisions in collaboration with our knowledge partner, Empowered Kids Ontario (EKO). We searched four databases for studies that applied any MCDA method to a decision regarding rehabilitation service provision or design. After screening for eligibility, content analysis was used to synthesize relevant information identified by EKO. Specifically, we extracted and synthesized data regarding the types of decisions supported by MCDA, decision context, implementation considerations, and stakeholder involvement, particularly by clients and families.

Results: We identified 548 records and included 45 studies following screening by two reviewers. Preliminary findings indicate that MCDA methods are useful for numerous decisions in rehabilitation service provision and design (e.g., comparing stakeholder preferences, managing waitlists, selecting optimal treatments, setting funding priorities, and evaluating clinical technologies). They may also more closely model the decision problems faced by rehabilitation decision makers than alternatives such as economic analyses. However, implementation must be carefully considered, as MCDA methods range greatly in resource intensity. Further, clients and families are frequently not involved in the MCDA process, and when they are, they primarily contribute data to the final analysis. They are less commonly involved in establishing the decision problem, identifying the alternatives for consideration, or establishing the decision criteria.

Conclusion: The MCDA approach is promising for supporting rehabilitation service provision and design decisions. However, careful consideration of implementation is recommended. MCDA methods may provide a new way to include family voices in service design and future paediatric rehabilitation projects should actively include and engage families in all stages of MCDA.

Primary Theme: Collaborative Healthcare Improvement Partnerships

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Knowledge Synthesis

AuthorNames: Peter Cahill, Meaghan Reitzel, Michelle Phoenix, Chantal Camden, Dana Anaby, Shelley Romoff, Wenonah Campbell

ID: 112
English Translation and Cross-Cultural Adaptation of the Cost for Patients Questionnaire (CoPaQ)

Background and Objectives: Very few validated tools are available to measure health-related costs from a patient perspective. Our team developed a tool in French, aimed at the general population, the Cost for Patients Questionnaire (CoPaQ). It became evident that the tool would be relevant to studies with a non-French speaking population. The objective of this study was to translate the CoPaQ into English, and have a version that would be conceptually equivalent to the original French version developed.

Approach: The translation was done using the cross-cultural translation techniques proposed by Vallerand in 1989. Two bilingual translators with English as the mother tongue independently conducted a forward translation from French to English. Our research team proceeded with a reconciliation of the two versions where differences between the two versions were discussed until consensus was reached. The reconciled version was then sent to two different translators for a back translation from English to French. These two professional bilingual translators had French as their mother tongue. The research team then compared the two French versions with the original French version.

Results: There were no major difficulties identified in the translation process. Five significant changes were made after the forward translation and seven after the back translation. The result of the back translation was very similar to the original French version. Following the forward and back translations, most changes concerned unclear language and expressions that were difficult to translate. In these cases, the research team discussed and determined the best way to formulate the expression in the English version. The process also led to some minor changes in the original French version, when the back- translation resulted in a wording that the team considered an improvement. However, we did not identify any modification that would change the meaning of a question.

Conclusion: We produced an English translation of the CoPaQ from the original French version. The research team will complete the final stage of the adaptation process by pretesting with English-speaking patients. This English version of the tool will enable its utilization to a broader patient population.

Primary Theme: Patient and Public Engagement

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Survey Research Methods

AuthorNames: Maude Laberge, Thomas Poder, Coulibaly Lucien, Erin Strumpf, Jason Robert Guertin, Abakar Idriss-Hassan

ID: 115
Barriers and facilitators to implementation of newborn jaundice assessment clinical practice guideline in Alberta

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Background and Objectives: Alberta's Clinical Practice guideline (CPG) for screening and management of newborn jaundice was implemented in 2019 after being endorsed by clinicians and decision makers in Alberta Health Services (AHS). The CPG follows the Canadian Pediatric Society guideline requiring universal screening of newborns for jaundice within specified timelines using accepted protocols. The aim of this study was to identify early challenges to the CPG implementation faced by Alberta's hospitals, and the facilitators and barriers encountered.

Approach: Hospitals providing maternity services were surveyed in 2019 to identify early challenges experienced with implementing the CPG with the two screening options available, transcutaneous bilirubinometry (TcB) and total serum bilirubin (TSB). Quantitative data were tabulated, and qualitative data were thematically analyzed according to guideline and resource issues. Findings also informed interview questions for managers of maternity services at hospitals and public health leaders from Alberta's provincial health zones. Interviews were carried out in early 2021. The Consolidated Framework for Implementation Research (CFIR) structured the interviews and will structure the analysis of data about barriers and facilitators to implementation.

Results: Survey findings revealed that 27 (79%) responding hospitals used a TcB meter for screening, while hospitals in two health zones reported lower usage of TcB meters. The main barrier to TcB use was cost of equipment and need for frequent calibration. Hospitals using TSB for jaundice screening reported needing to do multiple blood draws for babies with high bilirubin levels, it was time consuming for staff, and some non-urban sites lacked access to a community laboratory that could collect the blood for screening after discharge. Time to train staff was another barrier for both TcB and TSB, leading to increased workload, and inconsistent understanding of the CPG. Interview scheduling was affected by Alberta's response to COVID-19. Additional findings will be presented at CAHSPR 2021.

Conclusion: Despite the CPG applying to both TcB and TSB screening, and no policy for universal TcB screening, there was a focus by respondents on TcB screening identifying its value while simultaneously raising concerns about cost. These findings will continue to inform future CPG implementation strategies in Alberta.

Primary Theme: Maternal and Child Health

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Program or Policy Evaluation

AuthorNames: Yuba Raj Paudel, Deborah McNeil , Seija Kromm

ID: 116
Healthcare service uses in persons with dementia living in rural areas: a systematic review

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Background and Objectives: There are challenges in healthcare and service delivery in rural areas, and this may be especially true for persons with dementia (PWD), as they lose the ability to commute to these services safely. Nonetheless, relatively little is known about the geographical disparities in quality of care and healthcare service use of PWD living in rural areas. The objective of this study is to describe the differences on the quality of care and healthcare service

Approach: We performed a systematic review on Ovid MEDLINE. We selected all French or English publications before July 2019 that covered at least one of the quality of dementia care domains from a framework previously developed by our team. We included studies that presented data on both rural and urban patients with dementia and excluded intervention studies. Two reviewers independently screened studies. Three reviewers extracted data and performed a narrative synthesis by consensus.

Results: A total of 31 studies were included. Three studies reported results on various indicators from the domain of “Access”; eight on “Patient-Centered Care”, four on “Integration”, nine on “Effective Care”; three on “Efficient Care”; eight on “Population Health”; and four on “Safety”. Key findings on rural and urban differences in services uses for PWD will be presented and discussed.

Conclusion: The results of this systematic review provide a global portrait of the current knowledge on geographical disparities in quality of care and health service use for patients with dementia. Our results will inform researchers and decision-makers to maximize equitable programs and policy for PWD.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Equity and Vulnerable Populations

Methods: Knowledge Synthesis

AuthorNames: Genevieve Arsenault-Lapierre, Tammy Bui, Laura Rojas-Rozo, Isabelle Vedel, Mélanie Le Berre

ID: 119
Factors Associated with High Emergency Department Use in Community-Dwelling Older Adults with Diabetes Living in Ontario

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Background and Objectives: Frequent users of emergency departments (EDs) represent a small group of people that account for a disproportionately high number of visits. A better understanding of the factors associated with frequent ED use can help in the development of interventions best suited to the needs of high users. This study aimed to describe the characteristics of older adults with diabetes identified as high users of EDs to inform recruitment and analysis of a community-based diabetes-focused intervention.

Approach: Administrative data from Ontario (2011-2015) were used to identify and compare three groups of older adults with diabetes: 1) top 10% ED users among those with at least one ED visit ("high ED"), 2) bottom 90% ED users among those with at least one ED visit ("low ED"), and 3) a population-based group ('Population'). Socio-demographic factors considered in the study included age, sex, neighbourhood income and rural residency. Health factors included mortality risk, prescription medications, and a range of chronic conditions. Healthcare services included physician (general practitioner, specialist) visits, hospitalizations, and home care. Descriptive analyses were conducted to compare groups.

Results: Results were similar for 2011-2015. High ED users had a mean (standard deviation) of 8.4 (20.3) ED visits, versus 2.4 (10.3) and 5 (17.8) for the low ED and Population groups. They showed no sex differences but were typically older, rural and from a lower income neighbourhood. They had a mean (standard deviation) of 14.8 (6.9) prescription medications, versus 11.2 (5.5) and 10.9 (6.0) for the low ED and Population groups, and higher mortality (13.2% died within year versus 6.9% a and 4.1% for the low ED and Population groups). Sixty-seven percent of high ED users had at least one acute care episode (prior year), versus 33% and 16% of the low ED and Population groups. They also had more chronic conditions and physician visits.

Conclusion: Factors associated with high ED use in older adults with diabetes included higher use of other healthcare services, older age, residency in rural or lower income neighbourhoods, more prescribed drugs and chronic conditions. Policy/clinical implications include developing support services targeting these factors to better address complex needs and improve health.

Primary Theme: Chronic Disease Management

Secondary Theme: Equity and Vulnerable Populations

Methods: Data Mining/Big Data Analytics

AuthorNames: Kathryn A. Fisher, Andrea Gruneir, Jenny Ploeg, Maureen Markle-Reid, Rebecca Ganann, Richard Perez, Dean Eurich, Cheryl Sadowski, Francis Nguyen, Lynne Mansell, Frank Tang

ID: 121
Income-related Inequities in Healthcare Utilization in Canada: 2000–2014

Background and Objectives: The Canada Health Act (CHA, 1984) recognizes the need for "universality" and "accessibility" in healthcare. Although in principle the CHA eliminates direct financial barriers to physician and hospital services by making them free at the point of service provision, inequities (unfair inequalities) in healthcare utilization remain a major challenge in the Canadian healthcare system. This study, for the first time, sought to assess trends in income-related inequities in healthcare utilization within the Canadian healthcare system.

Approach: This study used data from ten cycles of the Canadian Community Health Survey (CCHS, 2000–2014) to measure the extent of income-related inequities in the utilization of three measures of healthcare utilization viz., general practitioner (GP), specialist physician, and hospital admissions. The horizontal inequity (HI) index was used to quantify and assess trends in income-related inequities in healthcare utilization in Canada, urban and rural areas, as well as in all provinces from 2000 to 2014.

Results: The HI results suggested significant pro-rich inequities in the utilization of GP and specialist visits in all CCHS cycles in Canada. In contrast, the distribution of hospital admission was found to be pro-poor over the study period. Stratified analyses by province and urban and rural areas also suggested similar findings. Pro-rich inequity in GP visits was found to be present at magnitudes similar to pro-rich inequity of specialist visits. This finding was consistent in all cycles and geographical areas. Trend analysis reveals inequity in GP visit became more pro-poor in New Brunswick, but more pro-rich in Prince Edward Island and Quebec.

Conclusion: This study demonstrated persistent income-related inequities in physician use favouring richer Canadians. As the services examined in this study are free at the point of use, income-related inequities in the utilization physician use indicates the presence of non-financial barriers.

Primary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Secondary Theme: Equity and Vulnerable Populations

Methods: Statistics/ Econometrics

AuthorNames: Laura Hirello, Mohammad Pulok, Mohammad Hajizadeh

ID: 123
Primary Care Innovations Across Canada

Background and Objectives: High-performing primary care is widely recognized as the foundation of an effective and efficient healthcare system. Over the past decade, jurisdictions across Canada have invested significant resources into the revitalization of the primary care sector. Consequently, a diversity of innovative approaches has emerged across the country to increase access to care, enhance quality of care, and improve efficiency. The purpose of this study is to identify primary care innovations in Canada.

Approach: This research study was informed by a combination of a literature review and key informant interviews. We conducted 46 interviews with primary care leaders (academics, provincial association leaders, health care professionals, and policymakers) across every province and territory in Canada. A document review was conducted of peer-reviewed articles and grey literature. Documents and transcripts were analyzed to identify primary care innovations. Primary care innovations were organized in accordance with the 13 attributes of the high-performing primary care systems identified in the discussion paper entitled “Towards Primary Care Strategy for Canada” developed with key primary healthcare stakeholders across Canada.

Results: This study found that there is considerable variability in the types of primary care innovations that have been implemented across the country and the degree to which these innovations have spread and have been evaluated within jurisdictions. In relation to the attributes of high performing primary care, many jurisdictions have invested in the implementation of primary care innovations in relation to governance mechanisms, health information technology, patient engagement, training and support for quality improvement, interprofessional team models, and coordination and integration with other health and social services.

Conclusion: Primary care transformation has been slow in Canada. The identification and continuous evaluation of innovations for primary care transformation will assist policymakers to build primary care systems that provide the foundation for integrated healthcare systems that deliver health outcomes, patient experience and value for money at the world’s best levels.

Primary Theme: Primary Healthcare

Secondary Theme: Primary Healthcare

Methods: Qualitative Research Methods

AuthorNames: Monica Aggarwal, Reham Abdelhalim, Brian Hutchison, Richard Glazier, Ross Baker

ID: 127

Risk Perceptions, Knowledge and Behaviors of General and High-Risk Adult Populations towards COVID-19: A Systematic Scoping Review

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Background and Objectives: The COVID-19 pandemic represents a major crisis for countries around the globe. A large number of studies have been conducted worldwide to understand people's awareness and behavioral response towards the disease. The public's risk perceptions, knowledge, and behaviors are key factors that play a vital role in the transmission of infectious diseases. Our scoping review aims to map the early evidence on risk perceptions, knowledge, and behaviors of general and high-risk adult populations

Approach: A systematic scoping review was conducted of peer-reviewed and preprint articles in five databases (MEDLINE-Ovid, EMBASE-Ovid, PsycINFO-Ovid, Web of Science, and CINAHL-EBSCO) on studies conducted during the early stage of COVID-19 (January to June, 2020). The gray literature was also searched through Open Grey, Scopus, Wonder, Social Science Research Network, MedRxiv, and websites of major public health organizations. Twenty studies meeting the inclusion criteria were included, appraised and analyzed.

Results: During the early stage of the pandemic, levels of risk perceptions, knowledge, and behaviors towards COVID-19 were moderate to high in both general and high-risk adult populations. The perceived severity of the disease was slightly higher than the perceived susceptibility. Adults were knowledgeable about preventive behaviors, including hand-washing, mask-wearing and social distancing. Nevertheless, an important knowledge gap regarding the asymptomatic transmission of COVID-19 was reported in many studies. Our review identified hand-washing and avoiding crowded places as dominant preventive behaviors. Staying at home, reducing social contacts, and avoiding public transport were less widespread in general populations than in high-risk adult groups. Being a female, older, and more educated was associated with better knowledge of COVID-19 and appropriate preventive behaviors.

Conclusion: This scoping review offers an understanding of adults' risk perceptions, knowledge, and behaviors towards COVID-19 during the early stage of the COVID-19 pandemic. Further research should be undertaken to assess psychological and behavioral responses over time. Research gaps have been identified in the relationship between ethnicity and behaviors towards COVID-19.

Primary Theme: COVID-19

Secondary Theme: Patient and Public Engagement

Methods: Knowledge Synthesis

AuthorNames: Nathalie Clavel, Melanie Lavoie-Tremblay, Janine Badr, Lara Gautier

ID: 128
Internal prospective validation of a clinical prediction rule for pediatric hand fractures – the Calgary Kids' Hand Rule

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Background and Objectives: Acute pediatric hand fractures (PHFs) are commonly referred to hand surgeons, yet most heal well without surgical intervention. This trend inspired the development of our clinical prediction rule, the "Calgary Kids' Hand Rule (CKHR)", a checklist intended to streamline PHF care by predicting which fractures need to be seen by a hand surgeon – referred to here as "complex" fractures. This prospective study aimed to validate the clinical effectiveness of the CKHR.

Approach: Emergency physicians assessing PHFs completed the CKHR, noting the presence of six risk factors prior to any treatment: malrotation, open fracture, angulation, displacement, dislocation, condylar involvement. If any of the risk factors were present, the fracture was classified as "complex"; otherwise, it was classified as "simple". Referral practices and patient care were not altered based on these classifications. Classifications made using the CKHR represent predicted fracture acuity, and predictions were compared to observable outcomes denoting complex fractures: requirement of closed reduction, surgical intervention, or >3 clinic visits. Prediction accuracy was quantified via sensitivity (Sn), specificity (Sp), and concordance (C-stat) metrics.

Results: 429 patients with PHFs referred to the Alberta Children's Hospital plastic surgery team with completed CKHR forms (April 2019 – September 2020) were included in the study. A total of 114 clinically complex fractures were identified: 104 fractures (24%) received a closed reduction, 18 (4%) underwent surgical operation, and six had >3 plastic surgery visits. The CKHR accurately predicted 91/114 complex fractures (Sn = 80%) and 280/359 simple fractures (Sp = 78%). 23 clinically complex fractures were incorrectly predicted as simple. These false negatives were largely attributed to improper checklist completion such as reporting on post-reduction radiographs. Overall model performance was good (C-stat = 0.79) and further improved after excluding improperly completed checklists (Sn = 95%, C-stat = 0.86).

Conclusion: The robust performance of the CKHR model demonstrates its potential to optimize PHF care by avoiding preventable hand surgeon referrals while preserving patient safety. Future work will focus on identifying and addressing barriers to successful implementation of the CKHR as part of an optimized care pathway for PHFs.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Knowledge Translation & Exchange (includes KTE methods)

Methods: Statistics/ Econometrics

AuthorNames: Altay Baykan, Frankie Fraulin, Rebecca Hartley, Paul Ronksley, Rob Harrop

ID: 129

Inequalities in health between registered and non-registered First Nations adults living outside of their communities and the non-Indigenous population in Canada: A decomposition analysis

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Background and Objectives: First Nations peoples in Canada are experiencing poorer health outcomes compared to non-Indigenous population. Reducing these health gaps has been considered as one of the main priorities of public policies. This paper first calculates the health gaps in both objective and subjective measures between First Nations and non-Indigenous Canadians and then decomposes the health deficits into levels and returns from observable characteristics to bring evidence to support enacting public policies.

Approach: Using the adult subsamples (aged 18 and above) of First Nations peoples from the 2017 Aboriginal Peoples Surveys (APS) and non-Indigenous populations from the 2017 Canadian Community Health Surveys (CCHS), we examined inequalities in health between registered and non- registered First Nations peoples (RFN and NRF, respectively) living off-reserve and non-Indigenous population in Canada. We first use regression analysis to examine the associations between the observable characteristics and health outcomes and then employ the Blinder-Oaxaca technique to decompose inequalities in five measures of health outcomes (self-reported poor/fair general and mental health status, the prevalence of obesity, diabetes and asthma).

Results: Descriptive statistics show lower socioeconomic status (education household income, and employment) and health status for First Nations peoples compared to the non-Indigenous populations in all five measures of health outcomes: self-perceived poor/fair general health (RFN 22.3%, NFN 23.3%, non-Indigenous 9.12%), poor/fair mental health (RFN 16.2%, NFN 18.2%, non-Indigenous 8.08%), the prevalence of obesity (RFN 39.5%, NFN 36.5%, non-Indigenous 29.5%), diabetes (RFN 10.8%, NFN 9.2%, non-Indigenous 4.8%), and asthma (RFN 13.4%, NFN 17.2%, non-Indigenous 8.8%). Regression results show positive associations between higher socioeconomic factors and health outcomes in Canada. The Blinder-Oaxaca decomposition results indicate that the deferential distribution of the determinants (particularly socioeconomic factors) explained 30% to 50% of the gap in these examined health outcomes between First Nations peoples and the non-Indigenous population.

Conclusion: The differential distribution of socioeconomic status between First Nations peoples and the non-Indigenous population explained a significant proportion of the differences in health outcomes. Improving the socioeconomic status of First Nations through policies in income and education equalization may reduce health inequalities between First Nations and non-Indigenous populations in Canada.

Primary Theme: Indigenous Health

Secondary Theme: Equity and Vulnerable Populations

Methods: Statistics/ Econometrics

AuthorNames: Min Hu, Mohammad Hajizadeh, Yukiko Asada, Amy Bombay

ID: 130
The implementation of quality improvement facilitators in primary care settings in Quebec, a case study

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Background and Objectives: Quality improvement (QI) facilitators were integrated into Quebec's academic primary care settings and have played a key role in implementing a quality improvement culture. Following the evaluation of the contribution of those facilitators in academic primary care settings, the Ministry of Health and Social Services decided to conduct a 1-year pilot project in non-academic primary care settings in the region of Chaudiere-Appalaches. This study examines the implementation process of the QI facilitators for this pilot.

Approach: A descriptive embedded case approach was used to consider the implementation process in each of the region's 4 sub-territories. The Conceptual Framework for Implementation Research was used to develop the interview guide and for data analysis. We used a two-pronged approach to data collection. First, we obtained relevant documents including reports, organizational charts, and the QI facilitator job posting. Second, we conducted 19 semi-structured interviews with QI facilitators (n=6), managers (n=7) and physicians (n=6). Qualitative methods were used to analyze the perception of the facilitators' role and contribution, governance characteristics and the effect of the pandemic's on their integration.

Results: All stakeholders had a positive perception of the role of QI facilitators on bringing a qualitative improvement culture and in the implementation process of primary care projects. Being decentralized was considered as enabling a more personalized approach, in which QI facilitators could better respond to their respective territory's needs, and improving their relations with the primary care settings. QI facilitators worked under a co-management hierarchical structure that included the clinics' medical directors, and the territorial managers. This structure was seen as a facilitator to the QI facilitators' integration and to their contributions in coordinating projects meeting ministerial guidelines in the COVID-19 context. The COVID-19 pandemic's context served as a lever for QI facilitators' integration and for their collaboration with members of the primary care settings.

Conclusion: The implementation of QI facilitators was positive. Acting as facilitator, change and project managers, these professionals play a key role in the implementation of a QI culture in primary care settings. This study suggested important components to consider in the implementation of such QI facilitators in primary care settings.

Primary Theme: Primary Healthcare

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Victoria Thân, Maude Laberge, Geneviève Roch, France Tanguay

ID: 135

Interventions to Change Clinicians’ Behaviour in Relation to Suicide Prevention Care in the Emergency Department: A Scoping Review

Background and Objectives: An emergency department (ED) is a critical place for suicide prevention, yet patients are often discharged without proper suicide risk assessments and/or referrals. Suicide rates may increase due to the COVID-19 pandemic having a significant impact on psychological health. In response, we must support ED clinicians’ behaviour change following evidence-based suicide prevention. This scoping review aims to explore, characterize, and map the literature on interventions implemented to change ED clinicians’ behaviour related to suicide prevention.

Approach: We conducted a review following the Joanna Briggs Institute scoping review methodology. Our search included PubMed, PsycInfo, CINAHL, Embase, and grey literature. The review included a wide range of interventions that target ED clinicians’ behaviour change related to suicide prevention. Behaviour change referred to observable practice changes as well as proxy measures of behaviour change, including knowledge and attitudes. Identified interventions were mapped onto the Behaviour Change Wheel’s (BCW) intervention functions (IF) and synthesized narratively. The BCW application aimed to provide a better understanding of the interventions' mechanisms in changing clinicians’ behaviour related to suicide prevention.

Results: 41 studies were included, and they were mix of experimental (n=2), quasi-experimental (n=24), non-experimental (n=12), qualitative (n=1), and mixed methods (n=2). Grey literature searches yielded eligible 29 citations. One was a pilot study, and the rest were interventions themselves. Of the 70 citations, there were 66 unique interventions. The frequency of IFs were: Education (n=48), Training (n=40), Enablement (n=36), Persuasion (n=20), Environmental restructuring (n=18). Many interventions targeted more than one determinant of behaviour, often employing Education and Training to improve clinicians’ knowledge and skills simultaneously. Studies reported outcome measures of effectiveness at clinician (n=38), patient (n=4) and/or organization levels (n=6). Few studies reported implementation outcomes, such as measures of reach (n=4), adoption (n=5), or fidelity (n=1).

Conclusion: The findings highlight opportunities to target additional behavioural determinants to impact ED clinician behaviour related to suicide prevention care. Future research should aim to report implementation outcomes. Lastly, it will be useful to assess comparative effectiveness of different IFs and combinations of IFs on the behavioural determinants of suicide prevention.

Primary Theme: Mental Health and Addictions

Secondary Theme: Mental Health and Addictions

Methods: Knowledge Synthesis

AuthorNames: Danielle Hwayeon Shin, Christine Cassidy, Janet Curran

ID: 137
Informal Caregiving: Implications for Healthcare Expenditures

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Background and Objectives: Informal caregivers' contribution to the healthcare systems is economically significant. Caregivers, however, report substantial consequences such as a decline in their health and a higher use of healthcare services due to their caregiving responsibilities. While many studies have explored these outcomes using self-reported measures, use of administrative databases to substantiate such claims is rare. The objective of this study was to examine the impact of caregiving on healthcare utilization amongst informal caregivers.

Approach: The outcome was the incremental total costs of publically funded healthcare services in Ontario incurred by caregivers in the first 1 and 2 years after the start of caregiving. The study population was Ontarians who participated in the 2008/09 Canadian Community Health Survey – Health Aging Supplement. Respondents were linked to administrative databases to measure healthcare cost. Healthcare costs of caregivers and non-caregivers were compared pre/post reported caregiving or proxy start date using a difference-in-differences design and Generalized Linear Models.

Results: The sample size was 4725 (1265 caregivers). The average age was 62.6 and 67.7 for caregivers and non-caregivers respectively. Nearly 58% of caregivers and 54% of the non-caregivers were female. On average caregivers had lower unadjusted total costs in one and two years prior to the caregiving start date (index date) in comparison to non-caregivers (proxy index date) implying that they were healthier than non-caregivers to begin with. Adjusted total healthcare costs for caregivers were 3% and 11% lower than non-caregivers, one year and two years into caregiving, respectively. While, the difference in adjusted total cost was not significant one year into caregiving, it became statically significant after two years of caregiving.

Conclusion: We found that healthcare utilization increased by a lesser amount amongst caregivers than non-caregivers. If caregivers' health did not improve relative to non-caregivers, this suggests that caregivers may defer health care with the onset of caregiving. This calls for careful consideration in providing adequate and timely support for caregivers.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Economic Analysis or Evaluation

AuthorNames: Sara Shearkhani, Kerry Kuluski, Geoffrey Anderson, Walter Wodchis, Yu Qing (Chris) Bai

ID: 145

The Association between Caregiver Distress and Ontario’s Home Care Clients’ Total Healthcare Expenditure

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Background and Objectives: Stress and strain among caregivers who provide unpaid care to family members, friends, and neighbors may impact their ability and availability to continue caring for their loved ones. Given the crucial role caregivers play in care-recipients’ care, this could result in an increase in use of formal healthcare services by care-recipients. This study examined the impact of caregiver distress on Ontario’s homecare clients’ costs of healthcare service use.

Approach: This study population included newly admitted and long stay clients of Ontario’s publicly funded homecare services over the age of 50 who received at least three Resident Assessment Instrument for Home Care (RAI-HC) assessments, and reported having primary caregivers between April 2010 to March 2018.. The outcome was the total government healthcare spending incurred by homecare clients in the period between two consecutive RAI-HC assessments (~6 months). Employing a repeated measure approach using Generalized Estimating Equation, this study assessed the impact of caregiver distress (as captured by RAI-HC) on clients’ future total healthcare expenditures.

Results: The sample size was 41,431 clients with a total of 154,139 observations. The average age of clients was 80, the majority were female, and 31% were frail. 51% and 34% of caregivers were clients’ children and spouses, respectively. Most caregivers provided assistance with ADLs. 33.7% of caregivers were reported to be distressed. Results showed that caregiver distress was associated with 4% increase in care-recipients total healthcare costs every six months. Additional analysis showed that caregivers’ reported inability to continue caring had a greater impact on care-recipients’ utilization than expressing feelings of distress. The overall increase in total healthcare expenditure in our sample was driven by hospitalizations costs followed by home care and long-term care costs.

Conclusion: Findings were consistent with the previous literature demonstrating caregiver distress as a risk factor for use of formal healthcare services by care-recipients. Supports for caregivers might mitigate distress and associated health system costs for clients.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Economic Analysis or Evaluation

AuthorNames: Sara Shearkhani, Kerry Kuluski, Geoffrey Anderson, Walter Wodchis

ID: 147
Building support and action for healthy food environments through community-based interventions

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Background and Objectives: Children are increasingly exposed to food environments that have negative impacts on their diet and health. Community-based interventions could help build the necessary public pressure for governments to implement supportive food environment policies and programs. This study sought to examine if community engagement in the Local Environment Action on Food (LEAF) project, a community-based food environment intervention in Alberta, Canada, could create action to promote healthy food environments and supportive policies.

Approach: This study adopted a qualitative collective case study design and included the first seven communities to complete LEAF. To explore LEAF's impact and stakeholders' experiences creating change, we used semi-structured interviews with a purposeful sample of 26 stakeholders. Data was analyzed using Charmaz's inductive constant comparison analysis strategy in a multi-phase process. We first conducted a within-case analysis, analyzing data from each LEAF community separately, followed by a cross-community comparison.

Results: Participants reported impacts in numerous settings and food environments. Additionally, they reported community impacts from LEAF, perceiving the process as sparking conversation and movement toward creating healthier local food environments. LEAF created a context-specific tool, a Mini-Nutrition Report Card, that community stakeholders used to promote healthy food environments and supportive policies. Thus, participants believed that LEAF facilitated community engagement in food environment action beyond the project's end. Further, analysis outlined perceived barriers and facilitators to creating healthy food environments at the community level, including level of engagement in LEAF, perceived controllability, community priorities, policy enforcement, and resources.

Conclusion: Community-based interventions, such as LEAF, can build community capacity and reduce existing barriers that prevent community-level food environment action. Thus, they can provide an effective method to build public awareness, demand, and action for healthier food environments and supportive policies.

Primary Theme: Patient and Public Engagement

Secondary Theme: Maternal and Child Health

Methods: Qualitative Research Methods

AuthorNames: Breanne Aylward

ID: 148
A Multi-Level Exploration of the Contexts and Factors Shaping Ontario's Traditional Approach to Health Promotion and Protection: Results from two Provincial Government Ministries

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Background and Objectives: The public policies of non-health government ministries have greater impacts on population health than those of health sectors or the traditional healthcare realm. Health Impact Assessment (HIA) broadens the scope of evidence that informs policy development so as to prevent a degree of foreseeable harm introduced through public policies. This presentation details the Ontario government's traditional approach to health promotion and protection to account for its receptivity (or lack thereof) to preventative tools like HIA.

Approach: Separate case studies were conducted to better understand how two related processes have 'routinely' occurred over a 15-year period between 2003-2018. The first explored intra-ministerial policy development within Ontario's Ministry of Education. The second explored inter-ministerial policy collaboration between Ontario's Ministry of Health and other 'non-health' ministries. Semi-structured interviews (N=20) were conducted with senior-level bureaucrats and supplemented with a range of processual documents (N=84). An integrated theoretical framework informed by Bounded Rationality and Normative Institutionalism was developed to explore how mechanisms at individual and organizational levels interact and institutionalize certain approaches to health promotion and protection rather than others.

Results: Ontario's traditional approach to health promotion and protection appears to both reflect and reinforce longstanding norms, values and conventions. Since 2003, the public health purviews of both ministries have been defined by various iterations of the Ontario Public Health Standards, which prioritize secondary and tertiary programmatic approaches rather than upstream policy interventions. In this regard, participants tended to espouse biomedical rather than holistic conceptualizations of 'health' and its antecedents. Moreover, while the bureaucracy was viewed as a critical 'brokering' mechanism for multi-level scrutiny of policy proposals, high-level public servants (e.g., Assistant Deputy Ministers) were perceived as 'gatekeepers' of inter-ministerial communication and collaboration. Finally, while various impact assessments (e.g., financial, economic) are built into Cabinet Submissions, explicit and systematic consideration of health impacts are not required.

Conclusion: While the functionalism afforded by longstanding Ontario government conventions may benefit intra-ministerial policy objectives, they appear to simultaneously deter the comprehensive 'boundary spanning' work necessary for HIA. This preventative tool must therefore be viewed as an adjunct to efforts to cultivate a policy environment conducive to healthy public policy.

Primary Theme: Knowledge Translation & Exchange (includes KTE methods)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

AuthorNames: Stephanie Simpson

ID: 155

Understanding transitions in care for people with major lower limb amputations from inpatient rehabilitation to home: A descriptive qualitative study

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Background and Objectives: The purpose of this study was to understand how people with major limb amputation experience the transition in care from inpatient rehabilitation to the community. As there is limited literature on transitions in care, particularly from this population, our goal was to describe the transition experiences with no commitment to a pre-selected variable or prior theory. Understanding patient experiences is crucial to guide quality improvement initiatives, and ultimately improve patient care.

Approach: Our study utilized a qualitative descriptive and discovery-oriented approach, which was routed in naturalistic inquiry. Semi-structured interviews were conducted either in-person or over the phone. Participants who had undergone a major lower limb amputation and had been discharged from inpatient rehabilitation to the community within one to twelve months were eligible to participate. Interviews explored participants' experiences with events leading to the amputation, inpatient rehabilitation, transitioning back home, and life in the community. The interviews were audio-recorded, transcribed, and thematically analyzed.

Results: Nine individuals with major lower limb amputation participated in the study. Five themes were identified to describe the transition in care experience: Preparedness: differing experiences during inpatient rehabilitation; Challenges with everyday tasks: "everything has to be thought out"; Importance of coping strategies; "gradually you accept it more and more" Importance of support and feeling connected; "if I needed anything, they're right there" and Not everyone has access to the same resources: "left to your own devices". This study emphasizes the importance of developing person-centered rehabilitation plans to optimize the transition experience. We developed recommendations for health care professionals to consider when preparing rehabilitation strategies and the subsequent discharge home.

Conclusion: Individuals' physical abilities, coping strategies, family and friends, and access to resources either helped or hindered their ability to manage at home. Health care professionals can implement strategies during rehabilitation to facilitate a smoother transition.

Primary Theme: Primary Healthcare

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Marija Radenovic, Kamille Aguilar, Anne Wyrough, Clara Johnson, Shirley Luong, Amanda Everall, Sander Hitzig, Dilkas Steven, Crystal MacKay, Sara Guilcher

ID: 157
Impacts of workplace conditions during COVID-19 on nurses' mental health

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Background and Objectives: As essential health-care workers, nurses have made significant personal and professional sacrifices working on the frontlines of the pandemic response. Ongoing issues of inadequate staffing and high workloads have been exacerbated by the increased risk of COVID-related workplace hazards nurses face. This presentation will examine the impacts of COVID-19 workplace conditions on nurses' mental health outcomes.

Approach: A province-wide electronic survey of nurses was conducted in the summer of 2020. Validated survey instruments were used to assess mental health and wellbeing, including measures of post-traumatic stress disorder, anxiety, depression, and burnout. Workplace conditions during COVID were captured across five domains of workplace safety, access to resources and supplies, organizational preparedness, organizational support, and workplace relations. Responses from over 3000 actively working nurses representing a range of nursing and workplace characteristics were used in the analysis of the results.

Results: Nurses actively working during the pandemic reported concerning rates of PTSD (47%), anxiety (38%), depression (41%), and emotional exhaustion (60%). Negative ratings across the five domains of workplace conditions were associated with adverse mental health outcomes. For instance, nurses working in environments with insufficient access to PPE (42%) were more likely to also report PTSD and depression. While nurses reporting inadequate organizational preparedness during the pandemic were more likely to experience emotional exhaustion, negative ratings of workplace safety indicators were more predictive of PTSD, anxiety, and depression. Poor organizational support and deteriorating workplace relations, such as relationships with colleagues and managers, and inadequate staffing were associated with all four adverse mental health outcomes measured.

Conclusion: Maintaining our nursing workforce is critical to an effective pandemic response. The data compiled from this project investigates the impacts of COVID on nurses' mental health and informs strategies to address the workplace conditions that affect our vital health human resources.

Primary Theme: COVID-19

Secondary Theme: Health Human Resources

Methods: Survey Research Methods

AuthorNames: Farinaz Havaei, Maura MacPhee, Andy Ma, Sabina Staempfli, Christine Sorensen

ID: 158

The evaluation of rapid redesign and resource redeployment on LTC staff: A case study

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Background and Objectives: 81% of Canada's COVID-19 deaths are linked to the long-term care (LTC) sector. To stop virus spread in this sector, a number of rapid redesign and resource redeployment (RR) practices, such as increased capacity for staffing, flexible sick leave policies, training, identification and management of ill residents and/or workers and strict visitation policies, were instituted provincially. The purpose of this study was to evaluate the impact of RR practices on LTC staff and their care

Approach: This case study used mixed methods and was conducted in partnership with Louis Brier Home and Hospital, one of BC's largest LTC sites with over 400 staff who care for nearly 250 residents. A combination of longitudinal survey data (n=~133), staff interviews (n=~50) and monthly administrative data were analyzed. Quantitative data analyses were descriptive statistics, regression and trend analysis. Content analysis was used with qualitative data.

Results: One in five staff members reported mental health disorders including anxiety and depression. Staffing levels declined and overtime hours increased at the height of the pandemic. Staff were concerned about the rise in their workload. The most challenging issue for leaders and staff was inadequate staffing, addressed through RR practices such as flexible sick leave policies, strict visitation policies and a single site employment policy.

Conclusion: Even though RR practices and policies slowed the spread of the virus in one LTC site, systemic issues such as staffing and workload management, negatively impacted staffs' mental health and their capacity to deliver effective resident care.

Primary Theme: COVID-19

Secondary Theme: Health Human Resources

Methods: Mixed Methods

AuthorNames: Farinaz Havaei, Maura MacPhee, David Keselman, Sabina Staempfli, Andy Ma, Ryan Ji, Emilie Desabrais

ID: 161

Across the Divide: Challenges to Progressing Health System Integration in Alberta

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Background and Objectives: Evidence to support integration of healthcare services is advancing but we need to know more about integration efforts that connect people with community based programs and resources. Health systems that integrate primary and social care are better equipped to sustain health and wellness. We invited key stakeholders from diverse organizations in Alberta to talk about their experience building connections between primary care and community, specifically their views on the challenges of cross-sector integration.

Approach: Twelve stakeholders from diverse organizations in Alberta completed a qualitative telephone interview. Interviews were recorded and fully transcribed. The lead author developed a coding framework by reading and marking transcripts multiple times to generate preliminary codes and potential key themes. A sample of transcripts were independently read and annotated by the second author and then the existing codes and themes were refined. The coding frame was applied to the rest of the data using NVivo 12. Frequent debriefing sessions were used to ensure accuracy and appropriateness of the analysis process and enhance the trustworthiness of the data analysis.

Results: Participants said social supports should be intertwined with healthcare but acknowledged that many of the integration efforts currently underway in Alberta focused on primary or secondary health care services. There was a shared view that an integrated system is people-centered where communities are engaged and patients can easily access and navigate all available resources. The main challenges were funding, dedicated personnel, and information sharing. Beyond pilot project money, sustained funding for integration work was hard to come by, making it difficult to ensure adequate time capacity for individuals. This was exacerbated by high turnover and competing organizational priorities. Finally, the lack of integrated information systems across platforms and sectors made it impossible to work towards a truly integrated and seamless healthcare experience for patients.

Conclusion: The challenges of sustaining horizontal connectivity between the different sectors are significant. Overcoming them though is not impossible. Grassroots movement with top down support and funding can bring people to the same table to test and adapt new ideas and technology for scale and spread of true integrated care.

Primary Theme: Collaborative Healthcare Improvement Partnerships

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

AuthorNames: Rima Tarraf, Sara Mallinson

ID: 162
Anti-corruption, transparency, and accountability in international organizations during COVID-19

Background and Objectives: Corruption in health systems is recognized by the global community as a threat to achieving the United Nations Sustainable Development Goals including SDG # 3: good health and well-being. In light of the current COVID-19 pandemic, the threat of corruption is exacerbated as health systems are under unprecedented duress. This presentation will explore how international organizations address risks of corruption generally, and how they are responding to increased risks of corruption during the COVID-19 pandemic.

Approach: The following international organizations were selected as the focus of this research given their current involvement in anti-corruption, transparency, and accountability in the health sector: The World Health Organization, the United Nations Development Programme, the World Bank Group, and the Global Fund to Fight Aids, Tuberculosis and Malaria. This research consists of two parts 1) a targeted website review reviewing organizational reports, policies, internal and external audits, and academic literature; and 2) semi-structured interviews with key informants at the four selected organizations. Informants were recruited based on their involvement in the creation or implementation of anti-corruption policies and programs.

Results: Our findings demonstrate that there has been a clear increase in the volume and scope of anti-corruption, accountability, and transparency measures implemented by international organizations in recent years. However, the implementation of measures in response to increased risks related to the COVID-19 pandemic is less consistent. The impact of these anti-corruption, accountability, and transparency measures remains unclear. Further research is needed to determine how these measures are achieving their transparency, accountability, and anti-corruption goals.

Conclusion: More research is needed both to conceptualize and determine the impact of the how international institutions manage corruption risks. Existing mechanisms should be studied for their effectiveness or need for change.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: COVID-19

Methods: Qualitative Research Methods

AuthorNames: Andrea Bowra, Jillian Clare Kohler

ID: 163
Implementation and impact of innovative interventions in a Quebec psychiatric emergency department

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Background and Objectives: Patients concerned with mental health issues are high emergency department (ED) users. Improving ED services for these patients and their families, and developing alternatives to ED use are therefore important matters. This study aimed to: (1) describe the implementation of three innovative interventions at a Quebec psychiatric ED and (2) evaluate impacts of these ED innovations on patients' mental health services use and more generally to answer their needs.

Approach: Using mixed methods with data triangulation, the implementation and impact of the three ED interventions were studied. These three interventions were : a) a brief intervention team, b) a crisis center team, and c) a family-peer support team. Quantitative data were collected from 101 participants using a questionnaire and patient medical records. Qualitative data were gathered from focus groups (n = 3) with key intervention staff members (n = 14). Descriptive, comparative and content analyses were produced.

Results: Key implementation issues were identified in relation to system features, organizational characteristics and patient profiles, similar to results identified in most studies regarding implementation of innovative solutions for patients with mental health issues in ED. Concerning this study specific interventions, positive results were shown, as innovations had a significant impact on patient mental health services use and their receipt of adequat care. Services also seemed adapted to deliver pertinent care to various patient profiles.

Conclusion: Before implementing innovations, managers need to recognize some issues related to healthcare innovative interventions implementation. These issues, raised in this study, are : the need for staff training and strong physicians involvement, development of collaborative tools to avoid potential cultural clash and development of continuous quality assessment processes.

Primary Theme: Mental Health and Addictions

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Mixed Methods

AuthorNames: Morgane Gabet, Marie Josée Fleury, Zhirong Cao, Guy Grenier

ID: 172

Closing the gap between Plan and practice: an Interpretive Description of actions to generate institutional proximity in cancer networks

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Background and Objectives: Cancer Plans prescribed at policy level aim to encourage integrated practice, bringing benefits to care providers and patients. However, plans have mitigated success at reducing the gaps between actors along the cancer trajectory. Better understanding is needed of how to change the relationships among professionals to enable and sustain integrated practices. We explore how deliberate actions taken by the leadership of the Quebec Cancer Network (QCN) contribute to integration at professional and organizational level.

Approach: We draw on empirical data from a qualitative case study conducted between 2018 and 2020 to identify leadership actions that create institutional proximity within the Quebec (Canada) Cancer Network. Data are collected through interviews (N=22) with policymakers, managers, providers and users, as well as documents and non-participant observation of meetings at national and local level (N=28). Analysis through cycles of Interpretive Description identifies deliberate actions to create institutional proximity, which concerns the roles and rules that define a field of activity. Institutional proximity contributes to integrated practice by reducing the uncertainties and inefficiencies associated with interactions.

Results: The strategic position of Cancer Plan leadership within the Ministry of Health enhanced institutional proximity among providers at system and organization level. Integration strategies evolved from creation of a dedicated role (pivot nurse) to coordinate interdisciplinary teams, to actions aimed at animating a network of networks. A consistent vision of meeting whole-person needs across the cancer trajectory inculcated shared values among network actors. Leadership support for communities of practice and imposition of national and local interdisciplinary coordinating committees worked in synergy to improve professional practice and collaboration between professions. However, Plan objectives to extend the network into primary care confronted institutional barriers related to practice context, emphasizing the need for creative means to enhance institutional proximity between actors in hospital and community care settings.

Conclusion: Deliberate actions by network leadership can create institutional proximity among network actors that enables and sustains integrated practices. In Quebec, actions involved promoting a consistent vision, imposing common obligations and supporting both communities of practice and interdisciplinary coordinating committees. Institutional proximity across practice settings presents a persistent challenge.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Cancer

Methods: Policy Case Study

AuthorNames: Dominique Tremblay, Nassera Touati, Susan Usher, Johanne Cournoyer

ID: 173
Pharmacists chronic disease management in Chronic Obstructive Pulmonary Disease (COPD): effect on health services utilization

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Background and Objectives: Chronic obstructive pulmonary disease (COPD) is a major source of morbidity, mortality, and economic costs. Pharmacists can be instrumental in improving care and reducing the cost burden by providing reimbursed services, such as comprehensive annual care plans (CACP). The objectives of this study are to characterize the population of COPD patients who receive a CACP, and to evaluate any changes in healthcare utilization for such patients, including COPD-specific hospitalizations and emergency room (ER) visits.

Approach: COPD patients who received a CACP in Alberta from 2012-2016 were identified within the administrative data. Each of these patients were matched with two control patients based on age, sex, provider, date of service, and qualifying comorbidities. A descriptive analysis was used to characterize patients who received a CACP, as well as the control group. An interrupted-time series analysis was used to evaluate changes in COPD-specific hospitalizations, ER visits and physician visits. Immediate and temporal changes were calculated for the difference in outcomes one year before and one year after receiving the CACP for the intervention group and matched controls.

Results: Eligible patients (N=74,365), of whom 28,795 (38.7%) had received CACPs were matched to a total of 45,570 controls. Patients' mean age was 70 (SD=12) years old. Other comorbid qualifying conditions were common, such as hypertension (85%), mental health disorder (84%), asthma (52%). The time-series analysis showed that in one year after the CACPs implementation the number of COPD hospitalization visits decreased by 174 (95% CI -270.8 to -76.5) per 10,000 patients per month, ER visits decreased by 123 (95% CI -294.9 to 49.6) per 10,000 per month, and general practitioners (GP) visits decreased by 153.9 per 10,000 per month (95% CI -293.3 to -14.5) when compared to the matched controls.

Conclusion: Pharmacists have extensively administered CACPs to COPD patients since 2012. Our analyses indicated clinically relevant changes in healthcare utilization post-CACP compared to matched controls.

Primary Theme: Chronic Disease Management

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Program or Policy Evaluation

AuthorNames: Tatiana Makhinova, Jeffrey Johnson, Jasjeet Minhas-Sandhu, Candace Necyk, Mohit Bhutani, Dean Eurich

ID: 176

Telemental health services for children and adolescents during the COVID-19 pandemic: Results from a rapid scoping review

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Background and Objectives: Children and adolescents are particularly vulnerable to detrimental mental health repercussions related to the COVID-19 pandemic. Due to physical distancing and confinement measures, the majority of mental health services have transitioned to providing care via telehealth and other remote technology-based interventions. This scoping review aimed to identify and synthesize relevant interventions and recommendations to better support children and adolescents' mental health during the pandemic.

Approach: A rapid scoping review methodology was used to address our research question. Searches in Medline, CINAHL, and PsycInfo, as well as Google and Governmental and Professional Associations' websites, were performed to identify relevant documents. Additional sources of information were derived from knowledge users and ancestry and offspring searches of included articles. Two independent reviewers screened all identified articles for inclusion. A third reviewer was consulted for any disagreements. Data extraction and analysis were then conducted through a pragmatic approach. Throughout the analysis, critical appraisal tools from the Joanna Briggs Institute were used to determine the quality of the included documents.

Results: A total of 13 articles presented interventions and 55 articles included recommendations. All of the interventions are based on telehealth, whereas the recommendations pertain to technology use, daily routines, and child-caregiver relationship. Due to the COVID-19 pandemic, various types of telehealth interventions, such as telepractice and self-directed online programs, were implemented within diverse healthcare contexts. Satisfaction related to telehealth varied. For certain types of services, adolescents and parents had positive experiences using telehealth, while some preferred face-to-face appointments. The most common recommendations identified in this review include: (1) using technology for learning and socializing; (2) establishing a daily routine that promotes a healthy lifestyle; (3) promoting stimulating activities, including physical activity; (4) adapting schooling; and (5) being attentive to the needs of children and caregivers.

Conclusion: The COVID-19 pandemic and sanitary measures resulted in increased use of telehealth. Our findings revealed mixed satisfaction with telehealth services. It is crucial that future research targets quality improvement in the provision of mental health services via telehealth and explore alternatives to adequately support children and adolescents during this pandemic.

Primary Theme: COVID-19

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Synthesis

AuthorNames: Geneveave Barbo, Michèle Desmarais, Marjorie Montreuil, Emilie Laberge-Perrault

ID: 177
Advancing a definition of socially assistive technologies in long-term care homes

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Background and Objectives: A transition to long-term care (LTC) interrupts personal relationships that are central to older adults' wellbeing. The COVID-19 pandemic restricted in-person visits, increasing the risk for loneliness and associated disorders. Assistive technologies can potentially support social interaction in LTC, however, no explicit definition of such technologies exists. We aimed to advance a definition of socially assistive technologies to further their use in mitigating loneliness in LTC.

Approach: A JBI scoping review was conducted to capture academic and grey literature that described socially assistive technologies in LTC. We considered studies that involved LTC residents aged 65 or older, families and friends, and LTC staff. Narrative excerpts were extracted from the literature and categorized to identify characteristics of socially assistive technologies. These characteristics were used to develop a definition, following the University of Maryland process that includes identifying: 1) the term, which is socially assistive technologies, 2) the classification, which is facilitates social interaction; and 3) the characteristics as extracted from the literature.

Results: Database searches yielded 4715 results and 137 proceeded to full-text screening. Eventually, twenty-five articles were included in this review. Reported assistive technologies ranged from simple devices such as telephone, to those with more advanced electronics including Nintendo Wii, and complex technologies that require Internet use (e.g., social media). The characteristics of socially assistive technologies identified from the literature were: 1) connectivity: to establish and maintain connections with the outside world; 2) overcoming distance: to facilitate contact between widely dispersed family members; 3) user appropriateness: to adapt to differing interests and functional abilities of residents and their families and friends; and 4) occurring in real-time: to offer instant communication and reassurance about how each other is doing.

Conclusion: The definition of socially assistive technologies advanced from this review is: Socially assistive technologies are user appropriate devices and tools that enable real-time connectivity to enhance social interaction. We recommend that future research use this definition, and that promising assistive technologies are made available in LTC homes.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Synthesis

AuthorNames: Ziwa Yu, Marilyn Macdonald, Lori Weeks, Elaine Moody, Ruth Martin-Misener, Meaghan Sim, Shelley McKibbon, Beth Wilson, Keisha Jefferies, Salma Almukhaini, Damilola Iduye, Dave Neeb

ID: 179

Divergent physician motivations to practice palliative care in the community: A qualitative descriptive study

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Background and Objectives: Both primary- and specialist-level palliative care are required to address the growing need in the community. However, the practice model of most specialist palliative care physicians is to provide all care to patients near end-of-life. It remains unclear how to support primary care-led palliative care in the community. This study examines the motivations of community-based specialist palliative care physicians to work in a particular practice model and their perceived role in supporting primary care providers.

Approach: We conducted a qualitative study using semi-structured virtual interviews with 14 community-based palliative care specialists in Ontario, Canada. The discussion guide was based on a theoretical framework on provider practice models in palliative care, where 2 practice models exist (takeover vs consultation). In total, 4 participants worked in a consultation model, 8 participants worked in a takeover model and 2 participants were transitioning from a takeover model to consultation model. We asked participants to describe their care processes and the factors that influence how they work. We used a thematic analysis approach structured according to the study framework.

Results: The underlying motivators differed clearly between physicians who worked in the two practice models. In the takeover model, palliative care physicians were motivated by their relationships with patients. In the consultation model, palliative care physicians were motivated by their relationships with primary care providers. These differing motivations led to differences in the day-to-day processes and outcomes of care. Process differences were noted in communication with family physicians, availability of the palliative care physician, and collaboration with others in the care team. Outcomes varied with respect to continuity of patient care, challenges of working in the model, and implications for system advocacy.

Conclusion: Internal motivations of physicians underpinned the takeover versus consultative palliative care models. Appreciating these motivations allows for an understanding of current models of care and informs strategies to enhance consultative palliative care models and therefore increase our primary palliative care efforts. Other factors that influence models of practice warrant exploration.

Primary Theme: Primary Healthcare

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Qualitative Research Methods

AuthorNames: Hsien Seow, Jose Pereira, Denise Marshall, Michelle Howard, Abby Maybee, Samantha Winemaker, Alexandra Farag, Hun-Je Park

ID: 181
Content Development of the Child Community Health Inclusion Index: An evaluation tool for measuring inclusion of children with disabilities in the community.

Background and Objectives: Participation in community life is vital for child health. Policies regulating public spaces must be inclusive to support children of all abilities to participate in the community. There is no measure that can effectively capture inclusion of children with disabilities at the community level in Canada to support the development of inclusive public policies and health promotion initiatives. The objective was to adapt and develop the content for the Child Community Health Inclusion Index.

Approach: Items were generated through review of existing guidelines and best practice recommendations for community inclusion and an expert panel consisting of experts in universal accessibility, population health, and childhood disability with >5 years of experience working with children with disabilities or related areas. A consensus meeting was held to develop the final items to be further validated through a Delphi process. The relevance and priority of each item were rated as a dichotomous response. Items deemed as high priority were retained, or were otherwise removed. Items with conflicting responses were discussed in a consensus meeting.

Results: A total of 109 items were retained through 12 levels of refinement. Experts suggested clusters of items that could inform subdomains for the adapted tool version. The domains should create a more concise and user-friendly list of items, supporting a variety of potential responders to the tool such as city counsellors and administrators, public health, inclusion and diversity managers at the municipal level and private sector. The importance of ensuring consideration of inclusion items for different type of disabilities was highlighted, and the consideration for intersectionality such as common use of spaces across age groups and multi-generational spaces. The index should include open-ended questions to further capture variations in community facilities accessibility criteria across levels (i.e. public, private) and sectors (e.g. leisure, education, health).

Conclusion: This study highlights the importance of having a child version of a community inclusion tool, as the needs of children with disabilities differ from those of adults. It can help communities identify or improve inclusion of children with disabilities, and further inform health promotion initiatives for this population.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Mixed Methods

AuthorNames: Paul Yejong Yoo, Keiko Shikako-Thomas, Annette Majnemer, Sara Ahmed, Robert Wilton

ID: 186
Equity, care and health service use in community-dwelling persons with dementia, a population-wide descriptive study from Quebec (2000-2017)

Background and Objectives: Evidence shows inequities associated with socioeconomic status (SES) in the care of persons with dementia. However, evidence is scarce and conflicting. There is an urgent need to describe the association between socioeconomic status, care received, and health services use in persons with dementia in order to ensure equity across all levels of SES. We described prevalence and trends of care and health service use across SES in community-dwelling persons with dementia in Quebec.

Approach: We conducted a repeated yearly cohort study of community-dwelling persons with incident dementia using the Quebec health administrative database (2000-2017). We described age standardized rates per 100 person-year of indicators of care and health service use during the year following diagnosis across 5 SES levels based on the area of residence. We used the material deprivation Pampalon index: a composite measure of the level of education, employment, and income of the census dissemination area level. We assessed the differences across SES groups by graphical assessment and expert consensus.

Results: Among the 237,635 community-dwelling persons with a new diagnosis of dementia between 2000 and 2017 (63% women, mean age 81,3 year), those living in the most deprived areas compared to those living in the least deprived areas had more hospitalization (44,15 vs 35,67 per 100 person year), more ED visits (63,09 vs 53,84). In addition, they were prescribed more potentially inappropriate medications including antipsychotic (33,55 vs 26,60) and benzodiazepines (42,73 vs 34,52). In contrast, prescription of anti-dementia treatment, visits to primary care physician, and mortality were comparable in every socio-economic group.

Conclusion: These socio-economic differences may signal inequities in the care received in persons with dementia. Future research should investigate these associations to better understand their underlying causes and the best way to tackle them, in order to offer equitable care to the entire Canadian population living with dementia.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Data Mining/Big Data Analytics

AuthorNames: Claire Godard-Sebillotte, Genevieve Arsenault-Lapierre, Tammy Bui, Nadia Sourial, Amélie Quesnel-Vallée, Victoria Massamba, Louis Rochette, Isabelle Vedel

ID: 187

Approaches to integrate mental health services in primary care: A scoping review of barriers and enablers to implementation

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Background and Objectives: Despite the growing prevalence of mental illness, the integration of mental health services in primary care has been a persistent challenge in Canada. Successful integration leads to reduced stigma, improved treatment of comorbidities, and enhanced access to care. The objective of this project was to conduct a scoping review to answer the following research question: what are the system-level barriers and enablers to implementing collaborative care models to integrate mental health services in primary care?

Approach: Three electronic databases (MEDLINE, EMBASE, PsycINFO) were systematically searched for peer-reviewed literature. Data were extracted using a charting form and descriptive summaries and thematic analyses were performed. Key article summary characteristics were geography, study objective, care team composition, and target mental condition per model. The Consolidated Framework for Implementation Research was utilized to code and analyze included articles' implementation factors (barriers and enablers) according to its five domains: intervention, outer setting, inner setting, individual characteristics, and process. The factors categorized into the outer setting underwent a qualitative thematic analysis.

Results: Upon reviewing 3,239 articles, 63 met the inclusion criteria. The majority of studies were conducted in North America, with models that specialized in the treatment of depression and anxiety. The main themes that emerged from the findings that related to the outer setting included: funding and reimbursement; health practitioner workforce, training, and regulation; relationships with organizations and communities; and policy development and coordination.

Conclusion: Results may inform the scaling up of existing promising local initiatives and pilot projects that integrate mental health services into primary care. Future work should focus on scaling up projects through implementation research and policy evaluations.

Primary Theme: Mental Health and Addictions

Secondary Theme: Primary Healthcare

Methods: Knowledge Synthesis

AuthorNames: Dane Mauer-Vakil, David Rudoler, Sara Allin, Nadiya Sunderji

ID: 190
Sustainability Failures: The Challenge of Sustaining the NP Role and Other Innovations in Primary Health Care

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Background and Objectives: Sustaining innovations in health systems is a topic of increasing importance to stakeholders interested in creating sustainable primary health care (PHC) reform. The Nurse Practitioner (NP) role, a PHC innovation, was initially introduced in Canada in the 1970's and re-implemented in the 1990's. Despite extensive evidence that NPs are a cost-effective means to providing comprehensive, high quality care, the role is not optimized and sustainability of the role remains an issue throughout Canada.

Approach: Understanding the contextual, policy and decision-making factors that influence sustainability of the NP role and other PHC innovations is an important addition to the current literature. Using an exploratory case study, this research examines the closure of a NP clinic in Canada and seeks to understand the contextual factors influencing the decision to close the clinic. Case study analysis was guided by a theoretical framework informed through a review of the literature examining the sustainability of innovations and by a policy framework which systematically considers the factors that may impact the policy environment, and is suitable for policy analysis.

Results: Sustainability failures in our health system are due to deficiencies in provincial and national policies in flawed policy environments. New sustainability knowledge; an updated understanding of the sustainability of innovations in PHC and a newly visioned conceptual framework for stakeholders to use when assessing sustainability of PHC innovations, have emerged from this work.

Conclusion: These findings contribute to the limited literature on sustainability failures, may inform future innovation planning and assessment, and have the potential to enhance governments, funders and policy-makers understanding of the elements that contribute to NP role sustainability and sustainability of other important PHC innovations.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Primary Healthcare

Methods: Qualitative Research Methods

AuthorNames: RAELENE MARCEAU, Kathleen Hunter, Tammy O'Rourke, Stephanie Montesanti

ID: 192

The association between back pain and all-cause and premature mortality among adults in Ontario, Canada: A population-based propensity-score matched cohort study

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Background and Objectives: Back pain is the leading cause of years lived with disability globally, and a driver of high health care utilization across health systems. Preliminary evidence suggests that back pain influences the risk of mortality in adults; however, previous studies had inconsistent results on the association between back pain and mortality. We assessed the association between back pain and all-cause and premature (before 75 years of age) mortality in a population-based sample of adults in Ontario.

Approach: We included Ontario respondents aged ≥18 years of Canadian Community Health Survey (CCHS) from 2003-2012 (n=150,537). CCHS data were individually-linked to death records to measure mortality up to 2018. Back pain was a self-reported back problem diagnosed by a health professional. We propensity-score matched (hard-matched on sex) adults with back pain to those without back pain, accounting for sociodemographic, health-related and behavioural factors. Cox proportional-hazards models were used to assess time to all-cause and premature mortality separately. We restricted premature mortality models to individuals aged

Results: For all-cause mortality models, we identified 36,806 pairs (21,054 for women, 15,752 for men) of adults with and without back pain after propensity-score matching (mean age of 51 years, SD=18). For premature mortality models, we identified 31,440 pairs (17,476 for women, 13,964 for men) of propensity-score matched adults with and without back pain (mean age of 48 years, SD=14). There were no differences between propensity-score matched adults with and without back pain in time to all-cause mortality (women: hazard ratio (HR)=0.98, 95% CI 0.91-1.05; men: HR=1.08, 95% CI 0.99-1.16) or premature mortality (women: HR=0.88, 95% CI 0.77-1.00; men: HR=0.90, 95% CI 0.80-1.02). Sensitivity analyses to assess potential misclassification of the exposure provided similar results when combining self-reported data with diagnostic information to define back pain.

Conclusion: Time to all-cause mortality or premature mortality did not differ between adults with and without back pain. As a high prevalence condition and leading cause of disability, back pain does not appear to affect survival. Study findings have implications for health care delivery and resources planning to improve population health.

Primary Theme: Chronic Disease Management

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Survey Research Methods

AuthorNames: Jessica Wong, Laura Rosella, Pierre Côté, Andrea Tricco, Tristan Watson

ID: 195

EXAMINING THE ASSOCIATION BETWEEN DOMAINS OF FRAILTY AND 6-MONTH CHANGES IN HEALTH-RELATED QUALITY OF LIFE, LIVING STATUS, AND TREATMENT DECISIONAL REGRET AMONG OLDER PATIENTS REFERRED FOR CARDIAC SURGERY

Background and Objectives: Frailty status, which takes function into account, may be a better measure for older patients' health status, although multiple operational definitions of this construct exist. Specific objectives were as follows: (1) Determine the association between domains of frailty and change in HRQoL at baseline and 6 months post-surgery, (2) dependent living status at 6 months post-surgery (3) and treatment decisional regret at 6 months post-surgery

Approach: A prospective cohort pre-post design was used to evaluate the exposure (frailty) and resulting outcomes (change in HRQoL; dependent living status; treatment decisional regret). Frailty was assessed preoperatively using the FACT, a frailty instrument that categorizes frailty in domains of mobility, social circumstances, daily tasks, and cognition. The primary outcome was HRQoL, measured preoperatively and at 6 months using EQ-5D-3L/EQ-VAS. Secondary outcomes were, dependent living status and treatment decisional regret, measured using the Functional Independence questionnaire, both assessed at 6 months post-surgery.

Results: Worse ADL function was positively associated with higher levels of impairment in mobility and usual function HRQoL from baseline to 6 months. As well, worse ADL function was negatively associated with greater HRQoL improvement in men as measured by index scores and across all procedure types as measured by EQ-VAS. Worse mobility function was negatively associated with higher levels of improvement in HRQoL in isolated AVR patients. Lastly, those with worse ADL function had higher odds of experiencing a dependent living status 6 months after surgery (aOR = 2.06 (1.42, 3.00)), and worse ADL (aOR = 1.89 (1.35, 2.65) and cognitive (aOR = 1.77 (1.26, 2.47) function had higher odds of regretting their decision to have surgery.

Conclusion: The evidence-based data has the potential to better inform patients who are at risk for loss of HRQoL and independence with cardiac surgery. Educating patients on the risks of frailty is an important aspect of patient-centered care and individualized prevention decision-making strategies based on patient priorities.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Experimental or Quasi-experimental Methods

AuthorNames: Ryan Gainer

ID: 196
Thematic analysis of patient experience of discharge related information at 30-day post-operative using ACS-NSQIP data

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Background and Objectives: In 2017 the Perioperative & Surgical Services Portfolio within Nova Scotia Health Authority made the decision and commitment to implement the American College of Surgeons - National Surgical Quality Improvement Program (ACS-NSQIP) at eleven facilities with a goal to improve patient experience and health system outcomes. The Perioperative & Surgical Services Portfolio intentionally sought to take advantage of the NSQIP 30 day post-operative follow-up process to engage with patients and families

Approach: The process to capture patient feedback is now embedded into the follow-up calls. In addition to questions on post-operative surgical outcomes a team of twelve Surgical Clinical Nurse Reviewers ask a sample of patients two questions related to receipt of discharge related information: (1) Did you receive written / verbal information at discharge? (2) Did it include information on how to seek medical attention if needed? Patient’s response to these two questions included qualitative information about their surgical care and experience. A thematic analysis was conducted on the information collected during the follow-up calls.

Results: As part of the NSQIP 30 day post-operative follow-up calls patients identified topics that they did not have sufficient information on for their care and recovery and in many cases provided examples.

Conclusion: Leveraging the NSQIP data abstraction process and 30 day postoperative follow-up calls with patients to enhance patient care is a unique opportunity to engage with patients and families to learn what matters to them. Additionally, this analysis informed the development of a survey tool to be piloted Jan 2021

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Ryan Gainer

ID: 197
Seen but not heard: A scoping review of the literature on women in larger bodies' experiences with contraception

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Background and Objectives: Contraception is a fundamental primary healthcare service. Although providers should not restrict contraceptive options solely on the basis of weight, some research suggests that women with a higher body mass index may experience reduced contraceptive efficacy and increased health risks. In this scoping review, we seek to gain a better understanding of women in larger bodies' experiences with contraception in order to identify gaps in the literature and provide recommendations for practice.

Approach: Guided by Arksey and O'Malley's framework for scoping reviews, the following five steps were taken: (1) identifying the research question; (2) identifying relevant literature; (3) selecting literature based on the inclusion and exclusion criteria; (4) charting the data; and (5) collating, summarizing, and reporting the results. The original search was performed in four databases using key words related to 'Contraception', 'Obesity', and 'Experience'. Our initial search was limited to peer-reviewed articles published in English between 2010 and 2020. We used inductive thematic analysis techniques to develop a coding scheme that was applied to each article for the full review.

Results: Twenty-nine articles meeting the eligibility criteria were reviewed. The vast majority of the research was quantitative (n=27), with only one qualitative study and one systematic review, respectively. While nearly all of the articles assessed routine use of contraception (n=26), only two examined the use of emergency contraception. Additionally, we identified four key sub-themes: (1) knowledge, attitudes towards and beliefs about contraception; (2) contraceptive (dis)satisfaction among women in larger bodies; (3) the need to prioritize contraceptive counseling; and (4) potential barriers limiting access and use of contraception. Our findings reveal a glaring lack of qualitative inquiry on this topic. Although the literature suggests that many women in larger bodies have unmet contraceptive care needs, women's voices are rarely represented.

Conclusion: This scoping review reveals that contraceptive research has largely neglected to center women in larger bodies' lived experiences. Nonetheless, the literature warns that these women may receive inadequate contraceptive counseling. To address this, primary healthcare providers must routinely engage in patient-centered contraceptive discussions with women in larger bodies.

Primary Theme: Primary Healthcare

Secondary Theme: Equity and Vulnerable Populations

Methods: Knowledge Synthesis

AuthorNames: Tierney Boyce, Elena Neiterman

ID: 198
A mixed-methods approach to the evaluation of health research networks

Background and Objectives: Health research networks, which are frequently funded through public funding, can provide opportunities for collaborative initiatives and to bring individuals of a variety of backgrounds together to achieve common goals. Diabetes Action Canada, which is a Canadian Institutes of Health Research (CIHR), Strategy for Patient-Oriented Research (SPOR) Network, funded in 2016, is one such endeavor. The objective of this evaluation is to present a mixed-methods approach for the conduct of a longitudinal network evaluation.

Approach: This evaluation proposes to integrate the State of Network Evaluation framework, centered on key network themes of Connectivity, Health, and Results, and the Canadian Academy of Health Sciences (CAHS) framework with 66 preferred indicators to measure returns on investment in health research across 5 domains: advancing knowledge; capacity building; informing decision making; health impact; and economic and social impact. Aspects considered for the evaluation include 1) structure and function of the network; 2) connectivity and roles of the diversity of actors 3) network's continual emergence and evolution; 4) timing of results with impact; 5) capturing of the "chain of impact.

Results: The Connectivity of the Diabetes Action Canada membership and structure between the members will be assessed longitudinally using social network analysis. A cross-sectional survey of each of the DAC members using an e-survey questionnaire asking about contact and frequency of relationship with other network members and the topic(s) discussed. Examining the Health of the network related to resources, infrastructure, and advantage, relevant internal and external resources are to be reviewed for funding, and semi-structured interviews to determine members' perception of joint value. Initial interim Results indicators related to advancing knowledge, through bibliometric analyses of reported peer-review manuscripts, capacity building, and health goals or impacts on a per-project basis were considered relevant based on the maturity of the network.

Conclusion: Longitudinal network evaluation provides stakeholders, including funders and Network members, with an annual analysis of network activities, provides accountability for the resources provided, diverse information that highlights growth and successes, assists with improvement and advancement, and finally supports sustainability of the collaborative effort of a network.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Knowledge Translation & Exchange (includes KTE methods)

Methods: Mixed Methods

AuthorNames: James M. Bowen, Valeria Rac, Mathieu Ouimet, Justin Lawarée

ID: 202

Evaluation of an electronic consultation service for Coronavirus 2019 (COVID-19) care

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Background and Objectives: The Coronavirus 2019 (COVID-19) pandemic resulted in an increased need for innovative virtual care solutions. Electronic consultations (eConsults) increase access to specialty advice for primary care providers (PCPs) through an asynchronous digital platform. In response to the COVID-19 pandemic, the Ontario eConsult Program launched COVID-19 specialty groups. The objective of this study is to examine the impact of an eConsult service between PCPs and specialists and to explore the content of clinical questions being asked.

Approach: We applied a mixed-methods approach. A quantitative descriptive analysis was conducted on eConsult cases submitted between March and September 2020 to the COVID-19 Building Access to Specialists through eConsultation (BASETM) group on the Ontario eConsult Service and Champlain eConsult BASETM Service. Data variables included the number of cases submitted by PCPs, average response time and time billed by the specialist as well as results from a PCP close-out survey capturing the outcome of the eConsult. An inductive and deductive qualitative content analysis was done on a subset of cases to identify common themes of clinical questions.

Results: 289 eConsults were submitted between March and September 2020 to the COVID-19 eConsult groups. The median specialist response time was 0.6 days (range: 3 minutes to 15 days) and the average time billed by specialists per eConsult was 16 minutes (range: 5 to 59 minutes). In 26% of cases, eConsults resulted in an avoided face-to-face referral and 88% of primary care providers surveyed rated the value of their eConsult as a 5 (excellent value) or 4. A further qualitative analysis was conducted on 51 cases. Five major themes were identified relating to clinical questions: Precautions for high risk populations, guidance on self-isolation and return to work, diagnostic clarification and/or need for COVID-19 testing, guidance on personal protective equipment (PPE), and management of chronic symptoms.

Conclusion: The Ontario eConsult Program was able to quickly adapt to the emerging COVID-19 pandemic in March 2020 by creating COVID-19 specialty groups for PCPs. Primary care providers used the group to ask questions related to high risk population, self-isolation, testing, PPE and managing symptoms.

Primary Theme: COVID-19

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Mixed Methods

AuthorNames: Jatinderpreet Singh, Gary Garber, Erin Keely, Sheena Guglani, Clare Liddy

ID: 203
Identifying multimorbidity patterns in older adults with diabetes and/or hypertension to improve tailoring of health services

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Background and Objectives: Multimorbidity, the coexistence of >= 2 diseases, is prevalent in older adults. In the U.S., the prevalence of multimorbidity ranges from 50% in adults = 85 years. Negative impacts of multimorbidity include reduced walking speed and difficulties in activities of daily living. Our study examined multimorbidity patterns in older adults with i) diabetes, ii) hypertension and iii) diabetes and hypertension and discussed the mechanisms of each multimorbidity pattern.

Approach: We conducted a secondary analysis using data from the National Health and Aging Trends Study (NHATS). The NHATS is a nationally representative, longitudinal study of older adults (>=65 years) in the U.S. Latent class analysis (LCA) was performed to identify multimorbidity patterns in community-dwelling older adults with i) diabetes, ii) hypertension and iii) diabetes and hypertension. We analysed the 2011 data (baseline) and the 2015 data (sample replenishment).

Results: We included 10, 201 community-dwelling older adults in our analyses, 5068 older adults from the 2011 cohort and 5133 older adults from the 2015 cohort. Six distinct multimorbidity patterns were identified through latent class analysis: i) minimal multimorbidity, ii) joint multimorbidity, iii) psychological-joint multimorbidity, iv) cardiovascular-joint multimorbidity, v) bone-joint multimorbidity and vi) cardiovascular-joint-respiratory multimorbidity. Mechanisms of multimorbidity patterns included shared risk factors, effects of medication, disruption of metabolism of nutrients and damage to organs and tissues across multiple body systems.

Conclusion: This work will more accurately account for the magnitude of increased morbidity on highly prevalent chronic conditions. Our findings can also improve clinical care through improved tailoring of health services that individuals receive based on their specific multimorbidity patterns.

Primary Theme: Chronic Disease Management

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Data Mining/Big Data Analytics

AuthorNames: Janelle Gravesande, Jinhui Ma, Ada Tang, Lauren E. Griffith, Julie Richardson

ID: 204

Transitions de soins pharmaceutiques chez les aînés-une évaluation de l’implantation

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Background and Objectives: Les transitions adéquates de soins pharmaceutiques entre l’hôpital et le milieu communautaire menées par les pharmaciens ont été associées à une diminution des hospitalisations évitables. Peu de données sont disponibles sur les conditions optimales à leur implantation. L’objectif de notre étude est de décrire les principales caractéristiques d’une intervention sur les transitions de soins pharmaceutiques chez les aînés dans un contexte québécois et d’en identifier les facilitateurs et les barrières à l’implantation.

Approach: Un devis d’étude de cas unique comprenant des entrevues individuelles et une analyse des sources écrites documentant le processus d’implantation a été privilégié. Un échantillonnage par convenance parmi les professionnels impliqués dans l’intervention a été effectué. Deux pharmaciens hospitaliers, cinq pharmaciens communautaires et trois médecins de famille ont participé aux entrevues semi-dirigées. Toutes les entrevues ont été enregistrées, transcrites et codées (n = 10). L’analyse thématique a été effectuée à partir d’un arbre de codage mixte, inductif et déductif, fondé sur le cadre conceptuel d’implantation de Damschroder.

Results: Les principales caractéristiques de l’intervention sont : 1) la collaboration interdisciplinaire entre les pharmaciens hospitaliers, les pharmaciens communautaires et les médecins ainsi que la clarté de rôles pour développer le plan de soins pharmaceutiques initial à l’hôpital et réaliser les suivis après le congé; 2) le temps dédié à l’intervention; 3) la bonification des mécanismes de communications interdisciplinaires entre les milieux hospitaliers et communautaires. Les facilitateurs de l’implantation incluent la disponibilité des leaders et champions cliniciens, la perception et la collaboration des professionnels. Les barrières comprennent la difficulté d’intégration de l’intervention aux soins usuels en termes de temps et de ressources disponibles, le manque d’expertise à l’utilisation d’un dossier médical électronique par les pharmaciens et la difficulté à rejoindre à certains patients pour les suivis.

Conclusion: L’analyse des caractéristiques principales de l’intervention ainsi que des facilitateurs et barrières à son implantation démontre la faisabilité de cette intervention pharmaceutique et les enjeux associés à son intégration aux soins usuels dans le système de santé québécois. L’implantation de l’intervention dans différents contextes en permettra une évaluation plus exhaustive.

Primary Theme: Pharmaceutical Policy

Secondary Theme: Collaborative Healthcare Improvement Partnerships

Methods: Qualitative Research Methods

AuthorNames: Sara Khalilipalandi, Benoît Cossette, Audrey Vandesrasier, Louise Mallet, Geneviève Ricard, Rolande Poirier, Suzanne Gosselin, Marie-France Langlois, Caroline Sirois, Yves Couturier, Claudie Rodrigue, Julie Teasedale, Mylaine Breton

ID: 207

How common is concurrent neurological and mood/anxiety disorder comorbidity over time? A population-based cohort study in Ontario, Canada

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Background and Objectives: Neurological disorders and mental health conditions, including mood/anxiety disorders, are a leading cause of disability and healthcare use. These disorders have shared risk factors and commonly co-occur in older adults. Mood/anxiety disorders are often under-diagnosed and under-treated among those with neurological disorders, potentially leading to more rapid symptom progression, worse health outcomes and increased health care use. We estimated the relative and absolute rates of neurological and mood/anxiety disorder comorbidity among adults in Ontario, Canada.

Approach: We identified adults aged 40-85 years on April 1st, 2002 in Ontario, Canada using health administrative databases. These individuals were followed for up to 14 years until March 31st, 2016. We estimated the association between between having a prior neurological disorder (dementia, Parkinson's disease (PD), and stroke) or mood/anxiety disorder and developing a different, incident neurological or mood/anxiety disorder using cause-specific hazard models. Exposure to prior disorders was modeled as a time-varying covariate and death was considered a competing risk. Individuals who were not at risk for the specific incident outcome disorder were excluded from that model.

Results: All prior disorders were associated with increased rates of dementia: PD (adjHR= 4.05, 95%CI, 3.99-4.11), stroke (adjHR=2.49, 95%CI, 2.47-2.52), and mood/anxiety disorder (adjHR=1.79, 95%CI, 1.78-1.80). Increased rates of PD were associated with prior dementia (adjHR=2.23, 95%CI, 2.17-2.30) and mood/anxiety disorder (adjHR=1.77, 95% CI 1.74-1.81), but not stroke (adjHR=1.04, 95% CI, 0.99 to 1.10). Rates of stroke were highest in persons with prior dementia (adjHR=1.56, 95% CI, 1.53 to 1.58) and showed more modest associations with PD (adjHR=1.21, 95% CI, 1.16 to 1.25) and mood/anxiety disorder (adjHR=1.09, 95% CI, 1.08 to 1.11). The associations were generally strongest in the six months following the prior disorder diagnosis, lowest in the interim periods (>six months to 10 years) and elevated in the later periods (10+ years) following diagnosis.

Conclusion: We observed associations between pairs of prior and incident neurological disorders and mood/anxiety disorder among middle- and older-aged adults. Neurological and mental health comorbidity is common. This should be considered in clinical practice guidelines for these conditions and may necessitate care across multiple providers.

Primary Theme: Chronic Disease Management

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Statistics/ Econometrics

AuthorNames: Laura Maclagan, Colleen Maxwell, Daniel Harris, Xuesong Wang, Jun Guan, Ruth Ann Marrie, David Hogan, Peter Austin, Simone Vigod, Richard Swartz, Susan Bronskill

ID: 208
Facteurs liés à la réhospitalisation à 30 jours suivant une hospitalisation pour une raison médicale chez des patients souffrant de troubles mentaux

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Background and Objectives: Aucune étude a évalué les facteurs associés à une réadmission précoce, dans le 30 jours, à l'hôpital pour des raisons médicales, qu'il s'agisse de maladies mentales ou physiques, chez les patients atteints de troubles mentaux. En plus, très peu d'études ont identifié les déterminants de la réadmission en utilisant un cadre conceptuel

Approach: Pour cette étude longitudinale, un total de 2 954 patients hospitalisés ont été identifiés en 2014-2015 par le biais de banques de données clinico-administratives au Qu;bec. Ils avaient visité l'une de six urgences québécoises. La première hospitalisation a été considérée pouvant avoir lieu partout au Québec. Une régression logistique binaire hiérarchique a identifié les variables cliniques, sociodémographiques ou d'utilisation de services de santé, collectées de 2012-2013 à 2013-2014, et liées à la réadmission ou non dans les 30 jours suivant le congé.

Results: Résultats: Les patients présentant des troubles concomitants de dépendance aux substances/maladies physiques chroniques, des troubles mentaux graves ou de l'adaptation (variables cliniques), ayant eu 4 consultations psychiatriques ambulatoires ou plus avec le même psychiatre et ayant été hospitalisés pour raisons médicales dans les 12 mois précédents (variables d'utilisation de services) étaient plus susceptibles d'être réadmis dans les 30 jours suivant leur congé. Ceux ayant eu 1 à 3 visites aux urgences dans les 12 mois précédent leur hospitalisation, ayant eu un séjour de 16 et 29 jours lors de cette hospitalisation (date index) et ayant consulté un médecin pour raisons médicales au moins 30 jours après leur congé ou avant leur réadmission (variables d'utilisation de services) étaient moins susceptibles d'être réadmis.

Conclusion: La réadmission à l'hôpital dans les 30 jours suivant le congé est plus fortement associée aux variables cliniques, suivis des variables d'utilisation des services, tous deux jouant un rôle clé dans la prévention de la réadmission précoce à l'hôpital. . Les résultats démontrent l'importance de développer des interventions spécifiques.

Primary Theme: Mental Health and Addictions

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Healthcare Service or Policy Initiative

AuthorNames: Lia Gentil, Guy Grenier, Marie Josée Fleury

ID: 210

Directly-Funded Care Programs: A Comparative Analysis from the Perspective of Family Caregivers of Persons with Dementia

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Background and Objectives: Directly-funded (DF) care programs provide funds to individuals to arrange their own homecare services and enable more control over their care providers. Initially developed for persons with disabilities, the criteria have been expanded to encourage access for persons with dementia, and their family members. This research sought to understand the effectiveness of DF policies in the context of dementia care, and potential unintended effects for dementia caregivers.

Approach: A comparative analysis of DF policies in three jurisdictions was conducted; two originally designed for persons with disabilities (BC's Choice in Supports for Independent Living, (CSIL), & MB's Self and Family Managed Care (SFMC) and the NS Supportive Care Program (SCP) designed specifically for persons with dementia as a comparison. Our evaluation framework considered the adequacy, suitability, sustainability, and equity of each policy. A Caregiver Policy Lens further assessed these policies from the perspective of caregivers of persons with dementia.

Results: DF programs offer advantages for individuals and families to have control over home care services that adapt to the progressive needs of persons with dementia. Historical and socioeconomic factors contribute to the accessibility and utilization of each program for persons with dementia and their caregivers. BC's program was developed to assist persons with disability to become independent thus, consideration of family caregiver needs was not addressed whereas Manitoba's program does consider the needs of family. The administration requirements and level of funding also varied considerably between provinces. For example, BC's CSIL program provides an average of $7300/month with substantial terms and conditions related to employment laws in contrast to the NS SCP $1000/month with fewer administrative requirements.

Conclusion: As DF policies expand to support older adults with dementia to remain in the community greater attention on family caregivers is needed. In particular, assessment of caregiver needs, and training and support components of the policies are critical for sustainability of dementia caregivers.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Program or Policy Evaluation

AuthorNames: Rosanne Burke, Janice Keefe

ID: 213

The EMBOLDEN study: Using intervention co-design to enhance physical and community mobility in older adults

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Background and Objectives: Community programs designed to support physical activity and social participation may be highly effective, but older adults with health inequities face barriers to participating in existing programs. The aim of the EMBOLDEN study is to successfully co-design a community-based intervention to improve physical and community mobility, foster social participation, and facilitate connections to community programs among older adults aged 55+ years living in urban neighbourhoods facing health inequities.

Approach: First, we completed an environmental scan to provide information about existing local health and social programming for older adults and conducted an umbrella review (review of systematic reviews) on the effectiveness of group-based physical activity and nutrition interventions to promote mobility in older adults. Next, we utilized co-design methodology using persona-scenario and focus group interviews to explore the experiences of older adults and service providers with community-based programs designed to support physical activity and social participation. A Strategic Guiding Council (SGC) comprised of local health and social service providers and older adults guides the intervention co-design and strategic research directions.

Results: The completed environmental scan and umbrella review provided an evidence-based foundation rooted in our local context. The intervention co-design process integrates this evidence and lived experiences to identify strategies to address unmet needs and accessibility barriers faced by older adults in neighbourhoods with health inequities. We anticipate that the co-design process will result in a novel complex intervention to promote mobility through physical activity, healthy eating, social participation, and facilitated system navigation. We anticipate that the co-design process will also identify trial design features and selection of the pilot neighbourhood to test the intervention from amongst the priority neighbourhoods identified in the environmental scan. Engagement of the SGC is critical for ongoing collaboration, real-world implementation success, and enhanced health and mobility of older adults.

Conclusion: Collaborating with diverse community partners and using multiple sources of evidence are critical to identifying optimal design features of a community-based intervention to promote mobility. Ultimately, we aim to implement a feasible, acceptable intervention to meet community needs, have the potential for sustainability, and improve the lives of older adults.

Primary Theme: Patient and Public Engagement

Secondary Theme: Equity and Vulnerable Populations

Methods: Knowledge Translation and Exchange (KTE) Methods

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ID: 218

Assessing the Impact of COVID-19 Responses on Dementia Care in the Community in Nova Scotia: An Intersectional Health Equity Analysis

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Background and Objectives: This presentation reports on the method and findings from a 10 month provincially funded COVID-19 rapid research study in Nova Scotia, Canada. This Integrated Knowledge Translation (iKT) study examined changes in service delivery for diverse populations of socially and medically vulnerable older adults living with dementia in the community and their family and friend caregivers, using an intersectional health equity and Sex and Gender Based Analysis Plus analytical approach.

Approach: To analyze and understand COVID-19's impact on service realities for dementia-related care/caregiving needs, this project employed multiple methods including: a) a rapid review synthesizing current dementia and/or dementia caregiving knowledge published between June 2020 and August 2020; b) a validated service mapping tool developed by Alzheimer Society Ireland to map new and existing resources, services and supports for Nova Scotians living with dementia and their caregivers under COVID-19; c) documentation and contextualization of service availability, accessibility, and delivery changes using a provincial online survey and interviews with people living with dementia, caregivers and service and support providers.

Results: Results highlight the intensification of inequities under COVID-19, unmet needs of people living with dementia and their caregivers in rural communities, and disparities associated with digital exclusions. Strategies that involved blended online and in person approaches to support the most vulnerable members of communities were also identified. The documentation of service realities provides a crucial resource for service providers to prioritize areas for action in accordance with resource availability within a dynamic and changing context.

Conclusion: New knowledge gained from this rapid project will contribute to a baseline for assessing the impact of COVID-19 on dementia care in the community service delivery both during and post-pandemic that can be used to support efforts to transition from emergency measures and adjust to the post-COVID-19 'new normal'.

Primary Theme: COVID-19

Secondary Theme: Equity and Vulnerable Populations

Methods: Mixed Methods

AuthorNames: Katie Aubrecht, Jacqueline Gahagan, Barbara Ann Hamilton-Hinch, Elaine Moody, Meaghan Sim, Christine Kelly, Janice Keefe, Rachel Herron, Kristin Hadfield, Trudy Flynn, Bernadette Rock, OmiSoore Dryden, Judah Goldstein, Mary Jean Hande, Susan Hardie, Maria Pertl, Janet Kokocki

ID: 222
CRISM – AHS Advancement of Analytics in Addiction Program

Background and Objectives: Alberta Health Services (AHS), the provincial health care provider in Alberta, and the Canadian Research Initiative in Substance Misuse (CRISM) Prairie Node have partnered to promote innovation in analytics related to substance use and health care utilization. This partnership's long-term goals are to support access to substance use data from relevant healthcare services and programs in AHS for researchers and promote innovative analytic projects.

Approach: This program's development started in Fall 2016, and operations began in 2018 by hiring a full-time embedded analyst within the Provincial Addiction and Mental Health (AMH) Knowledge, Performance, and Integrated Planning (KPIP) team of AHS. The embedded analyst works on projects beyond routine system reporting prioritized by a joint CRISM-AHS governance team based on shared research priorities. Projects come from researchers and clinicians across the province, Alberta Health (AH), internally from AHS, and CRISM members. The governance team ensures that appropriate ethical and administrative approvals are in place.

Results: To date, there have been 22 projects accepted, including 9 initiated by CRISM Prairies members, 4 initiated by AHS staff, and 9 initiated by urgent requests from AHS and/or Alberta Health. Work to date includes collecting and analyzing pilot data from AHS services that were leveraged by CRISM Prairies investigators into two successful external funding applications on methamphetamine and opioid-related services, valued at $676,591. Released two major, publically accessible reports, one on cannabis-related presentations to addiction treatment services prior to Canadian legalization and the other on methamphetamine-related presentations to addiction treatment services. Completed three projects supporting quality improvement for patients seeking treatment for opioid use disorders.

Conclusion: The CRISM-AHS Advancement of Analytics in Addiction partnership has proven to be a fruitful investment to all involved organizations and researchers to leverage agile analysis of administrative data to improve knowledge, planning, and innovation in the realm of the utilization of health service related to substance use in Alberta.

Primary Theme: Mental Health and Addictions

Secondary Theme: Collaborative Healthcare Improvement Partnerships

Methods: Program or Policy Evaluation

AuthorNames: Joshua Hathaway, Denise Adams, Shelly Vik, Neha Batra-Garga, Katherine Rittenbach, Steven Clelland, Cam Wild

ID: 223
Development of Shared Decision Making Training Module for Patients facing Preference-Sensitive Decisions regarding Major Surgical Procedures

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Background and Objectives: Studies have demonstrated poor levels of comprehension among surgery patients after informed consent. Shared decision making (SDM), a formalized approach wherein patients are educated about the risks, benefits to treatment options, and supported to share personal preferences, has been shown to improve comprehension, reduce decisional conflict, and better align patient expectations with outcome. The goal of this study is to develop a training module for HCPs in order to implement SDM into surgical consent discussions.

Approach: SDM training modules for team members involved in surgical decision-making in NSH will be developed. Focus groups with patients and providers will be held to identify learning preferences for HCPs and adapt training modules to include surgically relevant examples. Additionally, groups will identify barriers and facilitators to SDM, which will inform training strategies for the conduct of SDM and its broader implementation into clinical care. The effectiveness of the SDM training-program will be assessed by conducting observer-based evaluation of SDM (OPTION-5) and measuring quality of the discussion (SDM-Q-9) on audio recordings of consent discussions before and after HCP training.

Results: We expect to see a significant improvement in HCP OPTION-5 scores following SDM training intervention with a larger score improvement in cardiac surgery residents compared with older cardiac surgery attendees. We anticipate SDM-Q9 scores of SDM quality and patient satisfaction to improve following SDM training intervention.

Conclusion: This study will demonstrate the feasibility of the development of an SDM training program that effectively elicits patient preferences, improves patient comprehension, and reduces decisional conflict. The implementation of this training module will be a critical step towards bringing patient preferences, values, and understanding to the forefront of decision making.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Knowledge Translation & Exchange (includes KTE methods)

Methods: Knowledge Translation and Exchange (KTE) Methods

AuthorNames: Elias HIRSCH

ID: 224
Co-designing Supports to Enhance the Dementia Diagnosis Experience and Post-Diagnostic Care in Canada

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Background and Objectives: Dementia is characterized by a decline in memory and day-to-day functioning, resulting in life-changing physical, emotional, and psychological stress on persons with dementia (PWD) and family care partners (CP). The projected increase in dementia prevalence poses challenges for health and social care providers (HSCP). This project aims to design, deliver, and evaluate behaviour change campaigns and toolkits to enhance how HSCP communicate a diagnosis and provide post-diagnostic support for PWD and CP.

Approach: COGNISANCE* uses a longitudinal mixed methods approach that includes five phases over three years in Canada (New Brunswick, Ontario, Quebec), Australia, the Netherlands, United Kingdom, and Poland. This presentation focuses on Canadian data from Phase 1. Focus groups, individual interviews, and surveys were used to explore the dementia diagnostic process and post-diagnostic care from the perspectives of HSCP, PWD, and CP. Lessons learned will inform later phases, including co-creating (Phase 2), implementing (Phase 3), and evaluating the impact (Phase 4) of campaigns and dementia care toolkits. Phase 5 will focus on sustainability and scalability of the project.

Results: Focus groups and individual interviews with HSCP, PWD, and CP revealed barriers to diagnostic and post-diagnostic care, including stigma, access, wait times, cost, and geography. Facilitators included education, relationships, and using a team approach. All participant groups felt that honesty and open communication were integral to the diagnostic process, and individualized support was identified as an essential feature of post-diagnostic care. Surveys with HSCP, PWD, and CPs are currently being analyzed. Preliminary results highlight that a range of experiences with dementia care exist across and within participant groups. Final survey results will be shared in our presentation.

Conclusion: The findings improve our understanding of the varied experiences of dementia diagnosis and post-diagnostic support from the lens of HSCP, PWD, and CP. Results will inform the co-creation of COGNISANCE campaigns and toolkits to improve the diagnosis experience and post-diagnostic support for PWD and CP. *https://cheba.unsw.edu.au/consortia/cognisance

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Collaborative Healthcare Improvement Partnerships

Methods: Mixed Methods

AuthorNames: Shelley Doucet, Alison Luke, Carrie McAiney, Isabelle Vedel, Pam Jarrett, Amy Reid, Melissa Koch, Laura Rojas-Rozo, Emma Conway, Meredith Gresham, Henry Brodaty

ID: 231

‘Imagine 100lbs of bricks just hit you’ – Exploring beliefs about end-of-life among substitute decision-makers in Canada using the Common-Sense Self-Regulation Model

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Background and Objectives: At the time of death, families, friends, or others take responsibility as substitute decision-makers (SDMs) to consent to organ donation. Despite their central role, little is known about the beliefs that influence decision-making among SDMs. The Common-Sense Self-Regulation Model (CSSRM) may help explain how individuals formulate beliefs in response to health threats affecting a loved one (e.g., life-ending illness/event). We aimed to explore the perspectives of SDMs involved in making end-of-life and organ donation decisions.

Approach: We report initial findings from an ongoing multicenter, qualitative study involving semi-structured telephone interviews with SDMs conducted 6-8 weeks after the patient’s death. Our sampling frame includes three subgroups of SDMs that: 1) consented to donation; 2) declined donation; 3) were not approached about donation. We aim to recruit 20-25 SDMs per subgroup. Interviews were guided using five key CSSRM constructs: identity (how they label it), cause (what caused it), consequences (how serious is it), timeline (how long will it last), and cure/control (is it curable/controllable). Data are being analyzed using theoretical framework-informed directed content analysis and inductive thematic analysis.

Results: From Oct 2019 - Oct 2020, 23 SDMs had been recruited from three centers in Quebec, Canada. Participants readily used medical terminology to describe the patient’s illness/event and generally had a good understanding about the events that led to the patient’s death; however, additional knowledge was often sought posthumously to further understanding. Common causal attributions included predisposition to certain illnesses/events, lifestyle factors, and stress/worry. Participants were quick to identify the severity of the patient’s condition although a lingering hope for recovery was often reported. Maintaining the patient’s dignity (e.g., avoidance of a vegetative state) was a key motivator in making the decision to end life.

Conclusion: These findings can help clarify how SDMs label the cause of death of their loved one and what they perceive to be the cause, consequences, timeline, and controllability. Findings can contribute to optimizing tools and training for healthcare providers to support SDMs in making decisions about end-of-life and organ donation.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Patient and Public Engagement

Methods: Qualitative Research Methods

AuthorNames: Jacob Crawshaw, Justin Presseau, Michaël Chassé, Livia Pinheiro Carvalho, Polina Titova, Zack Van Allen, Kimberly Jordison

ID: 235
Profiles of socially isolated older persons during the COVID-19 pandemic

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Background and Objectives: The confinement measures of COVID-19 may have changed the landscape of socially isolated older persons, either by worsening or creating new situations of social isolation. It is important to understand the variety of health, mental and cognitive characteristics of this group of persons to adapt practices aimed at reducing the unintended effects of COVID-19 confinement measures. This study aimed to describe the typology of socially isolated older persons under COVID-19 confinement measures.

Approach: Cross-sectional study using self-reported measures from a community-based telehealth tool to identify potentially at-risk older persons 70 years and older living in Quebec during the COVID-19 pandemic. Measures included demographics (age group, gender), physical health (number of medications, use of home care, use of a walking aid), mental health (level of anxiety, presence of depressive symptoms) and access to social supports (living with someone, external contacts with family, friends, health professionals or other professionals). Socially isolated persons were identified as those living alone with no external contacts. Latent class analysis was conducted to develop the typology of socially-isolated older persons.

Results: Of the 1,783 older persons who completed the online assessment, 380 (21.3%) were considered socially isolated. Among these, a typology of three different profiles was identified: Class 1 (43%) consisted of relatively older, more frequently female and physically frail persons, Class 2 (20%) were younger, more frequently male and reporting higher levels of anxiety, Class 3 (37%) were seemingly well in terms of observed characteristics despite being socially isolated.

Conclusion: This study demonstrated the presence of multiple different types of socially isolated older persons. Findings may help tailor primary care policies and practices aimed at reducing the unintended effects of COVID-19 confinement measures in this population.

Primary Theme: COVID-19

Secondary Theme: Primary Healthcare

Methods: Statistics/ Econometrics

AuthorNames: Nadia Sourial, Lise Dassieu, Eric Tchouaket, Amélie Quesnel-Vallée, Claire Godard-Sebillotte, Svetlana Puzhko, Sathya Karunananthan, Élise Develay, Kevin Galery, Olivier Beauchet

ID: 236

Forecasting the need for General Internal Medicine (GIM) specialists with the Internists planning tool

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Background and Objectives: As the population ages and grows, hospital managers want to ensure appropriate staffing levels to meet the population's growing health needs. Predicting demand for GIM specialists will provide hospital planners with advanced warning about any potential gaps in care capacity. The project intended to develop a user-friendly interactive tool to predict long-term future demand for GIM specialists and allow users to explore various scenarios. The tool has potential extent to other specialties and facilities.

Approach: The methodology provides 5-year projections on six key indicators and contextual measures related to internists' workload, separately for inpatient and ambulatory settings. The projections take into account population aging and growth, historical rates of inpatient admissions and ED visits, and changes in patient complexity over time. Population estimates were obtained from Statistics Canada, and projections were obtained from the Ontario Ministry of Finance, while hospitalizations and ED visit rates are based on 3-years of clinical data. The tool models workload for internists by role – responsible provider and consultant.

Results: We developed an interactive tool to support health workforce planning at the hospital level. The tool provides eight years of historical trending data and 5-year projections on the overall population morbidity and associated demand for GIMs. In addition to providing a demographic changes adjusted baseline projection in the target population, the tool also has a "what if" feature, allowing users to create multiple scenarios against the baseline model. The feature will enable users to adjust for changes in the population's morbidity, the staff-mix within the hospital, and clinical practice changes. The model's key outcomes include the number of patients treated (overall and under internists care), patients' complexity in care, and patient days.

Conclusion: The tool is being piloted in a large teaching hospital in Ontario, testing the feasibility of using it to assist with long-term planning and budgeting for future staffing. Going forward, we intend to make the tool available to other facilities to support their health workforce planning.

Primary Theme: Health Human Resources

Secondary Theme: Health Informatics

Methods: Statistics/ Econometrics

AuthorNames: Olga Krylova, Hui Wang, Michael Carter, Yvonne Rosehart

ID: 240

Sex-specific differences in physical health and health services use among Canadian Veterans: a retrospective cohort study using healthcare administrative data

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Background and Objectives: Military populations tend to be male-dominated. Consequently, female military Veterans are an overlooked, insufficiently studied and, as a result, potentially medically underserved subpopulation of many ex-serving armed forces communities. The objectives of this study were to compare the physical health and health services use between male and female Veterans residing in Ontario, Canada.

Approach: This was a population-based, retrospective cohort study using administrative healthcare data in Ontario, Canada between 1990 and 2019. The study population included 27,058 male and 4,701 female Canadian Armed Forces and Royal Canadian Mounted Police Veterans residing in Ontario, Canada following their military or policing service. The study linked multiple administrative datasets at the individual level including hospitalization and emergency department records, physician visits, home care visits, and sociodemographic data. Sex-specific differences in the prevalence of select physical health conditions and rates of health services use were compared using multivariable logistic, Poisson, and modified Poisson regression.

Results: The risk of rheumatoid arthritis and asthma was higher for female Veterans compared to males. Female Veterans had a lower risk of myocardial infarction, hypertension, and diabetes. No sex-specific differences were noted for chronic obstructive pulmonary disease. Female Veterans were also more likely to access all types of health services than male Veterans. Further, female Veterans accessed primary, specialist, and emergency department care at greater rates than male Veterans. No significant differences were found in the sex-specific rates of hospitalizations or homecare use.

Conclusion: Female Veterans residing in Ontario, Canada have different chronic health risks and engage in health services use more frequently than their male counterparts. These findings have important healthcare policy and program planning implications, in order to ensure female Veterans have access to appropriate health services.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Chronic Disease Management

Methods: Healthcare Service or Policy Initiative

AuthorNames: Alyson Mahar, Kate St Cyr, Alice Aiken, Heidi Cramm, Marlo Whitehead, Paul Kurdyak

ID: 241

Depression and the risk of hospitalization: a nested case-control study accounting for non-persistence to antidiabetic treatment

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Background and Objectives: Depression is one of the most common comorbidities associated with type 2 diabetes. Both diseases separately lead to significant morbidity and mortality including hospitalization burden. Depression is associated with non-persistence to antidiabetic drugs which may lead to a worse prognosis of diabetes. The study objective was to measure the effect of depression on hospitalizations and particularly on all-cause, diabetes-related, cardiovascular-related and major cardiovascular events-related hospitalization, adjusting for non-persistence to antidiabetic drugs and other.

Approach: We performed a nested case-control study within a cohort of adult's individuals newly treated with antidiabetic drugs. Using Quebec province medico-administrative data, we identified four different subsets of cases: all-cause, diabetes-related, cardiovascular-related and major cardiovascular event hospitalizations during a maximum follow-up of eight years. By a density sampling method, all hospitalized cases were matched with up to 10 controls by age, sex, and Elixhauser comorbidity index. Using conditional logistic regressions, the effect of depression on hospitalization was estimated adjusting for non-persistence to antidiabetic drug treatment and other potentially confounding variables.

Results: We identified 41,550 all-cause hospitalized cases, of which 34,437 were related to cardiovascular (CV) diseases, 29,584 to diabetes, and 13,867 to major CV events. Depression was diagnosed in 2.51% of all-cause hospitalization cases and in 1.16% of matched controls. 69.11% of cases vs 72.59% of controls were on metformin monotherapy and the majority (71.62% vs 75.02%, respectively) did not add antidiabetic drug during follow-up. Non-persistence was similar (about 30%) in both groups. In the multivariate analyses, depression was associated with an increased risk for all-causes hospitalizations, with odds ratios (ORs) ranging from 1.20 (95% CI: 1.08-1.34) to 1.71 (95% CI: 1.59-1.83) according to the model adjustment. Results were consistent in sensitivity analyses changing depression definition, non-persistence definition, and performed only among older individuals.

Conclusion: Depression was associated with an increased risk of all-causes hospitalizations. We did not find a statistically significant association between depression and cause-specific hospitalizations, except for major CV events. These results stress on the impact depression has on health care resources use by patients with diabetes.

Primary Theme: Mental Health and Addictions

Secondary Theme: Chronic Disease Management

Methods: Data Mining/Big Data Analytics

AuthorNames: Isabelle Tardif, Line Guénette, Arsène Zongo, Éric Demers, Carlotta Lunghi

ID: 242
Transformational change in mental health service delivery for emerging adults

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Background and Objectives: In 2020, a collaborative project was undertaken to build a foundational understanding about the need for, and availability of mental health services, for emerging adults (15-24 years old) in the Calgary area in Alberta. Data was collected from emerging adults and their caregivers and mental health providers in the Calgary area. The presentation will focus on sharing key findings and implications for creating transformational change in mental health service delivery.

Approach: The methodology consisted of three components: (1) an online survey of mental health needs and experiences of emerging adults and their caregivers in the Calgary area, (2) analysis of Statistics Canada data to describe the current demographics of the emerging adult population in the Calgary area, (3) Calgary area service provider focused data including a funding survey, service use survey, an inventory search, and analysis of organizations administrative data. Results were further contextualized with the guidance of a steering committee made up of experts and leaders in the field of mental health in the Calgary area.

Results: Emerging adults experience complex and unique challenge as they transition into adulthood. A brief overview of findings will be shared that compares and contrasts how and what type of mental health supports emerging adults seek versus the way mental health settings currently offer supports and the challenges organizations face in delivering service. From these findings, there are implications for how the system and society view emerging adulthood as a life stage, how mental health settings can transform to better meet the needs of this population, and what opportunities exist at a system level to provide care in a timely, consistent, and coordinated way.

Conclusion: There are significant opportunities for how mental health settings offer and respond to the needs of emerging adults in the Calgary area. Harnessing these opportunities can reduce the number and severity of mental health issues of emerging adults and costs to the system as they move into adulthood.

Primary Theme: Mental Health and Addictions

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Healthcare Service or Policy Initiative

AuthorNames: Shannon McInnes, Naomi Parker

ID: 243
Impact of COVID-19 on long-term care in Alberta: Interviews with frontline workers

Background and Objectives: While the COVID-19 pandemic devastated the LTC sector, we have little systematic information on specific effects on LTC staff and residents. This project's goal was to assess the impact of COVID-19 on well-being and quality of work life among LTC staff and quality of care and quality of life for LTC residents. We will report on findings related to key modifiable factors and narratives reflecting essential experiences from the interviews conducted with LTC.

Approach: Using an Interpretive Descriptive approach, we interviewed staff from January through March 2021, using a semi-structured format (in total 140 interviews care aides, regulated and manager staff) in Alberta's 34 TREC homes. Facilities were sampled according to zone, public/private, and COVID-19 status. Four trained interviewers completed recorded virtual interviews, focusing on three key areas: (a) staff mental and physical health, well-being, and work life, (b) the impact on the care home, and (c) the impact on residents. Interviews were recorded, transcribed and analyzed using inductive content analysis. This project was conducted in partnership with Alberta Health and Alberta Health Services.

Results: Analyses began in January and will occur concurrent with data collection with summary analyses in April 2021. We will develop an understanding of the impact of COVID-19 on the lives of staff and residents from the perspective of LTC staff. From the analyses, we will derive a small set of critical pandemic-relevant questions to include in TREC's (Translating Research in Elder Care) longitudinal survey, in the summer of 2021. Findings will be compared to pre-pandemic surveys collected from 2009 until Feb 2020. Findings will inform system managers and others in the development of supports and programming to address areas of greatest need.

Conclusion: We know that SARS had a major impact on mental health. The impact of the COVID-19 will be much greater and persist for many years. It is essential that we understand the impact on the LTC workforce in order to inform policy and program development to support this essential workforce.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: COVID-19

Methods: Qualitative Research Methods

AuthorNames: Heather Titley, Jude Spiers, Amber Savage, Trina Thorne, Matthias Hoben, Peter Norton, Zahra Goodarzi, James Silvius, Carole Estabrooks, Corinne Schalm, Sandra Young

ID: 245
Obstetric safety indicators addressing preventable hospital harms: a scoping review

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Background and Objectives: A key issue in the delivery of safe obstetric care is the prevention of harms that occur during the hospital stay. Effective measurement and monitoring can contribute to the reduction of maternal, fetal and neonatal morbidity and mortality. Our objectives were to identify obstetric safety indicators relating to the prevention of hospital harms for low-risk births and knowledge gaps, to chart the data and summarise results.

Approach: For this scoping review we searched Medline, Embase, CINAHL and the Cochrane Library, as well as websites from professional bodies and other organisations. Two researchers independently screened records to determine eligibility for inclusion and consulted a third author when eligibility judgements differed. Two researchers independently charted data from a sample of 50 records that meet our inclusion criteria using an iteratively developed data charting form. One of these researchers charted the remaining records and the other verified the data for accuracy. We will report the final list of indicators and conduct a thematic analysis.

Results: We identified 868 records from electronic databases searches and 246 records from grey literature and other sources. We charted data from 594 electronic databases and 230 records from grey literature. Data charting is currently in progress and will be completed by the conference dates along with summarisation. Judging by the portion of records for which data has already been charted, we anticipate identifying a large number of potential indicators. This list will be significantly reduced when we remove potential indicators that do not satisfy further criteria. We will present our findings using an appropriate tool such as the Donabedian model or the Hospital Harm Framework.

Conclusion: We will discuss the implications of our findings for future research, clinical practice and policy-making.

Primary Theme: Maternal and Child Health

Secondary Theme: Maternal and Child Health

Methods: Knowledge Synthesis

AuthorNames: Aislinn Conway, Jessica Reszel, Mark Walker, Jeremy Grimshaw, Sandra Dunn

ID: 250

Accessing mental health services in the COVID-19 pandemic context: Preliminary findings from Quebec, Canada

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Background and Objectives: The COVID-19 pandemic measures have significantly impacted the psychological health of individuals and their access to health services, widening existing inequities. The current study aims to describe access and referrals to mental health (MH) services in primary and specialized care during the pandemic. This study is embedded within a larger research project aiming to assess the implementation and impact of regional access points for processing requests to MH services via primary care in Quebec.

Approach: Semi-structured interviews with 8 health planners, 12 clinical-administrative staff (ex.: liaison nurses, social workers), 8 psychiatrists, and 12 family physicians are being conducted. These interviews include questions on the process of obtaining MH services via primary care during the pandemic, demand and supply of MH services, and recommendations to improve access to MH care. Interviews are being conducted by telephone in four Quebec regions, selected purposefully based on our research team's previous contacts. These regions have different characteristics (ex.: rural, urban, with/without university-affiliated hospitals, etc.). Interviews are being analysed in NVivo12 software using a deductive and inductive thematic approach.

Results: Participants noticed a decrease in primary care consultations during the first wave (March-July 2020) due to clinic closures and staff relocation. Psychosocial consultations occurred mainly through a self-referral centralized access point. Participants reported an increased use of referral mechanisms by primary care physicians during the second wave (September 2020-). Patients were referred primarily to primary care psychosocial services and less to specialized psychiatric services. Consultations for MH services during the pandemic were reportedly from people with pre-existing vulnerabilities (anxiety, depression, adjustment disorders) and difficulties adjusting to new norms (balancing remote work and school closures), as well as young adults. Facilitators to MH care access in primary care included the presence of MH professionals (i.e., social workers) within clinics and use of technology to offer care.

Conclusion: We believe that this is the first study to assess how people are accessing MH services during the pandemic in Quebec, and challenges/facilitators regarding their receipt. Findings are useful to better understand factors influencing MH care access and referrals, and can help inform recommendations for accessing MH care during/post-pandemic.

Primary Theme: COVID-19

Secondary Theme: Mental Health and Addictions

Methods: Qualitative Research Methods

AuthorNames: Jessica Spagnolo, Jean-François Clément, Claire Gamache, Carine Sauvé, Richard Fleet, Lyne Couture, Christine Gilbert, Shane Knight, Helen-Maria Vasiliadis, Marie Beauséjour, Marie Josée Fleury

ID: 251
Utilizing Reddit to inform health care: Qualitative methodology for the analysis of social media data for health research

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Background and Objectives: Patients use social media to learn about their disease and receive peer support. Data from social media sites are often publicly accessible and could be used by researchers to better understand patients' concerns and experiences. Large amounts of data are readily available, but few methods have been developed to collect and analyze such data. Our objective was to determine how to retrieve and qualitatively analyze data from Reddit, a social news network and discussion website.

Approach: We reviewed the methodology of published social media research to understand research considerations. We used R, an open-source software environment for statistical computing and the 'RedditExtractoR' package to retrieve data. We implemented our methods using an active subreddit 'r/ostomy' to observe how 3500+ people discussed food while having an intestinal ostomy due to bowel disease. We extracted post titles, content, and comments containing chosen keywords related to food. We cleaned and reformatted the data, and imported the data into Nvivo, data analysis software. Using Nvivo, we catalogued usernames and recorded demographic characteristics from information within their posts and comments.

Results: Our final data file was organized and in an easy-to-read format that allowed us to qualitatively analyze the data. We conducted a thematic analysis by independently coding responses and highlighting themes to produce a coding template and using Nvivo software. Through our analysis, we were able to identify common patient concerns such as worries about nutrient absorption, food restrictions and avoidance, and symptom management. Users also discussed the difficulties of having an illness and the value r/ostomy provided by creating an opportunity to talk to others with lived experience of having an ostomy. Reddit contained rich data of good quality and because Reddit users use pseudonyms to communicate with one another, posts appeared disinhibited, potentially attributed to the use of pseudonyms on the Reddit platform.

Conclusion: The utilization of Reddit data in health care research can provide a candid view of people's health and health care experiences. Our findings indicate that Reddit is a rich data source and studies using these data have the potential to inform health care services and triangulate research findings.

Primary Theme: Chronic Disease Management

Secondary Theme: Primary Healthcare

Methods: Emerging Methods (e.g. new developments in observational study design)

AuthorNames: Lisa Blundell, Maria Mathews

ID: 252

Exploring the intersection of traumatic brain injury and mental health in survivors of intimate partner violence: A scoping review

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Background and Objectives: One in four women experience intimate partner violence (IPV) in their lifetime. Up to 75% of survivors are suspected of sustaining a TBI and 50-75% experience mental health or substance use challenges (MHSU) from IPV, resulting in extensive personal, social, and economic implications. The objective of this scoping review was to synthesize what is known in the literature about MHSU and TBI among survivors of IPV and identify gaps.

Approach: MEDLINE, EMBASE, PsycINFO, CINAHL, Cochrane, Scopus, and Web of Science were searched using a search strategy including text words and subject headings related to TBI, IPV, and MHSU. Two reviewers independently assessed articles for inclusion.

Results: The search identified 33 articles for inclusion: 14 reporting on MHSU in IPV-related TBI and 9 reporting on both TBI and MHSU in IPV but not discussing them together; the remainder were reviews. Included articles predominantly focused on cis-gendered women in heterosexual relationships. Care seeking experiences and healthcare use and access were explored by a small subset of articles, though none discussed implications of co-occurring TBI and MHSU.

Conclusion: Despite the high rates of co-occurring TBI and MHSU among survivors of IPV, there is little research on this intersection and minimal investigation of the impacts on the health system. Future research should focus on identifying the healthcare-related needs of survivors and identifying and mitigating barriers to access.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Mental Health and Addictions

Methods: Knowledge Synthesis

AuthorNames: Danielle Toccalino, Angela Colantonio, Halina (Lin) Haag, Sophia Chuon Gutierrez, Amy Moore

ID: 253

Visual Analytic tools and techniques in Population Health and Health Services Research: the opportunity for health services research

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Background and Objectives: Visual analytics (VA) promotes understanding and use of big healthcare data. Employing dual analytic and visual engines, this innovative technique focuses on knowledge discovery, exploration of complex datasets, hypothesis generation and testing. This scoping review addressing a critical gap in literature on the contemporary use of visual analytic techniques in population health and health services research.

Approach: We synthesized literature on the use of VA methods, tools, techniques and frameworks in population health and health services research from journal articles and conference papers from January 2005 to March 2019. Two independent researchers worked through each stage of screening and abstraction, while a third researcher arbitrated the conflicts. A comprehensive abstraction platform was built to capture the data from diverse bodies of literature, primarily from the computer science and health care. After screening 11,310 articles, we present findings from 55 articles focusing on VA applications being used in sub-domains of population health and health services research.

Results: We found a wide application of VA methods used in areas of epidemiology, surveillance and modelling, health services access, utilization, and cost analyses. All articles included a distinct analytic and visualization engine, with varying levels of detail. Seven analytic frameworks were identified. Related to knowledge translation and co-design, 7 articles targeted policy and decision makers. We present an expanded definition for VA applications in healthcare, with a reporting checklist to assist researchers in the sharing their applications for greater replicability. Trends are also summarized in a Tableau dashboard.

Conclusion: VA is an innovative, fast-growing method applied to complex healthcare data. Its capability to process multiple data sources leads to knowledge generation and decision support. This is the first review to bridge a critical gap in the literature on VA methods in population health and health services research.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Informatics

Methods: Knowledge Synthesis

AuthorNames: Jawad Chishtie, Jean-Sebastien Marchand, Iwona Bielska, Luke Turcotte, Monica Cepoiu-Martin, Tara Jeji, Susan Jaglal

ID: 255
Combining multidimensional analytics with conventional statistical tools to expedite large cohort analyses of geographic health cost variations

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Background and Objectives: Exploratory analyses is the basis of most research projects, and can require extensive analyst time prior to decisions on the focus of investigation and relevant parameters for more complex statistics. This preliminary work can be compounded when research projects involve large and complex data sets. This study used a multidimensional data cube (MDC) to expedite analyses of geographical variation in resource use among multiple cohorts of osteoarthritis (OA) patients.

Approach: An MDC was created using over 500 million rows of hospital, ambulatory and physician claims data for OA patients. Cohort patient identifier and date of cohort entry were integrated into the MDC, as well as multiple tables of reference information, including a provincial standard to categorize seven levels of a geographic rural-urban continuum. Data from the MDC were then accessed using readily available productivity tools (e.g., Excel) for mining the large data source to identify patterns of cost utilization across geographic areas, leading to selection of ten cohorts (2001/02 to 2011/12, inclusive) for further statistical analysis using R.

Results: The MDC supported preliminary exploration of trends in Excel, including data mining capability to explore small count data anomolies quickly (mortality prior to cohort entry), and highlight summarized trends that warranted further exploration. After identifying the cohorts for further study, the MDC facilitated quick extraction of costing data for 263,086 incident OA cases over the 10 year period. Exclusion criteria was also easily implemented based on in/out-migration and mortality data, using simple filters that had also been integrated into the MDC. Data were exported to R, and log transformed for further analyses. The preliminary findings indicate that rural residents with OA have higher health care expenditures compared to metro and metro/urban influence patients, and that cost variation is largely driven by service type.

Conclusion: An MDC incorporating relevant parameters used for research, such as cohort identifiers, can be used to facilitate data mining, identify trends for further exploration, expedite descriptive analyses and data extraction from large sources. Further statistical analyses are underway to assess other factors that may be influencing the observed patterns.

Primary Theme: Health Informatics

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Data Mining/Big Data Analytics

AuthorNames: Shelly Vik, Deborah A Marshall, Xiaoxiao Liu, Christopher Smith

ID: 256
Predictors of Attitudes and Adherence to COVID-19 Public Health Guidelines in Western Countries: A Rapid Review of the Emerging Literature

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Background and Objectives: Physical distancing, face coverings, and hand hygiene are evidence-based methods to protect the public from COVID-19 infection. Recognizing that adherence to these measures at the individual-level is crucial to limit transmission, there has been a proliferation of research examining individual characteristics that can be targeted by public health interventions to improve adherence. This rapid review sought to identify predictors of attitudes toward and adherence to COVID-19 public health guidelines, and identify interventions to improve adherence.

Approach: Articles for this rapid review were retrieved from multiple databases (e.g., MEDLINE, CINAHL, LitCOVID) and preprint servers (e.g., medRxiv, bioRxiv) on August 6, 2020. Studies were included if they examined predictors of attitudes towards or adherence to COVID-19 public health guidelines, or if they were testing interventions to improve adherence. Studies were limited to studies conducted in Western countries and published in English. Studies were classified according to the types of factor(s) examined as independent variables. The consistency of evidence for each factor was scored by two reviewers.

Results: A total of 1,323 unique articles were identified through the initial search, resulting in 29 studies included in the final synthesis. Studies reported on a wide range of factors that were related to both attitudes and adherence to COVID-19 protective behaviors. Most studies consisted of cross-sectional survey studies recruited using convenience sampling methods. The available evidence suggests that individuals who are older, identify as women, trust governments, perceive COVID-19 as threatening, and access information through traditional news media are more likely to adhere to COVID-19 public health guidelines. Interventions for improving adherence have not yet been investigated thoroughly, and this review identified only three experimental studies each testing different approaches to improve attitudes and/or adherence.

Conclusion: This review identified several individual-level characteristics that impact attitudes and adherence to COVID-19 public health guidelines. It also identified an important gap in the literature regarding the absence of evidence-based interventions to promote attitudes and adherence. Future research should utilize experimental designs and more robust sampling techniques.

Primary Theme: COVID-19

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Knowledge Synthesis

AuthorNames: Chelsea Moran, David Campbell, Tavis Campbell, Pamela Roach, Lyne Bourassa, Zoe Collins, Marysia Stasiewicz, Patrick McLane

ID: 260
Examining medical resident applicants to geriatric-focused post-graduate training: A retrospective cohort study

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Background and Objectives: Geriatric-focused physicians are underrepresented in the Canadian healthcare workforce to meet the needs of the aging population. While post-graduate medical residency training is needed to enhance geriatric competency, interest in careers to care for older patients remains low. The three geriatric-focused medical specialties in Canada include family physicians with a Care of the Elderly (COE) certification, geriatricians, and geriatric psychiatrists. In this work, we present the residency match characteristics concerning applicants to geriatric-focused medical specialties.

Approach: We conducted a retrospective cohort study of applicants to COE family medicine and geriatric medicine post-graduate medical training in Canada. We utilized data from the Canadian Resident Matching Service (CaRMS) for the main residency match and medicine sub-specialty matches for the years 2016 to 2021 (for geriatric medicine) and 2019 to 2021 (for COE). We examined the number of applicants to geriatric-focused residency programs across Canadian medical schools, the match outcomes, and applicants' preferred medical disciplines.

Results: In the 2021 CaRMS iteration, 12 medical schools offered 48 training positions in geriatric medicine, with the majority offered in the province of Quebec, and 15 medical schools offered 34 positions in COE family medicine. Despite an increasing number of geriatric-focused training positions over time, the proportion of unfilled training positions increased in recent years, including medical schools where more geriatric-focused programs were offered. Most recently, almost half of COE family medicine positions were vacant. Despite an aging population in Canada, the total number of applicants to geriatric-focused programs does not increase consistently over time. Compared to other medical specialties, fewer people apply for geriatric-focused training, and the number of applicants choosing this discipline as their first choice is diminishing.

Conclusion: Our findings demonstrate waning interests in geriatric-focused medical careers based on the stagnant number of applicants and an increasing number of vacant positions nationally. Strategies to garner interests in COE family medicine and geriatric medicine training are essential in equipping the physician workforce to respond to population-level needs.

Primary Theme: Health Human Resources

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Statistics/ Econometrics

AuthorNames: Rebecca Correia, Andrew Costa, Darly Dash

ID: 266

Factors associated with medical care visits among nursing home residents: A cross-sectional study

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Background and Objectives: Nursing homes often comprise frail older adults with complex health care needs and, thereby, reduced capacity to travel for primary care services or clinical consultations. Improving access to medical care in nursing homes may prevent unnecessary transfers to healthcare facilities and improve the quality of life among residents. Delineating which nursing home residents require immediate evaluation is often difficult. We examined the associations between nursing home resident characteristics and the provision of medical care visits.

Approach: We conducted a cross-sectional study of nursing home residents across a chain of nursing homes in Ontario, Canada. Data on residents' clinical characteristics and outcomes were obtained from the Resident Assessment Instrument Minimal Data Set (RAI-MDS) 2.0. Data were analyzed at the time of each resident's first quarterly assessment after admission to the facility. We utilized multivariable binary logistic regression to model the associations between resident characteristics and the provision of a medical care visit. We identified independent variables a priori from the RAI-MDS that could potentially influence the provision of elective assessments. Model fit and assumptions were assessed.

Results: We identified 3,556 adult residents from 18 nursing homes with a first-quarterly RAI-MDS assessment completed between November 15, 2009, and October 20, 2017. In this sample, most first-quarterly RAI-MDS assessments occurred 98 days after residents were admitted to a nursing home (n=415; 11.67%), but ranged from 60 to 120 days post-admission. We report the unadjusted odds ratios representing the associations between medical care visits and the demographic and clinical factors of interest. In the adjusted analysis, four key factors were found to be associated with the provision of a medical care visit: fluctuating health status (OR=0.73, 95% CI=0.59–0.91), new medication use (OR=1.38, 95% CI=1.15–1.66), severe cognitive impairment (OR=1.76, 95% CI=1.19–2.59), and prior hospital use (OR=1.35, 95% CI=1.03–1.77).

Conclusion: Nursing home residents with severe cognitive impairment, prior hospital use, and orders for new medications had higher odds of receiving medical care visits. Residents with fluctuating health states were less likely to receive medical visits. These findings can inform clinical decision-making by identifying residents with potentially higher care management needs.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Statistics/ Econometrics

AuthorNames: Rebecca Correia, Fabrice Mowbray, Ryan Strum, Andrew Costa

ID: 267

Strengthening Governance Systems to Enhance Access to Antimalarial Medicines within Universal Health Coverage in a Low to Middle Income Country: A Case-Study of Ghana

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Background and Objectives: Access to safe and efficacious antimalarial medicines is vital to any government effort to control malaria. In Ghana, malaria accounts for about 40% of all health facility out-patient department visits and the death of 3 children a day. Coordination amongst stakeholders of several concurrent malaria control initiatives is weak and Ghana's health sector is vulnerable to corruption in the pharmaceutical sector. Accordingly, effective governance arrangements and anti-corruption mechanisms are vital in attempts to control malaria.

Approach: Universal Health Coverage (UHC) is a key target of Sustainable Development Goal 3 and aims to achieve equity in health through access to safe, effective, quality, and affordable essential medicines. Both state and non-state actors are involved in malaria control activities in Ghana. A qualitative study using an embedded case study design is being conducted in Ghana. Key policy documents are being reviewed and key informants are being recruited by purposive and snowball sampling to choose a heterogeneous sample of thirty healthcare stakeholders. The interviews will take place via Zoom. The data generated will be analyzed using thematic analysis.

Results: Examining governance arrangements and mechanisms to counter corruption will enhance understanding of health sector policies aimed at the control of malaria in Ghana, particularly in view of the challenges the COVID-19 pandemic is putting on the health system. International organizations and donor agencies such as the World Health Organization, the World Bank, and the Global Fund have given importance to the issue of governance and anti-corruption mechanisms for effective performance of institutions particularly for aid receiving countries. However, there is scant research on the nature of governance arrangements within and between state and non-state actors in malaria control efforts in Ghana and how this might impact equitable access to quality assured antimalarial medicines; a gap in the literature which this study seeks to fill.

Conclusion: Global progress towards the control of malaria has stalled over the last 3 years. This study will contribute knowledge to understand the reasons behind the stalled process, as well as add to the discourse on access to medicines, governance, anti-corruption, UHC, and strengthening health systems in malaria control efforts.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Equity and Vulnerable Populations

Methods: Qualitative Research Methods

AuthorNames: Eustace Orleans-Lindsay, Jillian Clare Kohler, Erica Di Ruggiero

ID: 269

The characteristics of ethnographies used to explore the experiences of people managing chronic physical health conditions: A systematic review

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Background and Objectives: Ethnography is a research methodology where researchers triangulate multiple data sources (e.g. observations and interviews). The result provides a nuanced understanding of complex phenomena and individual experience, making it well-suited to health services research. Given its roots in sociocultural anthropology, health services researchers may be less familiar with how to apply ethnography. The aim of this study was to describe the core characteristics of contemporary published ethnographies about patients' experiences managing chronic physical health conditions.

Approach: We conducted a systematic review of primary research studies that used ethnography as a methodology to understand a patients' experiences living with a chronic physical health condition. Electronic databases (Medline and CINAHL) were searched from January 1st, 2015 to October 21st, 2020. Dates were restricted to the past five years to identify contemporary studies and for feasibility purposes. Studies were excluded if they were not in the English language or were conducted in pediatric populations. Study data, including characteristics common to ethnography were extracted and synthesized. The Mixed Methods Appraisal Tool was used to assess study quality.

Results: The initial search yielded 6269 studies, of which 94 underwent full-text review and 50 were deemed eligible for inclusion. The majority of studies were of moderate quality. Studies were conducted in 25 countries with patients who had a variety of health conditions, the most common being cancer (n=¬17). Eleven subtypes of ethnography were reported, the most common being 'focused ethnography' (n=8). Data were collected longitudinally with the same participants in 72% of studies, indicating some degree of prolonged engagement. Qualitative interviews were used to collect data in 90% of studies. Participant observation, most often in medical facilities and in patients' homes, and occasionally in community settings, was used in 82% of studies. Rigour and reflexivity statements were absent in 58% and 86% of studies, respectively.

Conclusion: We found that ethnography is used in a variety of ways in health services research, although its use remains relatively infrequent. Core methodological characteristics are also applied and reported inconsistently, making it difficult to assess methodological rigour of study results.

Primary Theme: Chronic Disease Management

Secondary Theme: Patient and Public Engagement

Methods: Knowledge Synthesis

AuthorNames: Danielle Fox, David Campbell, Kathryn King-Shier, Kirnvir Dhaliwal, Diane Lorenzetti, Robert Quinn

ID: 270

A systematic review and meta-analysis of the effects of self-management interventions on depressive symptoms in adults with chronic physical disease(s) experiencing depressive symptomatology

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Background and Objectives: An estimated 20% of adults with chronic physical diseases experience concomitant depression, increasing their risk of morbidity and mortality. Self-management (SM) interventions, focused on developing illness management skills, are part of recommended treatment for depression. This is the first systematic review to examine the effect of SM interventions on reducing depressive symptomatology in adults with concomitant chronic physical disease(s) and depressive symptoms. Differential effect based on participant and intervention characteristics was also examined.

Approach: Studies comparing depression SM interventions to a control group were identified through systematic searches of databases to June 2018 and through secondary ‘snowball’ search strategies (e.g., screening reference lists). The methodological quality of included studies was critically reviewed based on 17 criteria. Screening of all titles, abstracts, and full texts for eligibility was evaluated independently by two authors. Data were extracted by one author and verified by a second. Pooled effect sizes (Hedge’s adjusted g) and heterogeneity (Higgin’s I2) were calculated. Meta-regressions were conducted to assess the potential effect of pre-specified moderators on the primary outcome of depressive symptoms.

Results: Fifteen studies were retained; twelve for meta-analysis and three for descriptive review. Overall, these trials included 2064 participants. Included studies mostly evaluated interventions targeting people with cancer (n = 7) or diabetes (n = 4). The mean quality assessment score across the sample was in the moderate range (11.2/17). From baseline to < 6 months (T1), the pooled mean effect size was -0.47 [95% CI -0.73, -0.21] as compared to control groups for the primary outcome of depression and -0.53 [95% CI -0.91, -0.15] at ≥ 6-months (T2). Results were also significant for anxiety (T1 and T2) and glycemic control (T2). Addressing the skills of decision-making or taking action in the intervention were significant moderators of depression at T1.

Conclusion: SM interventions are promising in reducing depression and anxiety in adults with concomitant chronic physical disease and depression. These findings may contribute to the development of future SM interventions and delivering evidence-based care to this population. Further RCTs are needed to identify sources of heterogeneity and investigate key intervention components.

Primary Theme: Chronic Disease Management

Secondary Theme: Mental Health and Addictions

Methods: Knowledge Synthesis

AuthorNames: Lydia Ould Brahim, Sylvie Lambert, Nancy Feeley, Chelsea Coumoundouros, Jamie Schaffler, Erica Moodie , John Kayser, Kendall Kolne, Eric Belzile, Christine Genest, Jane McCusker

ID: 272

The influence of social networks on knowledge transfer within and between healthcare organizations: A scoping review

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Background and Objectives: Social network analysis (SNA) focuses on relationships between people and structures that form through their interactions and research outlines that people can be influenced by their social networks to embrace new practices. This scoping review aims to systematically map the SNA research conducted to study the transfer of knowledge both within (intra) and between (inter) organizations in healthcare, to understand the prevalence of network intervention types enacted, and to identify existing gaps in the literature.

Approach: A scoping review of published research in English was conducted using Medline, ABI Inform and PsycInfo databases. Articles were included if they addressed the use of social network theory or analysis and the transfer of knowledge in a healthcare organizational setting. Two reviewers independently reviewed and the author extracted data from included articles. Data was abstracted on article characteristics, setting of the intervention, professional role(s) observed, how social network theory/analysis was utilized, whether it observed inter and/or intra organizational knowledge transfer, what knowledge was transferred, the type(s) of network intervention observed/proposed, and other theories, models or frameworks mentioned.

Results: From 11, 640 original records, 84 studies were included in this review: 8 were theoretical, 39 were quantitative, 26 were mixed methods and 11 were qualitative. The use of sociometric surveys or questionnaires was the most common method used. Most studies were set in hospitals and its units and although most looked at multiple professions as they aimed to conduct whole network analyses, physicians were most studied. The types of knowledge studied by the researchers included practitioner, process and resource knowledge. There was an even split between studies that focused on networks between organizations, within organizations and studies that looked at both. Social network analysis was utilized in research in a variety of ways including the data collection, data analysis, and interpretation of findings phases.

Conclusion: The findings highlight that although many of the studies focused on the individual, alteration and induction approaches, more network interventions could explore using the segmentation approach. Further research is warranted to measure and evaluate the effectiveness of network interventions in healthcare settings.

Primary Theme: Knowledge Translation & Exchange (includes KTE methods)

Secondary Theme: Collaborative Healthcare Improvement Partnerships

Methods: Knowledge Synthesis

AuthorNames: Kainat Bashir, Lauren MacEachern, Whitney Berta

ID: 273

Shades of care: Understanding the needs of racially and ethnically diverse paediatric patients, their families, and health care providers in North America

Background and Objectives: While race and ethnicity have been acknowledged as determinants of health, there remain gaps regarding their effects on experiences of paediatric care. This paper examines barriers to accessing care among paediatric patients, while also identifying the needs and values of families and paediatric care providers. Overall, this paper aims to clarify the needs of care administrators and recipients, as well as to conceptualize what paediatric care must look like to enable optimal health outcomes.

Approach: We conducted a scoping review to examine empirical literature regarding the state and experience of paediatric care provided to racially and ethnically diverse families in North America. The perception of paediatric care providers, faculty and residents, as well as paediatric patients, their caregivers and families were included in the review. Utilizing Arksey and O'Malley's framework, we reviewed literature published between 2005 and 2020 in English. The relevant empirical research articles were inductively analyzed and thematically coded.

Results: In total, 29 papers were included in the review. Qualitative, quantitative and mixed methods studies were featured. Paediatric residents and faculty identified needs pertaining to professional training, paediatric healthcare providers highlighted needs regarding service provision, and paediatric patients and their families identified needs regarding the receipt of care. Paediatric care administrators and recipients collectively identified the need for increased focus on the following domains: (1) knowledge pertaining to providing care to ethnically diverse patients (awareness or training); (2) alignment of views and values; (3) lack of resources for the provision of adequate care and training; and (4) clear communication between care providers and recipients. Findings suggest that despite there being merit in the cultural competency efforts underway, there is a necessity for more patient-centric approaches.

Conclusion: This scoping review highlights the potential for cultural safety to pave the way for clinical practice within North American paediatric care contexts. It warrants the sustained development of cultural safety initiatives as a result of its focus on patient comfort and empowerment, to ultimately foster provider-patient collaboration.

Primary Theme: Maternal and Child Health

Secondary Theme: Equity and Vulnerable Populations

Methods: Knowledge Synthesis

AuthorNames: Raisa Ladha, Elena Neiterman

ID: 274

Vaccine Hesitancy, a Major Challenge Ahead! – Intention to vaccinate against COVID-19 among parents with asthmatic children

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Background and Objectives: A safe vaccination program is part of a comprehensive long-term solution to end the COVID-19 pandemic. However, there is growing concern that vaccine hesitancy and vaccine refusal may prevent to full population inoculation against COVID-19. Among parents of children with asthma, determine parental intent to have their asthmatic child vaccinated against COVID-19 and identify the determinants of their vaccination.

Approach: We performed a cross-sectional survey of parents whose child was followed at the asthma clinic. We report outcome data for the question: "if a vaccine for COVID-19 was available today, what is the likelihood that you would get your child vaccinated?” with answers on a on a 4-point Likert scale. As a secondary outcome, we also asked parents if they would get vaccinated. Independent variables included sociodemographic, child asthma control, anxiety, personal worry during the COVID-19 pandemic, and cognitive variables. We ran an ordered probit on the decision to vaccinate a child to explain the decision to accept a vaccine.

Results: In total, 305 participants completed the survey among the 580 approached. 55.7% of the participants were between 35 and 44 and 94.4 % were female. Overall, 63% of parents are likely or very likely to have vaccinated their child, and 64% for themselves once a vaccine would become available. There was a strong relationship between likelihood of not intending to have one’s child vaccinated and personal intent not to get vaccinated. For the decision to be vaccinated, parents with a university level of education, active in the labor market, and a high numeracy level declare higher probability of accepting the vaccine. With a 6.3% level of significance, parents expressing a high level of concern regarding COVID-19 also have a higher probability of accepting a vaccine.

Conclusion: Among parents of children with asthma, close to 1 in 5 reported being unlikely or very unlikely to vaccinate their child against COVID-19. Because previous research indicates that vaccine compliance remains variable and inconsistent, successful vaccination against this disease will require widespread public education campaigns regarding vaccine safety and efficacy.

Primary Theme: COVID-19

Secondary Theme: Patient and Public Engagement

Methods: Survey Research Methods

AuthorNames: Pierre Fontaine, Olivier Drouin, Roxane Borgès Da Silva, Claude Montmarquette, Alexandre Prud'homme, Yann Arnaud

ID: 275

Partners in transformation: A developmental evaluation to meet policy, practice and researcher needs

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Background and Objectives: Health system transformation is often enacted with broad health policy objectives and little implementation advice. Ontario Health Teams (OHTs) were introduced in 2019 as a large-scale health system transformation to advance population health management and integrated care models. Our research team was commissioned to evaluate OHTs for the Ontario Ministry of Health (MOH). This presentation will summarize the goals for evaluation from the perspective of the MOH, a participating OHT and the research team.

Approach: The evaluation is aligned with the phased implementation of OHTs including: 1) a formative stage including surveys and interviews with OHTs that applied for MOH approval; 2) a developmental stage including direct observation, interviews and surveys with selected OHT teams and initial focus patient groups; and 3) a measurement and monitoring phase reporting on measures of health system performance. The approach was developed in collaboration between the research team and the MOH and implemented in collaboration with OHTs. The developmental phase aims to address self-defined OHT developmental goals. The approach requires partnerships, trust and application of novel research methodologies.

Results: OHT survey and interview results were provided to OHTs with individualized summaries with key findings shared broadly in an anonymous format. Development of new tools such as a provider experience survey was undertaken in partnership with providers within OHT structures. Other methodologies including rapid ethnographic assessments are being implemented to study the implementation of selected OHTs in order to identify opportunities for reflection, growth and development within the OHTs and to inform policy at the provincial level. The successful implementation of this approach requires development of trust and both tactical and relational coordination across government, researchers and implementation teams. We discuss some of the challenges and key success factors for this model with recommendations from policy, provider and research perspectives.

Conclusion: A rich partnership is developing in the evaluation of OHTs to meet policy, provider and researcher goals. The approach is resource intensive and time-consuming but is expected to reap greater knowledge and benefits for all involved perspectives than other more passive approaches to evaluation.

Primary Theme: Collaborative Healthcare Improvement Partnerships

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Mixed Methods

AuthorNames: Walter Wodchis, Lori Marshall, Anne Hayes, Gayathri Embuldeniya, Ruth Hall

ID: 276
Time-varying risk of non-fatal drug overdose: a self-controlled case series

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Background and Objectives: Cohort studies have suggested that there are periods of time, including the two weeks following release from prison, the transition on and off opioid agonist therapy (OAT), and during the use of other medications such as opioids and benzodiazepines, where the risk of overdose is heightened. However, this research has focused almost solely on fatal overdose and may be subject to confounding. This study aims to examine the association between these factors and non-fatal

Approach: In a random sample of British Columbia, Canada residents (≥ 10 years) ascertained through the Provincial health insurance client roster, we identified non-fatal overdoses resulting in medical care between 2015 and 2017 and key exposures including periods of incarceration, hospitalisation, emergency department care, and dispensing of prescription OAT, other opioids, benzodiazepines, and antipsychotics linked provincial health and correctional records. Using a self-controlled case series, we examined the association between periods during and post- each of these exposures and non-fatal overdose using case-only, conditional Poisson regression.

Results: During a 3-year follow-up of 921 346 people, 4149 experienced a non-fatal overdose. The rate of overdose was higher on the day of admission to prison (adjusted incidence rate ratio (AIRR)=2·76; 95% confidence interval (95%CI):1·51-5·04), 1-2 and 3-4 weeks after release from prison (AIRR=2·92, 95%CI:2·37-3·61; AIRR=1·34, 95%CI:1·01-1·78, respectively), 1-2 weeks after discharge from hospital (AIRR=1·35, 95%CI:1·11-1·63), while being dispensed opioids for pain (AIRR=1·30, 95%CI:1·02-1·65) or benzodiazepines (AIRR=1·65, 95%CI:1·29-2·10), and in multiple time periods after discontinuation of antipsychotics, compared to unexposed periods. The rate of non-fatal overdose was reduced while using OAT (AIRR=0·40, 95%CI:0·33-0·50) and while in prison (AIRR=0·12, 95%CI:0·08-0·19).

Conclusion: Expanding access to stable and long-term OAT, improving continuity of care when transitioning between service systems, including during and following discharge from hospital and release from prison, and ensuring safe prescribing and medication monitoring processes for medications such as benzodiazepines may decrease the rate of non-fatal overdose.

Primary Theme: Mental Health and Addictions

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Data Mining/Big Data Analytics

AuthorNames: Claire Keen, Amanda Slaunwhite, Wen Qi Gan, Bin Zhao, Jesse Young, Stuart Kinner, Kathryn Snow

ID: 280
Concordance and discordance between policymaker and family physician experiences of the COVID-19-driven rise of virtual care in Nova Scotia

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Background and Objectives: The COVID-19 pandemic triggered unprecedented transformation to the delivery and access of primary healthcare. In particular, there has been a major shift toward the use of virtual care modalities in Nova Scotia and elsewhere, with telephone and video-based appointments being chief among these. We sought to identify perspectives from policymakers and family physicians regarding virtual care implementation and use. Analysis was conducted to explore areas of concordance and discordance between these two stakeholder groups.

Approach: As part of the PUPPY-Study, (Problems Coordinating and Accessing Primary Care for Attached and Unattached Patients Exacerbated During the COVID-19 Pandemic Year), semi-structured, digital interviews were conducted with policy and decision makers (n=10) and family physicians (n=8) across Nova Scotia, with representation from diverse organizations, demographics, and geographic regions. Interview guides were developed with the PUPPY-Study team patients, primary care researchers, providers and policy-makers. Interviews were transcribed and analyzed using NVivo software to identify, emerging themes pertaining to virtual care, and identifying areas of concordance and discordance. Data collection for this study is ongoing and emerging findings will be added.

Results: To date, while nearly all participants cited virtual care-related challenges or concerns, family physician participants tended to discuss challenges more often than policymakers. Concerns cited by physicians and policymakers included the inability to provide physical examinations, privacy challenges, and disparities in patient access to technology. When discussing the future use of virtual care, physician respondents more frequently described mixed perspectives, whereas policymaker participants largely discussed the benefits of utilizing virtual care. Benefits identified by physicians included reduction of no-shows, patient satisfaction and comfort, ease of use, and potential for increasing capacity for visits. Policymaker participants also discussed the potential for virtual care to increase primary care access for unattached patients. More policymakers than physicians discussed supports available to facilitate virtual care modalities as well.

Conclusion: Early findings suggest some discordance between policymaker-identified intentions and family physician virtual care experiences. These findings can help express provider concerns and guide policymaking for the continuation and expansion of virtual care modalities. Emerging themes will be refined by further qualitative inquiry, questionnaire development, and administrative healthcare data analysis.

Primary Theme: COVID-19

Secondary Theme: Primary Healthcare

Methods: Qualitative Research Methods

AuthorNames: Emily Marshall, Caitlyn Ayn, Lauren Moritz, Jennifer Isenor

ID: 283

The effect of culturally- adapted health education interventions among culturally and linguistically diverse (CALD) patients with a chronic illness: A meta-analysis and descriptive systematic review

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Background and Objectives: Individuals from culturally and linguistically diverse backgrounds (CALD) are at a significantly higher risk of developing chronic illnesses compared to non-CALD individuals. Thus, interventions are needed to help culturally and linguistically diverse (CALD) patients acquire the knowledge required to achieve optimal disease control. This systematic review examined the effectiveness of health education interventions adapted for CALD populations with a chronic illness.

Approach: A systematic review and meta-analysis of studies examining the effect of health education interventions for CALD individuals with a chronic illness were conducted. Eligible trials were identified through a systematic search of six electronic databases: CINAHL, MEDLINE, PsycInfo, EMBASE current, Cochrane, and Global Health. Data were extracted and if sufficient data were available, intervention effect was summarized using standardized mean difference (SMD). If there were not enough data for a meta-analysis, a descriptive summary of results was included. Modifying effects of intervention format, length, intensity, provider, self-management skills taught, and behavioural change techniques utilized were also examined.

Results: 58 studies were critically reviewed, and data were extracted for 36 outcomes. Of these, meta-analysis was possible for 10 outcomes. Participants were predominantly of Hispanic ethnicity. Most interventions used multiple modes of delivery (e.g., interviews, activities, workshops, phone calls). Typically, interventions were delivered by bilingual health care professionals (HCPs), often an interprofessional team consisting of nurse(s) and dietician(s)/nutritionist(s). Interventions most often took place in the participant's home and/or primary care clinics. The interventions reviewed were efficacious in reducing body mass index, cholesterol, triglycerides, blood glucose, HbA1C, and depressive symptoms and in increasing knowledge. Effectiveness was influenced in part by intervention provider, with HCPs favoured over lay providers for increasing participant knowledge.

Conclusion: Health education interventions for CALD populations were effective on distal outcomes such as physical/anthropometric measures. These interventions may be effective in improving proximal patient-reported outcomes (PROs); however, heterogeneity of PROs limited the analyses possible. Core outcome sets (COS) are needed to establish effectiveness of these interventions on PROs.

Primary Theme: Chronic Disease Management

Secondary Theme: Equity and Vulnerable Populations

Methods: Knowledge Synthesis

AuthorNames: Sylvie Lambert, Jamie Schaffler, Lydia Ould Brahim, Eric Belzile, Andrea Maria Laizner , Nathalie Folch, Ellen Rosenberg, Christine Maheu, Luisa Ciofani, Sylvie Dubois, Élise Gélinas-Phaneuf, Sarah Tremblay, Karissa Clayberg, Susan Drouin, Katherine Leung, Antonio Ciampi

ID: 284
Exploring the perspectives on medication self-management among persons with spinal cord injury/dysfunction and providers

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Background and Objectives: Persons with spinal cord injury/dysfunction (SCI/D) frequently take multiple medications (prescribed and unprescribed) to manage secondary complications and multimorbidities. Optimizing medication self-management is a key component to improving outcomes for persons with SCI/D. The purpose of this study was to explore the experiences of medication self-management from the perspectives of persons with SCI/D and healthcare providers, and the extent to which participants' experiences mapped onto the Taxonomy of Everyday Self-management Strategies (TEDSS) framework.

Approach: A descriptive qualitative study using interpretive methodology was conducted. Study participants included persons with SCI/D and healthcare providers (e.g. physicians, pharmacists, physical and occupational therapists). Persons with SCI/D were required to be at least 18 years old, at least one year post-injury, a resident of Ontario and English-speaking. Healthcare providers were required to be practicing in Canada, English-speaking and have provided care to at least one individual with SCI/D. Semi-structured telephone interviews were conducted with participants until data saturation was achieved. Interviews were transcribed and analyzed using a constant comparative approach. We adapted the TEDSS framework and applied it deductively.

Results: Fifty-one individuals participated in this study, 32 healthcare providers and 19 persons with SCI/D. The core concepts of self-management (medical, emotional and role management) were discussed by persons with SCI/D and healthcare providers, with a focus on medical management. Both participant groups discussed similar domains of the TEDSS framework. Disease controlling strategies (monitoring and managing medications, treatments and side effects) were discussed in detail by all participants. Process (problem-solving, decision-making), resource (seeking support) and activities strategies (organizing routines) were the next most frequently discussed domains. There was limited discussion of health behaviour (physical and mental exercise), social interaction (relationships) and internal strategies (controlling emotions). Medication self-management support (provided or received) was not described in detail by either participant group.

Conclusion: Persons with SCI/D and healthcare providers discussed similar domains of the TEDSS framework. There was limited reflection from healthcare providers on the impact of managing medications on the day-to-day lives of persons with SCI/D. More work is needed to explore the integration of all self-management domains into medication management programs.

Primary Theme: Chronic Disease Management

Secondary Theme: Primary Healthcare

Methods: Qualitative Research Methods

AuthorNames: Lauren Cadel, Sara Guilcher, Sander Hitzig, Amanda Everall, Tanya Packer, Aisha Lofters, Tejal Patel

ID: 285
Outcomes of Ontario Health Teams -Where are they starting from and how will improvement be measured?

Background and Objectives: In April 2019, the Government of Ontario passed the People's Health Care Act, introducing Integrated Care Delivery Systems in the form of Ontario Health Teams (OHTs). In order to determine the effectiveness of the OHTs integrated care programs baseline data is needed. Our objective is to use routinely collected health administrative data to quantify metrics of patient outcomes and efficiency over time and across OHT attributable populations.

Approach: To assess the overall impact of OHTs, we selected measures that could be calculated using routinely-collected health administrative data, including nine total population indicators and five related to each of the 3 most common target populations including mental health and addictions care, care for older adults, and end-of-life care. Selection of measures was guided by a review of recommended and published measures of health system performance in Ontario and then finalized and endorsed with support from domain experts and applicable provincial councils. Measures are being calculated longitudinally across the OHT attributable populations.

Results: In late December 2020, the OHT attributed population dataset from the Ministry of Health was linked to data housed at ICES. We are using this data to describe the characteristics of the OHT attributable populations and to calculate the outcome and efficiency indicators annually from 2015/16 to 2018/19 to establish a pre-OHT baseline. All measures will be standardized or risk-adjusted to facilitate comparisons across OHTs over time. Indicators will also be calculated using the ratio of least to most deprived neighborhoods to assess health inequalities. We will also report on the degree of variation of these indicators and identify where improvement efforts are needed. A summary of these data and analyses will be included in this presentation.

Conclusion: These data can support monitoring of successful implementation for the OHTs in meeting their population's health needs. The data provide a starting set of indicators to identify where lessons can be shared and where improvements are needed.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Statistics/ Econometrics

AuthorNames: Luke Mondor, Ruth Hall, Walter Wodchis

ID: 286

“Clearly they are in the circle of care, but…”: Perceptions of personal health information sharing with community pharmacists in an integrated care model

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Background and Objectives: Ontario’s Health Links approach to care is an integrated care model that aims to optimize care for patients with complex needs. While community pharmacists are health information custodians and play a role in the care of patients with complex needs, they do not have a formal role. This study aimed to explore stakeholders’ perceptions about privacy and how privacy may impact the extent to which community pharmacy is involved with integrated care models.

Approach: This qualitative study was part of a larger project that explored perceptions of integrating community pharmacists with integrated care models. Semi-structured telephone-interviews were completed in 2018. Participants were working in Ontario as either pharmacists, clinicians in Health Links or integrated team-based models, or decision-makers in Health Links or health regions. For this sub-study, the original interviews were analyzed with a focus on perceptions of privacy within the integrated care model. Thematic analysis following the Qualitative Analysis Guide of Leuven approach was used to identify themes.

Results: Overall, 22 interviews were completed, in which 21 participants discussed issues of privacy. The main themes identified were: different definitions of circle of care, as clinicians and decision-makers felt community pharmacist involvement was situational; perceived value of sharing personal health information for patient outcomes within a fragmented health care system; uncertainty about what information can and should be shared; and how to share information, with descriptions of processes. Concerns surrounding privacy and circle of care highlight an important issue that needs to be addressed with integrated care models. Potential enablers to mitigate privacy concerns include relationship-building between community pharmacists, patients, and health care providers, and mutual access to information sharing platforms such as electronic health records.

Conclusion: Participant perceptions about community pharmacists in relation to privacy, and circle of care can impact sharing of patient information. These perceptions are incongruent with Ontario’s Personal Information Privacy and Electronic Documents Act (PIPEDA) and likely affect community pharmacists’ current and future involvement in integrated care models.

Primary Theme: Primary Healthcare

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

AuthorNames: Teagan Rolf von den Baumen, Jennifer Lake, Sara Guilcher, Amanda Everall, Katie Dainty, Zahava Rosenberg-Yunger

ID: 287
Using digital tools for a better access to care

Background and Objectives: Providing adequate access to care for patient is a persistent challenge in health care system. The complexity for patients to access the right care, at the right time, contributes to the inappropriate use of healthcare services and overuse of emergency rooms, which negatively impacts the performance of healthcare system throughout Canada. This research identifies digital tools proposed to the general public, analyses their functionalities, and presents their limits in enhancing access to care.

Approach: The data was collected in 2018 using two strategies. 1) An environmental scan of the digital tools currently available in the province of Quebec. This scan was conducted through web searches and supplemented with tools used by our peers. Each tool was then tested, analysed, and categorized following a clinical scenario of an adult patient having internal ear pain. 2) Interviews with four healthcare professionals representing the emergency room environment, primary care, management, and digital innovation. The analysis of the interviews allowed us to get information on their perceptions and their real-world experience of digital tools.

Results: The analysis of the 13 digital tools revealed three categories: 1) Symptom checkers that uses machine learning and algorithms to inform the patient on the possible causes of his symptom and recommend different actions; 2) Online booking platforms used to book appointment directly by patients; 3) Clinical directories which proposes a searchable list of clinics and other medical services available to the public, with some providing wait time or occupation rates. The interviews and a scan of the literature revealed five limits of using digital tools to help with accessibility to care: 1) clinical reliability of symptom checkers, 2) ethics and privacy concerns, 3) technological challenges, and 4) organizational barriers.

Conclusion: Digital tools can provide a way to better guide patients through the health care system. Still, there is a need for a complete comprehensive tool that offers all the needed functionalities. A collaborative design approach could contribute to better adoption rates and tools adapted to the primary care reality.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Informatics

Methods: Knowledge Synthesis

AuthorNames: Jonathan Lapointe, Janine Badr, Aude Motulsky

ID: 288

Service transformation in youth mental health: the ACCESS Open Minds - Esprits Ouverts Initiative and preliminary findings from stakeholder interviews

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Background and Objectives: Service transformation through locally-led initiatives centered on integrating research and clinical services has gained traction in youth mental health. Among such initiatives is ACCESS Open Minds (AOM), a pan-Canadian project in which fourteen sites have participated in implementing transformed services in their community by drawing on the five pillars of the AOM model (early identification, rapid access, appropriate care, continuity of care and engagement). This presentation focusses on understanding service implementation within such an initiative.

Approach: This is a single case study in which the aim is to understand how youth mental health services were implemented across AOM sites. Using Normalization Process Theory as a conceptual framework, data collection comprised semi-structured interviews with stakeholders (service providers, community members, policy-makers, AOM youth and family representative as well as researchers). An approach combining template analysis and narrative methods is used to analyze the stakeholder interviews. Coding is tested by a second coder and thematic saturation will be achieved once no new changes are made to the template.

Results: Eighty-one interviews have been conducted with stakeholders across all fourteen sites. Preliminary findings point to four major themes. The first theme pertains to the elasticity of the intervention following compromises between the AOM model and sites' specific settings in order to obtain support from service providers in the community. Second were relational compromises, that is the process through which ties between sites and services providers in the community took shape. Third, practices aimed at matching young people to appropriate services enabled sites to bypass institutional and organizational challenges and reflect the ongoing character of normative and relational compromises. The fourth theme explores the extent to which AOM is included in sites' efforts to sustain youth mental health services and become embedded in the community.

Conclusion: As sites engage, to varying degrees, in adjusting the AOM model to the traditions, approaches, roles and rules that characterize their settings, this presentation highlights the importance of plasticity and elasticity of interventions, such as AOM, in order to respond rapidly to youth mental health needs.

Primary Theme: Mental Health and Addictions

Secondary Theme: Collaborative Healthcare Improvement Partnerships

Methods: Qualitative Research Methods

AuthorNames: Kathleen Charlebois, Ashok Malla, Srividya Iyer

ID: 290
A systematic review of non-pharmacological interventions for caregivers with depression or caregivers of care recipients with co-morbid depression

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Background and Objectives: Caregivers of people with co-morbid depression are at risk of high burden and experiencing depression themselves. Effective interventions are needed to help caregivers manage symptoms of depression they experience as well as those of the person they care for. This meta-analysis examined the effect of non-pharmacological interventions focused on improving depressive symptoms of caregivers and/or helping them manage symptoms experienced by their care recipient.

Approach: Trials were eligible if: 1) published between 1985 and 2019, 2) evaluated the effect of non-pharmacological interventions for caregivers to help manage their depressive symptoms and/or those of the care recipient, and 3) the effect on caregivers' depression (primary outcome) was examined. Five electronic databases were searched. Data were extracted using a standard form, which included evaluating studies' methodological quality using 15 criteria. A meta-analysis was conducted to obtain pooled effect sizes (ESs); heterogeneity was assessed using the Higgin's I2 statistics. Meta-regressions were conducted to identify significant moderators (participant sub-groups) and mediators (identify how the interventions worked).

Results: 16 manuscripts were reviewed. The mean methodological quality score was moderate (8.76/15). 18 interventions were examined (two studies evaluated more than one intervention), with 16 delivered to the caregiver to help manage their depression. The remaining two interventions were dyadic, one supporting the caregiver in managing the care recipients' depression and the other with a dual focus on caregivers' depression and supporting them in their role with the care recipient. The most common condition (n = 10/16) of the care recipients was dementia. Interventions had a moderate effect on caregivers' depression in the short-term (-0.62, CI -0.81, -0.44), which was not sustained over time (-0.19; CI -0.29, -0.09). Self-management skills taking action, problem solving, and decision making were significant mediators of intervention effect.

Conclusion: Non-pharmacological interventions are associated with improvement in caregivers' depression, particularly in the short-term. The recommendation for future interventions is to include self-management skills taking action, problem solving, and decision making. Research is needed to determine the active components of these interventions and enhance their impact over time (e.g., booster sessions).

Primary Theme: Chronic Disease Management

Secondary Theme: Equity and Vulnerable Populations

Methods: Knowledge Synthesis

AuthorNames: Sylvie Lambert, Lydia Ould Brahim, Jane McCusker, Chelsea Coumoundouros, Li-Anne Audet, Mark Yaffe, John Kayser, Mona Magalhaes, Eric Belzile, Nerida Turner

ID: 291
Pharmacist Prescribing and Primary Healthcare Access

Background and Objectives: Recently in Nova Scotia, pharmacists' scope of practice has expanded. This has created a gap in knowledge from what pharmacists can do, to what they have been doing. This study will evaluate current pharmacist prescribing in Nova Scotia. This study aims to describe (1) prescribing activities of community pharmacists including areas of strength and weakness and (2) characteristics of patients who use pharmacist prescribing services.

Approach: Administrative health data from the Drug Information System was used to identify a cohort of 1) community pharmacists who have prescribed and 2) patients who have used pharmacist prescribing services. The study period was based on data available from October 1, 2016 to March 31, 2020. Trends in prescribing by pharmacists were analyzed by fiscal year (ie. April 1 – March 31 2017/8, 2018/9, 2019/20) to facilitate analysis over time. The patient cohort included Nova Scotians who received at least one prescription prescribed by a pharmacist in the study period. Descriptive analysis included cross-tabulations and testing using Kruskal-Wallis tests.

Results: 1185 pharmacists were identified as prescribers across the study period (1034, 1041, and 1050 in years 1, 2 and 3 respectively). First fills (first fill in a sequence) were the most common (261.4, 275.1, 347.3 average prescriptions per pharmacist in years 1 to 3), of which approximately 23% were therapeutic substitutions each year (60.9, 65.0, 83.3 average substitutions per pharmacist in years 1 to 3). Prescribing frequency increased in both categories over time (p2, 2, 1, and 0 comorbidities).

Conclusion: This study demonstrated an increase in pharmacist prescribing over a 3-year period. Most prescribing activity was around first fills, of which a quarter were also substitutions. Older patients and patients with multiple comorbidities used prescribing services most often and this represents an important role for pharmacists in primary care.

Primary Theme: Primary Healthcare

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Healthcare Service or Policy Initiative

AuthorNames: Amy Grant, Judith Fisher, Elizabeth Jeffers, Andrea Murphy, Juanna Ricketts, Liam Rowe, Ingrid Sketris, Lisa Woodill, Jennifer Isenor, Ashley Crawford, Katelyn Frizzell, Rebecca Lawrence, Lihui Liu, Samuel Stewart, Shanna Trenaman

ID: 292

Better COVID-19 dashboards for better decision-making by Canadians: a descriptive assessment and expert appraisal of changes to Canadian COVID-19 dashboards in 2020

Background and Objectives: In early 2020, COVID-19 dashboards were rapidly launched worldwide to communicate pandemic-related information to the public. We conducted a global study of COVID-19 dashboards in July, resulting in seven features common to highly actionable dashboards. In follow-up to this investigation, we used the subset of Canadian dashboards to study how they changed over time, and if their actionability—as a predictor of their potential use for decision-making—increased between July and November 2020.

Approach: We conducted a descriptive assessment and expert appraisal with a panel of scorers (n=8) on a pan-Canadian sample of public, web-based COVID-19 dashboards (n=26), developed by federal or regional governments, public health authorities and independent initiatives, think thanks or media. Dashboards ranged national-, provincial/territorial- and municipal-level reporting. Scorers assessed the dashboards in July and again in November 2020 using a standardized tool rooted in communication theory and health care performance intelligence. Using Nominal Group Technique, the panel of scorers appraised the presence of the seven features conducive to highly actionable dashboards at both time points.

Results: We found improvements were made to the dashboards between July and November 2020. These were predominately linked to the data reported (specificity of geographic breakdowns, range of reported indicators, explanations of data sources/calculations) and the technology used (customization of time trends, interactive and visual chart elements). Improvements on the extent to which the actionability features were present was most pronounced for providing data 'closer to home', use of time trends, and indicator management. No improvements on communication-related elements like clarity of purpose and audience were found. Similarly, the use of story-telling techniques to 'narrate' data remained absent from nearly half of the dashboards in November.

Conclusion: Further increasing the actionability of Canadian COVID-19 dashboards for decision-making relies on better skill-mixing between tech, public health and data specialists and continued investment in quality, granular data. Additionally, attention to steward the network of dashboard developers and their respective mandates will provide better dashboards for better decision-making by Canadians.

Primary Theme: COVID-19

Secondary Theme: Health Informatics

Methods: Qualitative Research Methods

AuthorNames: Erica Barbazza, Damir Ivankovic

ID: 293

Prioritization of public health systems financing, organization and workforce transformation: a Delphi study

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Background and Objectives: Public health (PH) systems in Canada have been transformed following the SARS crisis. The ongoing COVID-19 pandemic provides a strong impetus for a renewal of these PH systems, currently under extreme stress. While new public health investments of different sizes are now made by several provincial governments, it is necessary to understand how to prioritize the allocation of these new funds, which is precisely our objective.

Approach: We use a modified Real-Time Delphi online approach to collect information from local to national public health decision-makers across Canada, covering its provinces and territories. We have conducted a literature review and a consultation with a group of PH experts to set up a list of Delphi propositions that will characterize the potential changes to the PH systems. These statements (propositions) cover financing, organization, interventions, and workforce. In our Delphi survey, respondents rate a set of propositions with possible answers ranging from “not important” to “very important”. We use four two-week iterative rounds to gather information on the priority propositions.

Results: We will start data collection in February 2021 and are confident that preliminary findings will be ready for the conference. Consistent with the Delphi literature best practice, our targeted sample size is of 40 respondents, with a minimum of 20 in the unlikely case of heavy attrition. During the first round, to ensure that we capture all the potential priorities, we ask respondents if they have top three priorities for PH systems changes not listed in our Delphi propositions. We will add those suggestions to the second round of the Delphi. Starting in the second round, we will keep only the propositions that reached between 75% or 80% of respondents’ agreement of importance. The process will continue until the fourth round.

Conclusion: Public health systems renewal is at the top of many policy agendas. Ensuring that their redesign is informed by PH communities will not only increase the readiness of the systems for future PH challenges, but they will also increase their acceptability by those in charge of transforming the PH systems.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Survey Research Methods

AuthorNames: Mehdi Ammi, F. Antoine Dedewanou, Sara Allin, Ak'ingabe Guyon, Jasmine Pawa

ID: 295
The Impact of COVID-19 on Wait Times for Hip Replacement Surgeries and Knee Replacement Surgeries Performed at the Centre Hospitalier de l'Université de Montréal

Background and Objectives: The coronavirus pandemic has brought the government to make important decisions and implement several measures such as suspending temporarily elective procedures in hospitals to meet healthcare needs. This situation puts enormous pressure on the healthcare system, causes an accumulation of patients, and reduces surgery accessibility. This study analyzes the impact of the coronavirus pandemic on wait times for hip and knee arthroplasty surgeries performed at the Centre Hospitalier de l'Université de Montréal.

Approach: We conducted the analysis using clinical data from a three-year period, i.e. from April 1st, 2016, to March 31st, 2019, to establish past trends in wait times and descriptive statistics. To determine the operating capacity, we used the average service supply between 2016 and 2019 and compared it to the supply during the pandemic. Then the difference allowed us to estimate the accumulation of patients waiting due to the COVID-19 pandemic. We will also conduct a predictive analysis using time series forecasting to estimate how long it will take before a normal resumption of activities can be observed.

Results: We carried out the descriptive analysis for hip and knee arthroplasties and found that access to care in the facility follows Canadian trends. Furthermore, we were able to observe that between January 1st, 2020, and November 30, 2020, 218 surgeries have been realized compared to 266 surgeries in 2019 for the same period which represents a decrease of 18.05% in the supply of surgeries in 2020. Moreover, the average monthly supply in 2019 was 24.18 interventions compared to 19.82 in 2020. We believed that the effects of COVID-19 will continue to impact greatly the service supply in 2021. Predictive analyses are yet to be completed. However, we plan to use time series modelling on the demand and supply to estimate the impact of COVID-19.

Conclusion: The pandemic has put enormous pressure on the network and this study has the potential to contribute to the decision-making process regarding the allocation of resources. Even if we have not yet completed our study, we can already observe the effects of COVID-19 on the volume of interventions performed.

Primary Theme: COVID-19

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Mixed Methods

AuthorNames: Caroline Cotnoir-Majeau, Maude Laberge, Ismaël Choinière Crèvecoeur, Philippe Lachapelle

ID: 297

Ontario Health Teams, Ontario’s version of Integrated Care: Do they have what it takes to deliver integrated care?

Background and Objectives: In April 2019, the Government of Ontario passed the People’s Health Care Act, introducing Ontario Health Teams (OHTs). OHTs are expected to bring together health care providers and patients to design a system to meet the needs of populations. Thirty OHTs were announced Fall 2019 and another 15 in Fall 2020. We assessed the extent of collaboration, communication, trust, teamwork, a common vision and readiness for change within and across 45 OHT.

Approach: Using the Context and Capabilities for Integrated Care (CCIC) framework we developed a 45-item leadership survey to measure collaboration, trust, communication, teamwork, common vision and readiness for organizational change within and across OHTs. The online survey was distributed to representatives from the signatory organizations on each of the 45 OHT applications between December 2019 and March 2020 for the first OHT cohort and one year later to the second cohort. Across OHTs, the number of signatory organizations ranged from 4 to 142. Over 1000 online surveys were distributed between the two OHT cohorts.

Results: The average OHT response rate was 77% for the first cohort and as of January 20th, cohort two's response rate was almost 50%. Results from the first cohort revealed 79% had a common vision of how to improve the integration and agreed to share responsibility for achieving improved patient outcomes of care; 71% said their OHT leadership was effective at fostering respect, trust and inclusiveness and 81% felt their organization will benefit from this change. Only 41% reported they share tools for clinical coordination and clinical information across partners. A comparison of the individual average scores and the variation in scores will be compared between cohorts as well as a comparison between the two cohorts in the overall OHT population average score and variation.

Conclusion: The first OHT cohort reported a high degree of trust, commitment and common vision of how to improve care integration but had low resources and capacity to share clinical information. There is a need for some systematic supports for all OHTs and some targeted supports to specific OHT challenges.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Survey Research Methods

AuthorNames: Ruth Hall, Kevin Walker, Nusrat Nessa, Walter Wodchis

ID: 300
The Early Experience of Developing a New Model of Delivering Care

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Background and Objectives: Ontario Health Teams (OHTs) were introduced in 2019 to enable healthcare stakeholders to collaboratively create a coordinated continuum of care. They will be clinically and fiscally accountable for a defined geographic population at maturity. We present the results of the qualitative component of a mixed methods evaluation of select teams. We sought to develop an understanding of what was important to participants when developing an OHT.

Approach: A stratified random sampling approach was used to select 12 OHTs across geography (urban-suburban/rural-small community) and sector (hospital/non-hospital) from 30 OHT applicants. This allowed for the inclusion of teams of different sizes, and with potentially different sectoral emphases and leadership styles. 125 interviews were conducted, largely between January and March 2020, approximately 10 with each OHT. Participants included leaders, providers, and patient family advisors across participating organizations, who had been instrumental in shaping their OHT. Interviews were conducted by telephone and videoconference by a team of five qualitative researchers. They were recorded, transcribed, and thematically analysed.

Results: OHTs shared many underlying strengths, challenges, and strategies, despite their unique contexts and histories. We identified five key components of OHT development that resonated with participants: a) building on existing relationships and believing in the objectives of the OHT model, b) developing collaboration, co-leadership, and equitable governance across partners, c) developing primary care engagement strategies, d) meaningfully including and valuing patient and family advisor perspectives, and e) addressing uncertainty about policy and direction. These key components were cited as strengths when they were managed successfully, challenges when they were not, and often cited as the aim of strategic interventions and future plans.

Conclusion: Participants recognised the fragility of the OHT model. It had to overcome uncertainty at the policy level, and at times, challenging cultures of collaboration at a local level. Yet, the OHT model became the peg upon which the hopes of many for system reform precariously hung.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Gayathri Embuldeniya, Amanda Everall, Shannon Sibbald, Jennifer Gutberg, Nusrat Nessa, Ruth Hall, Walter Wodchis

ID: 302

Incorporating economic evidence into provincial immunization policy development

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Background and Objectives: The National Advisory Committee on Immunization (NACI) recently updated its national immunization recommendations to include economic evidence. However, many provincial governments and immunization advisory committees (IAC), including Alberta's IAC, have yet to decide how to incorporate economic data into their own decision-making. Therefore, the objective of this project was to understand how health economic analyses are integrated into immunization policy development in Alberta, and where new methods or processes are needed.

Approach: To achieve the above objective, we conducted semi-structured in-person or telephone interviews with current members of the provincial IAC (n= 3), members of the provincial Immunization Policy Team at the Ministry of Health, i.e., the IAC Secretariat (n= 2), and public health nurse managers who implement provincial immunization policies (n= 2). Moreover, we reviewed IAC and Ministry of Health documentation, including IAC terms of reference, as well as published guidelines and reviews on methods for incorporating economic evaluations into decision-making.

Results: Most respondents stated economic evidence was not consistently or systematically incorporated into IAC reviews or recommendations; however, there was evidence the Ministry took costs into account when deciding whether to fund certain vaccines (e.g., Shingles). While all respondents agreed that there should be more consideration of economics in immunization policy development, many were concerned that decision-makers would put too much weight on the economics, in comparison to other factors, including safety, equity, and effectiveness. Respondents also had varying opinions on who should incorporate economic evidence. For instance, some believed the IAC should focus on the safety and effectiveness of the vaccination program and leave economic consideration to the Ministry, while others suggested the IAC should provide both recommendations (i.e., with and without consideration of cost-effectiveness).

Conclusion: Although policy-advisors want to incorporate economics into immunization decision-making, there is very little agreement on suitable processes for integration. These need to be in place soon, as NACI recommendations already include economic evidence, and provincial governments and advisory bodies want to be able to use that valuable evidence appropriately.

Primary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

AuthorNames: Ellen Rafferty, Ali Assi, Shannon Macdonald, Larry Svenson

ID: 303
Patterns of Usual Care for People with Nonsurgical Knee Osteoarthritis – A Descriptive Survey

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Background and Objectives: Background: Approximately one-third of people with knee osteoarthritis(OA) referred for total knee replacement (TKR) consultation in Alberta do not meet surgical criteria1. International clinical guidelines recommend people with knee OA receive education, exercise, weight management (if appropriate) and pain medication (as needed) to help manage their nonsurgical knee pain2. Objectives: Describe 'usual care' patterns for nonsurgical OA treatments in a cohort who were not surgical candidates during TKR consultation at Edmonton, Alberta's centralized intake clinic.

Approach: Methods: People diagnosed with nonsurgical knee OA by an orthopedic surgeon were invited to take a standardized, telephone-administered questionnaire to capture key socio-demographics and OA treatments used over 4-6 years since TKR consultation. Descriptive statistics (frequen¬cies, means and standard deviations) summarised key variables. The primary outcome, recommended nonsurgical treatments, was defined as using education, exercise and weight loss (if body mass index ≥ 25 kg/m2) and at least 1 recommended medication (oral or topical anti-inflammatory, acetaminophen or corticosteroid injection). Secondary outcome, not recommended treatments, was defined as use of opioids, hyaluronic acid, platelet rich plasma and stem cell therapy.

Results: Results: 563 people were invited and 250 participated (44%). Participants were 61% female, mean age 66.3 (SD 8.33), mean body mass index 33.5 (SD 6.7), 91% Caucasian, 71% retired, 69% married, 66% living with a spouse or relative, 58% post-secondary education and 47% had >=3 co-morbidities. The most common reason for nonsurgical recommendation during the initial TKR consultation was symptoms were not severe enough (58%). Recommended nonsurgical treatments were used by 20% of participants following their initial TKR consultation. Among these participants, 64% received education by a health professional, 74% exercised regularly, 38% attempted weight loss, and 91% used recommended pain medications. 42% of participants used treatments that were not recommended. Over 6 years, 34% of participants proceeded to surgery.

Conclusion: Conclusions: One in five participants used recommended nonsurgical treatments to manage knee OA within 6 years of orthopedic surgeon consultation. Future work will assess the association of participant characteristics with use of recommended treatments. Findings will help provincial decision-makers plan future OA service delivery to optimize nonsurgical care.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Chronic Disease Management

Methods: Survey Research Methods

AuthorNames: Darren Mazzei, Deborah A Marshall, Tracy Wasylak, Peter Faris, Jill Robert, Gillian Hawker, Ania Kania-Richmond

ID: 307
Surveying the Nation-wide Local Public Health Systems Responses to COVID-19

Background and Objectives: Although COVID-19 has increased interest in studying public health systems in Canada, efforts have so far tended to focus on provincial- and federal-level activities, while services are delivered at the local level. However, advancing nation-wide research at the local level is complicated by the myriad local public health systems in Canada. Our objectives are to document the local public health responses to COVID-19 and to develop a model of routine public health policy surveillance.

Approach: Our research team is conducting survey-based policy research methods interviewing regional medical officers of health (MOH) to gather information on local public health responses to COVID-19. This study has been developed in partnership with MOH from across the country as part of an integrated knowledge translation (iKT) collaborative established by the MOH themselves at the University of Saskatchewan. Broadly, the collaborative is developing methods to compare units from across the country to more effectively assess key features of local public health systems and governance.

Results: In this presentation, we will report on the concepts and instruments that we have developed to record local public health responses to COVID-19 in a comparable manner across the country, and the iKT processes that we engaged in to ensure the success and impact these efforts. We will also report preliminary findings on local public health efforts.

Conclusion: Multi-level public health systems and services research is essential for informing resilient public health systems in Canada. Our research is working to develop the fundamentals of how system-level evidence can emerge through a collaborative process between public health practitioners and researchers on a routine basis.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: COVID-19

Methods: Survey Research Methods

AuthorNames: Thilina Bandara, Cordell Neudorf, Charles Plante, Lori Baugh Littlejohns, Navi Sandhu, Anh Pham

ID: 310

Implementing a telehealth support tool for vulnerable older adults during the COVID-19 pandemic: a qualitative examination of challenges and future directions

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Background and Objectives: Older adults are among the populations most vulnerable to the physical, psychological and social consequences of the COVID-19 pandemic. Some telehealth tools have been developed to assess their health condition and social isolation, but little is known about how they have been implemented during the pandemic. This study aimed to understand the experience and needs of professionals who were provided with a telehealth support tool (Évaluation Socio-Gériatrique, ESOGER) during COVID-19 first wave in Quebec.

Approach: ESOGER is a telephone-based telehealth support tool providing a first-line socio-geriatric assessment of community-dwelling older adults' health and social conditions. It was deployed during the spring of 2020 in various health care facilities, community organizations and public administrations in Quebec. This qualitative study was carried out based on 20 semi-structured online/phone interviews with professionals who were provided with the ESOGER tool. We recruited participants coming from diverse institutions; we included both adopters and non-adopters of the tool. We used inductive/deductive thematic analysis to interpret transcribed verbatim interviews.

Results: According to participants, ESOGER was helpful to screen social isolation and identify emergency situations. However, they reported three main challenges regarding the tool's implementation. [1] Adapting the tool to diverse contexts of practice (e.g., social service vs healthcare): though many participants described standardization as a positive aspect fostering interprofessional cooperation, they often thought the tool was not entirely suitable for their context. [2] Adopting a new tool in the context of a health crisis: despite their perception that the tool was useful, several participants could not implement it due to administrative constraints and/or increased time burden during the pandemic. [3] Relational challenges with older adults: several participants wished that the tool could have better helped them to establish a relationship of trust with older adults.

Conclusion: Actively involving professionals from diverse practices, as well as older adults and caregivers, in the future development and implementation of telehealth support tools, could help improve the tools' adaptivity, reduce contextual barriers to adoption, and better take into account the relational component of interactions with recipients.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: COVID-19

Methods: Qualitative Research Methods

AuthorNames: Lise Dassieu, Élise Develay, Olivier Beauchet, Amélie Quesnel-Vallée, Eric Tchouaket, Claire Godard-Sebillotte, Svetlana Puzhko, Sathya Karunananthan, Kevin Galery, Nadia Sourial

ID: 311
Health System-Level Evaluation of Tele-Mental Health Care Services among Children and Adolescents in Ontario

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Background and Objectives: Tele-mental health care is a strategy to address the growing gap between mental health care needs and available resources. We aimed to describe the characteristics of children and adolescents receiving tele-mental health care services in Ontario, Canada and examine access to a psychiatrist, in-person or via telepsychiatry, following a mental health and addictions (MHA)-related emergency department (ED) visit or hospitalization.

Approach: Using linked health and administrative data, we conducted a retrospective population-based pre-post study of children and adolescents (age 1-18) using a provincial tele-mental health care program from January 1, 2013 to March 31, 2017 and examined their MHA-related service use (outpatient, emergency department, hospitalization) 1 year prior to and following initial consultation. To contextualize utilization patterns, we used a second cohort of pediatric patients with an incident MHA-related ED visit or hospitalization between January 1, 2013 and December 31, 2016 and assessed follow-up with psychiatry in-person or via telepsychiatry within 1 year.

Results: 7,216 children and adolescents received tele-mental health care services during the study period. 52.9% were male, mean age was 11.8 (±3.8) years, 42.7% lived in rural settings, and 24.6% were in the lowest income quintile. MHA-related ED visits (15.1% pre vs 12.6% post, p

Conclusion: Tele-mental health care services appear to reduce MHA-related ED visits and hospitalizations, while increasing access to psychiatrists. However, these services are vastly underutilized among children and adolescents with high needs. As mental health care shifts to virtual modes of delivery, improved planning is needed to more effectively integrate telepsychiatry.

Primary Theme: Mental Health and Addictions

Secondary Theme: Maternal and Child Health

Methods: Program or Policy Evaluation

AuthorNames: Alene Toulany, Paul Kurdyak, Sima Gandhi, Longdi Fu, Seena Grewal, Chetana Kulkarni, Natasha Saunders, Simone Vigod, Astrid Guttmann, Maria Chiu, Antonio Pignatiello

ID: 314
Considerations for Patient and Public Involvement in Health Technology Assessment

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Background and Objectives: Research organizations and health technology assessment (HTA) agencies in Canada and worldwide have been involving patients and the public (PPI) in their work. How to meaningfully involve these individuals in the structure, phases of work and outcomes of health technology assessment is not well understood. This Report, informed by evidence and additional inputs, presents key considerations for the involvement of patients and the public in HTA.

Approach: The development of this Report included three inputs: 1) a focused review of the literature; 2) a grey literature review of HTA agency websites; and, 3) key informant interviews with HTA professionals and members of the patient/public community. Records retrieved were screened by one reviewer and assessed for studies that could inform patient involvement in HTA. Records were excluded if they were not written in English, were opinions or commentaries or if they did not describe the engagement or involvement of patients in HTA

Results: Forty-seven records underwent data extraction for the evidence review and 9 interviews were conducted with 6 health technology agencies and 3 patient/public members. The goals and rationales for PPI are well defined including improved decision-making, meaningful ways to gather input and to build the knowledge of patients. Despite little consensus on where in the HTA cycle patients should be involved, a number of stage-specific approaches exist. There is a scarcity of research that examines the impact and value of patient involvement, but a number of studies assert improvements in overall research design, including the research question, and overall relevance. A number of barriers to PPI were identified, including additional resources and impact to project timelines, as well facilitators including flexible approaches and role clarity.

Conclusion: Given the evidence, six considerations have been developed and include: 1) Establishing a patient advisory committee; 2) Developing a strategy for patient involvement; 3) Allocating appropriate resources 4); Adopting a phased and manageable approach; 5) Establishing productive partnership with SPOR and other HTA agencies; and, 6) Evaluating the impact.

Primary Theme: Patient and Public Engagement

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Mixed Methods

AuthorNames: Tamara McCarron, Tom Noseworthy, Tracy Wasylak, María José Santana, fiona clement

ID: 315

Evaluating a Self-Management and Wayfinding Telehealth Initiative to Support Rehabilitation Concerns During the COVID-19 Pandemic

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Background and Objectives: Governmental responses to the COVID-19 pandemic necessitated innovative, collaborative approaches to deliver services, especially for vulnerable populations. In Alberta, a novel, rehabilitation-focused telehealth phone service began in May 2020 to provide wayfinding and self-management advice to Albertans with acute or chronic rehabilitation needs, whether neurological, musculoskeletal, or COVID-19-related. This evaluation project aimed to understand the service's sustainability as well as short and long-term impacts.

Approach: We utilized a mixed-methods design, including secondary data analyses, surveys, and semi-structured interviews. We conducted narrative analyses of calls using artificial intelligence and machine learning (AI/ML). Secondary data analyses described call metrics and demographic information about the population accessing the service during the first six months post-implementation as well as health care utilization after accessing the service. Three-month follow-up surveys clarified caller health outcomes (e.g. quality of life, social support, self-efficacy). Semi-structured interviews with callers explored caller experience, satisfaction and thoughts on service sustainability. Qualitative data collection occurred between July and November 2020.

Results: 464 calls were analyzed, the majority came from urban areas with the rest spread across rural and remote regions. On average, callers were 55 (SD=18) years old and call duration was 48 (SD=18) minutes. The average frequency of emergency room visits prior to calls was 1.298 times (SD=1.799) compared to 0.863 times (SD=1.428) after the calls. The AI/ML results identified underlying reasons for the calls, type of assessment and management plans offered. Sixty-eight callers completed the three-month follow-up survey. Several statistically-significant Spearman correlations were found between quality of life, self-efficacy for managing chronic disease, interpersonal support, gender, employment status, ethnicity, education level, and place of residence. Two key themes emerged from the qualitative arm: professional communication and opportunities for utility and sustainability.

Conclusion: Our results demonstrated that populations were supported when other rehabilitation services closed. The intervention demonstrated value for callers adding to its sustainability. The initiative has a potential positive impact on rehabilitation access for rural areas, neurological populations, and the post-COVID-19 population.

Primary Theme: Chronic Disease Management

Secondary Theme: COVID-19

Methods: Economic Analysis or Evaluation

AuthorNames: Katelyn Brehon, Kiran Pohar Manhas, Adalberto Loyola-Sanchez, Chester Ho, Petra O'Connell, Elisavet Papathanassoglou, Mahdi Tavakoli, Rob MacIsaac, Jay Carriere, Katie Churchill

ID: 317
Exploring the Lived Experiences of Homeless Female Veterans of the Canadian Armed Forces

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Background and Objectives: It is estimated that 3,000 to 5,000 of Canadian Veterans are homeless. Female Canadian Veterans (FCV) make up 10 to 15% of all Veterans, while 30% of all homeless Veterans are female. Little evidence exists to inform policy development/implementation to address homelessness. This phenomenological study explores the experiences of homeless FCV before, during and after military service, and the overlapping identities that led to their homelessness using a combined life course and intersectionality framework.

Approach: An integrated Knowledge Translation approach is used to engage knowledge users at every stage of this qualitative study (e.g., Veteran Affairs Canada, representatives from homeless shelters, Sunnybrook Veterans Centre) The sampling approach includes both purposive and snowball sampling to identify homeless FCV from homeless shelters in the Oshawa, Hamilton, Toronto, London, and Montreal areas. Data collection includes; a semi-structured interview to collect demographic information and to complete a life history grid; and a narrative interview to collect more detailed information. Qualitative content analysis will be used to interpret meaning from the content of text data.

Results: Similar studies in other countries have indicated that the factors that contribute to homelessness are multi-dimensional and can include different stages of life; employment characteristics; racism; substance abuse; military sexual abuse; mental health issues; perceived lack of support; difficulties transitioning to civilian life; and traumatic experiences pre/post and during military deployment. We anticipate similar experiences may be reported by homeless female Canadian Veterans. However important differences exist between countries in terms of the type and accessibility of health and social services, the number of homeless shelters, military culture and the existence and implementation of policies at the national, regional and local levels.

Conclusion: The identification of the factors that contribute to female Veteran homelessness will assist in the transition from military to civilian life for Canadian female Veterans. As well, the findings will assist in the development of policy and interventions to support female Veterans who are homeless now and in the future.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Michael Short, Brenda Gamble, Michael Rostek

ID: 318

Feasibility and effects of an audit and feedback intervention with a nursing team in primary care: A pilot study

Background and Objectives: There is little performance measurement of nursing care due to limited access to data. Although audit and feedback interventions show favorable results on performance improvement, its effectiveness and some of its components are poorly understood. This pilot study aims to evaluate the feasibility and preliminary effectiveness of an audit and feedback intervention with a nursing team in a Local community Health Center in Quebec, Canada.

Approach: A quasi-experimental design with three measurement times was used. Seven nursing-sensitive indicators were measured using clinical and administrative data and based on episodes of wound care. These indicators included teaching, relational continuity and treatment planning. Data were collected once (T1), then after 6 (T2) and 12 months (T3). Indicators were reported back to clinicians and managers in two feedback sessions that took place between T1 and T2, then between T2 and T3. Feedback sessions were led by a clinician with whom the nursing team was acquainted. Feasibility was assessed through direct and indirect observation.

Results: The intervention included two complete cycles of audit and feedback. Regular team members attended both feedback sessions, including registered nurses and managers. Most of the first session was spent on discussing indicators, which led to a lack of time for reflection and action planning. The team was more involved in defining the action plan in the second feedback session. Scores for the indicators were compared from March 2018 (T1) to August 2019 (T3) based on samples of 404 and 482 patients. The teaching indicator was the only one for which we found a significant improvement. The treatment planning indicator showed slight improvement although not statistically significant.

Conclusion: All indicators were considered clinically relevant, but certain associated measures for action were inconsistent with the current management practices. An audit and feedback intervention is feasible and engages nursing team members but needs to better support actions both at an individual and collective level.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Primary Healthcare

Methods: Experimental or Quasi-experimental Methods

AuthorNames: Émilie Dufour, Arnaud Duhoux, Mylaine Breton, Damien Contandriopoulos, Marie-Thérèse Lussier, Jolianne Bolduc

ID: 326
Providing more recent hospital cost estimates using forecasted financial information

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Background and Objectives: CIHI estimates costs for inpatient hospitalizations and ambulatory care episodes where financial and clinical information are available. Clinical data are typically reported monthly while financial data are reported annually, which impacts our ability to provide more recent cost estimates. Currently, clinical data are available for 2020-2021 and financial data for 2019-2020, allowing for cost estimates up to 2019-2020. We explored two forecasting methods to provide more recent cost estimates for 2020-2021 to inform future planning.

Approach: CIHI estimates costs by multiplying the Cost of a Standard Hospital Stay (CSHS) indicator by the encounter Resource Intensity Weight (RIW) (measure of resource utilization). We explored methods to estimate recent costs by inflating the most recent CSHS available by the health portion of the Consumer Price Index (CPI) and by forecasting based on trends in prior CSHS values (10 years) observed using weighted linear regression ($\alpha=0.5$). To evaluate these methods for each jurisdiction, we considered the CSHS for 2016-2017 and forecasted CSHS values for the following two years. We compared the forecasted CSHS to actual CSHS for these years.

Results: Both methods displayed strong concordance between forecasted and actual CSHS values: most forecasted CSHS values were within 10% of actual value. Both methods were more accurate in forecasting CSHS after one year compared to two. Jurisdictional comparisons revealed differences in accuracy across provinces and territories. These forecasting methods can be used to estimate costs for COVID-19 encounters (whose financial data are yet unavailable). For detailed COVID-19 cost estimates, please see CIHI's abstract "Estimated Cost of COVID-19 Hospitalizations in Canada". Despite using CPI values adjusted to account for COVID-19, the true impact of COVID-19 on hospital costs will not be known until financial information from that period are available.

Conclusion: By forecasting CSHS values, we can estimate costs where clinical data are available but financial data are yet unavailable. These cost estimates provide critical insight into recent hospital spending and resource utilization to enable informed decision-making based on the most relevant information available.

Primary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Economic Analysis or Evaluation

AuthorNames: Stephanie Bonnell, Jason Black, Lauren Clow

ID: 327
Interjurisdictional comparison of approaches to private sector-funded research in Canada: key learnings and future directions

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Background and Objectives: Health Data Research Network Canada (HDRN Canada)'s data centres are working to facilitate and accelerate multi-jurisdictional research. Currently, the network focuses on supporting public sector researchers. Going forward, supporting private sector-funded requests is of interest to maximize the impact of data held by HDRN Canada's data centres. This work identifies opportunities for harmonizing approaches across jurisdictions for these requests to increase comfort with data sharing, access and use by providers, researchers and the public.

Approach: Consultations with 11 provincial, territorial and pan-Canadian data centres that make up HDRN Canada took place in November 2020 to understand the jurisdictional differences that exist in policies and practices for working with the private sector. Also conducted was a network-wide survey to understand data centre governance and operations. Jurisdiction-specific processes and requirements have been summarized to identify lessons learned and insights for future opportunities to harmonize approaches across jurisdictions.

Results: The process of working with private sector-funded requests varies greatly across jurisdictions and data centres. Decision-making is often time-intensive and relies on individual input, highlighting an opportunity for clearer guidance and coordination. For example, supporting private sector requests can depend on whether the data sharing agreements with data providers allow for data use by a private sector-funded entity, the composition of the research team (involvement of a local investigator), mandate alignment with the data centre (is for research purposes/public benefit) and compliance with the data centre/institutional policies. Reputational concerns with supporting requests from the private sector, including sharing data, are common among centres. Individual centres are interested in learning from the policies and practices of those jurisdictions experienced in working with the private sector.

Conclusion: An opportunity for guidance and harmonization of policies and practices for private sector-funded requests across jurisdictions exists. HDRN Canada's relationships, infrastructure, and experience with data governance and public engagement can be leveraged to mitigate concerns about trust and public perception of private-sector requests, while advancing health research, policy and practice.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Collaborative Healthcare Improvement Partnerships

Methods: Mixed Methods

AuthorNames: Nicole Yada, Marie-Chantal Ethier, Donna G. Curtis Maillet, Juliana Wu, P. Alison Paprica

ID: 329

Managing osteoarthritis – Learning from the lived experience of Albertans with knee osteoarthritis who are not candidates for arthroplasty.

Background and Objectives: Background: One-third of patients with knee osteoarthritis (OA) are not surgical candidates and require on-going management of their OA-related symptoms. Understanding how these patients manage their OA from their perspective will help decision-makers align services with best practice guidelines and in response to patients' needs and lived realities. Objectives: Explore how people with knee OA who are not candidates for arthroplasty manage their OA.

Approach: Methods: Semi-structured interviews were conducted with a convenience sample of who agreed to an interview following a telephone-administered questionnaire evaluating use of health care services. An interpretative-descriptive approach was used for the analysis. Through an iterative process, data elements were compared and contrasted, and an emergent coding framework was developed. This framework was then applied to all interview data. Based on similarities, patterns and relationships, descriptive categories were generated, and high-level themes emerged through the interpretative analysis.

Results: Results: Twenty participants consented to the interview from the 50 who agreed to be contacted. Participants were 75% female and 90% were retired. The number of years since participants had been diagnosed with OA ranged from less than 3 years to over 30 years. Participants accessed services from a range of health care professionals, including physicians, allied health professionals, and complementary/alternative practitioners. A variety of medical (physician administered) and non-medical interventions were used to address OA symptoms. Three themes emerged that define how participants manage their OA: 1) a cyclical process that is highly individualized, 2) experimentation and willingness to "try anything", and 3) reliance on networks of peers, family members, and perceived experts for information.

Conclusion: Conclusions: Day-to-day management of OA is a patient-driven, highly individualized process informed by a network of sources. Effectively supporting individuals with knee OA who are not surgical candidates involves access to appropriate health care services, credible information, and self- management strategies that occur within and outside of the healthcare system.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Chronic Disease Management

Methods: Qualitative Research Methods

AuthorNames: Darren Mazzei, Ania Kania-Richmond, Tracy Wasylak, Jill Robert, Peter Faris, Gillian Hawker, Deborah A Marshall

ID: 336

Accessing Antenatal Care - exploring the impacts of intimate partner violence in Benin

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Background and Objectives: Utilization of ANC is key to positive health outcomes for both mother and infant. The republic of Benin ranks in the bottom third of countries recently assessed for antenatal care (ANC) coverage and has reported that close to 70% of Beninese women suffered abuse at least once in their lifetime. We examined the impact of partner violence on utilization of ANC using both the basic four-visit model and the updated WHO recommended eight-visit model.

Approach: Data were collected from the nationally representative 2017-2018 Benin Demographic Health Survey (BDHS) on ever-partnered women aged 15-49 who had completed both the reproductive maternal health and domestic violence modules. The outcome variable was ANC utilization, and the main independent variable was IPV. To adequately assess utilization of ANC, we examined both the basic at least four visit ANC model (ANC-4) and the most recent 2016 WHO recommended at least eight-visit model (ANC-8). Descriptive statistics and multivariate logistic regression analyses were performed to determine significant factors associated with ANC utilization in Benin. The final sample size used was n=3082.

Results: Findings revealed that women who ever experienced IPV (OR 0.753, 95% CI: 0.628-0.901; p=0.002) had 25% less odds of accessing the basic at-least-4 ANC visits; it was not a factor for the eight-visit model. Being in the richest quintile (OR 5.490, 95% CI 3.907-7.714; p

Conclusion: This work revealed key areas for maternal health policy makers and service providers in Benin to appropriately plan effective policies (i.e., alleviate poverty; equitable health services access; cultural sensitivity) and necessary interventions (i.e., ANC education, IPV prevention, paid employment, alcohol cessation) to increase utilization of ANC.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Equity and Vulnerable Populations

Methods: Data Mining/Big Data Analytics

AuthorNames: Dina Idriss-Wheeler, Sanni Yaya

ID: 337
Barriers and facilitators to Nova Scotia pharmacist's self-reported prescribing practices: A quantitative analysis

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Background and Objectives: Pharmacists were first authorized to prescribe in Nova Scotia in 2011, with this authority recently expanded to include prescribing for renewals for up to 180 days, contraception management, shingles, minor bladder infections. Further understanding of the impact of recent scope changes and the COVID-19 pandemic on pharmacist prescribing behaviours is needed. The aim of this study was to quantify pharmacist prescribing and explore self-reported barriers and facilitators related to pharmacist prescribing in NS.

Approach: A questionnaire based on the Theoretical Domains Framework version 2 (TDFv2) was electronically distributed to all direct patient care pharmacists in NS (n = 1,338) in July 2020. The questionnaire assessed self-reported prescribing activities and potential barriers and facilitators using the TDFv2 domains. Survey questions were assessed on a 5-point Likert scale, and converted to three categories to facilitate reporting: negative (strongly disagree/disagree), neutral (uncertain), and positive (agree/strongly agree). Paired t-tests were used to examine temporal differences in self-reported prescribing activity, and TDF responses were descriptively reported using the positive, neutral, negative categories from March 2020 onward (i.e., 'during' COVID-19).

Results: A total of 321 participants accessed the survey of which all partial and completed responses were included for analysis (N=190, 14% of the pharmacist population). Renewals were the most common type of prescribing activity reported. Since the pandemic, activity in several categories of prescribing has increased: minor ailment (25.3% vs 34.7%, p=.03), preventative medicine (22.1% vs. 33.2%, p

Conclusion: This study revealed significant increases in various types of pharmacist prescribing activity during the pandemic and also identified key barriers and facilitators that influence the extent to which pharmacists are willing and able to prescribe. The findings offer valuable insights that may be used to inform both policy and

Primary Theme: Primary Healthcare

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Survey Research Methods

AuthorNames: Jennifer Isenor, Amy Grant, Liam Rowe, Andrea Bishop, Judith Fisher, Elizabeth Jeffers, Natalie Kennie-Kaulbach, Julia Kontak, Laura Minard, Bobbi Morrison, Juanna Ricketts, Glenn Rodrigues, Ingrid Sketris, Samuel Stewart, Anne Marie Whelan, Lisa Woodill

ID: 338
Patient-Reported Experiences in Accessing Primary Healthcare among Immigrant Population in Canada: A Rapid Literature Review

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Background and Objectives: Adequate and equitable access of quality Primary Health Care is crucial to everyone; however, it is still a matter of great concern in many countries. Immigrants in particular face unique challenges, often driven by socio-culture/economic, language, literacy, and exposure to a new healthcare structure, in accessibility/usability of PHC. Understanding these determinants is a foundation for developing an effective/efficient healthcare. This review explores immigrant patients experiences in PHC, identifies areas for further research and improvement.

Approach: A comprehensive search and review of scientific literatures was performed following the PRISMA guidelines on PubMed, MEDLINE, Embase, SCOPUS, and Google scholar to identify studies published from 2010 to July 2020. Relevant peer-reviewed articles published in English language and reported immigrant's patient experiences in primary healthcare in Canada were included in this review. Studies focused only refugee status population, temporary foreign workers, and undocumented immigrants were excluded. The combination of search keywords included: 'Primary Care', 'Primary Healthcare', 'Healthcare delivery', 'Primary Medical care', 'Immigrant', 'Newcomer', 'Patient Experiences', 'Patient Satisfaction', 'Patient-Centered Care', Quality of Health Care'. Two reviewers reviewed the literatures independently.

Results: Of the 1566 searched articles, 19 articles were included in this review. Overall, the finding from articles were summarized into four major themes: Cultural and linguistic difference (e.g., language/communication barriers, gender preferences for providers, health literacy, cultural tradition, health belief and perception on mental and sexual health) was the most highlighted barriers in accessing PHC among Immigrants. Similarly, socio-economic challenges (e.g., lack of social network as a newcomer, financial hardship and healthcare costs, lack of alternative resources), structural factors (e.g., long waiting time, lack of accessing specialist services, distance, lack of supportive services-interpreter, inadequate/not coverage dental/vison care cost), and patient-providers relationship (e.g., perceived discrimination, lack of linguistic/culturally competent physicians, lack of shared decision-making in treatment, and miscommunication) were other major experiences/challenges found form this review.

Conclusion: Understanding the gaps to accessing/receiving appropriate healthcare is important to shape policies, enhance the quality of services, and deliver more equitable healthcare services in a respectful and responsive manner. It is therefore pertinent that primary healthcare providers play an active role in bridging these gaps with strong support from policymakers.

Primary Theme: Primary Healthcare

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Synthesis

AuthorNames: Bishnu Bajgain, Kalpana Thapa Bajgain, Sujan Badal, Fariba Aghajafari, Jeanette Jackson, María José Santana

ID: 342

Innovation Pipeline – System Level Approach to Translating Health Research and Adopting Innovations of Value that Support Heath System Change

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Background and Objectives: As a learning health system supporting continuous improvement in health outcomes and service delivery across the province, Alberta Health Services (AHS) developed the “Innovation Pipeline” which provides a system-level approach to translate health research and adopt innovations into care. The Innovation Pipeline outlines the level and types of evidence needed to demonstrate the value of an innovation during different stages of development within AHS; reinforcing that only solutions with demonstrated value are spread and sustained.

Approach: The Innovation Pipeline provides a more structured approach to integrating evidence into care, and offers more clarity about how innovations of value are assessed when incorporated into the health system in Alberta. Driven by defined priority health system challenges, potential solutions/innovations for these challenges are identified and undergo early, rigorous and on-going testing in collaboration with the health system and its partners. At each step of testing, evidence of value assesses the impact on outcomes and costs, ensuring health system sustainability. AHS looks for evidence of improved health outcomes, quality, and health equity; health and operational impacts; and economic value.

Results: Clinicians and researchers partner throughout the Innovation Pipeline to drive quality improvement, health system innovation and transformation. Research and academic partners provide expertise and capacity to support scientific inquiry, knowledge generation, rigorous data collection and analysis. AHS’s collaborative clinical strategy groups, Strategic Clinical Networks, connect researchers with patients and clinical partners and support pragmatic trials within operational settings. Solutions to health system challenges generally begin as proof of concept research and quality improvement projects driven by academic partners. Promising solutions undergo early testing in the health care setting to determine clinical effectiveness in an operational setting. As effective solutions advance through the pipeline, evidence of value in the Alberta health care system refines the solution and guides its implementation ensuring maximum organizational value.

Conclusion: The Innovation Pipeline informs both innovators and those tasked with investing time and funding on those solutions that are measurably better in addressing health system challenges; that improve quality of care and health outcomes, demonstrate economic value, and that are feasible, equitable and adaptable within the health system.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Healthcare Service or Policy Initiative

AuthorNames: Barbara Hughes, Tracy Wasylak, Braden Manns, Marc Leduc, Nancy Fraser, Arianna Waye

ID: 343

Exploring variability in the implementation of innovative centralized referral systems to improve patient access to specialized health services in Quebec, Canada

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Background and Objectives: Delays in accessing specialized health services in Canada are listed among the worst in OECD countries. To improve access to specialized health services, Quebec implemented the Programme Accès prioritaire aux soins spécialisés (APSS) - Centres de répartition des demandes de services (CRDS) (2016). The program includes single regional access points for processing and prioritizing requests to specialized services via primary care. We will explore the variability in the conceived program's implementation across three Quebec regions.

Approach: A multiple case study design was used to assess the program's implementation in three Quebec regions, chosen based on characteristics related to population demographics/territory urbanity. The program's implementation and its variability per region was assessed by semi-structured interviews with regional health planners (n=9). Interviews were developed to gather perspectives on the main components/functioning of the program, and were based on the Quebec Ministry of Health and Social Services' APSS-CRDS logic model, Mitchell & Lewis' (2003) framework for logic models, and Chaudoir and colleagues' (2013) framework to better understand contextual factors influencing an innovation's implementation. Interviews are being analysed thematically.

Results: Based on the participant responses, logic models for each of the participating Quebec regions are being elaborated and compared. Preliminary data highlight the program's regional variability with regards to program structure, human resources involved in its implementation, supports offered to primary care providers to facilitate its use, methods for monitoring use, mechanisms for feedback relayed to primary care providers/patients, and procedures for documenting and managing availability for specialist consultation. Variability in the regional models may be explained by contextual factors (barriers and facilitators) influencing the APSS-CRDS implementation. We organized them according to structural (MSSS involvement, specialist availability), organizational (leadership of health planners, inter-regional and inter-institutional collaborations), provider (attitudes towards the program), and innovation (regional readiness for the program's implementation, the program's adaptability) characteristics.

Conclusion: Findings are useful to inform Quebec health administrators/decision-makers how programs like the APSS-CRDS can be adapted considering regional contextual factors while maintaining their core components. This variability is important to consider as it may influence anticipated effects. Results may also inform Canadian stakeholders should they wish to implement similar programs.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Program or Policy Evaluation

AuthorNames: Jessica Spagnolo, Mylaine Breton, Carine Sauvé, Jean-François Clément, Martin Sasseville, Marie-Claude Tremblay, Richard Fleet, Camille Lebel, Marie Beauséjour, Cloé Rodrigue

ID: 344
Impact of a medication optimization intervention on potentially inappropriate medications: a quasi-experimental study

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Background and Objectives: Potentially inappropriate medications (PIMs) are highly prevalent in older people up to 60%. Medication optimization has been shown to reduce PIMs' prevalence. The PAERPA (Personnes Âgées En Risque de Perte d'Autonomie) intervention included an in-hospital medication optimization intervention. This intervention was implemented in a real-life context outside of the controlled conditions of a randomized experiment. The aim was to evaluate the impact of the medication optimization intervention on PIMs.

Approach: We analyzed a retrospective cohort of older persons enrolled in the PAERPA intervention between January 1st, 2015 and December 31st, 2018 in the Valenciennois-Quercitain area in France. The control group was built by extracting, from the French health administrative database, similar persons, hospitalized during the same period in an equivalent general hospital, but not having received the in-hospital intervention. We defined PIMs with three definitions: the French Laroche list, the STOPP list and the European PIM list. We compared the intervention group and control group in terms of PIMs by using the difference-in-difference analysis.

Results: The 582 persons enrolled in the study had an average age of 82.9 ± 4.9 years, 65.3% were women. The control and intervention groups had the same socio-demographic, clinical and drugs characteristics (including median number of PIMs). For the both group and depending on the list used, the median number of PIMs ranged between 2 [0;3] at the hospital admission and 3 [0;3] at discharge. There was no significant difference in the mean number of PIMs associated with the intervention.

Conclusion: Even though medication optimization interventions have shown promising results in a controlled randomized context, there impact might be less conclusive in real-life implementation. We will conduct further analysis to understand the factors that can explain this absence of effect.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Emerging Methods (e.g. new developments in observational study design)

AuthorNames: Anaïs Payen, Jean-Bapstiste Beuscart, Julien Soula, David Verloop, Marguerite-Marie DEFEBVRE, Delphine DAMBRE, Claire Godard-Sebillotte

ID: 345

Using an Integrated Knowledge Translation Approach to Explore the Transition from Pediatric to Adult Health Care in Nova Scotia

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Background and Objectives: The transition from pediatric to adult health care can be a complex and challenging process. Despite available evidence on transitions of care, challenges exist when implementing interventions into practice to improve patient and health system outcomes. Our collaborative team of Patient Partners, health care providers, decision-makers, and researchers are working together to address this gap by examining what factors enable or mitigate a successful transition of care for youth in Nova Scotia.

Approach: Our partnership was established at a Maritime SPOR SUPPORT Unit Bridge Event, which is a knowledge exchange event that brings together health care decision-makers and providers, researchers, Patient Partners, and the public to identify research questions around priority health topics. Our IKT team, divided into separate quantitative and qualitative working groups, has been working together to refine our research question, design study methods, and conduct data collection and analysis. Each group meets monthly to discuss project activities, timelines, and troubleshoot challenges. Patient Partners, health care providers, and decision-makers play a lead role in these conversations to inform study activities.

Results: We are currently in the data collection and analysis phases of this study. The quantitative team will be analyzing transfer outcomes through a combination of administrative health, clinical, and health system data. Primary outcomes include i. time to transfer (median number of days from pediatric to adult visit), and ii. changes in the type, pattern, and frequency of healthcare utilization over a 6-year period, 3-years prior to and following transfer. The qualitative team is analyzing data using directed content guided by the Behavioural Change Wheel. Coded data will be further examined inductively to generate themes that represent the barriers and enablers to transition from pediatric to adult care, from the perspective of patients, caregivers, and health care providers in pediatric and adult care settings.

Conclusion: Our team, in partnership with the multi-stakeholder, IWK Transition of Care Committee and health care decision-makers, will use these findings to inform the implementation and evaluation of interventions to support the physical and mental health of youth throughout the transition process from pediatric to adult care.

Primary Theme: Collaborative Healthcare Improvement Partnerships

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Mixed Methods

AuthorNames: Christine Cassidy, Jacklynn Pidduck, Sarah Schwartz, Cassidy Bradley, Amanda Higgins, Elizabeth Jeffers, Julia Kontak, Liam Rowe, Amy Grant, Ashley Crawford

ID: 348

Engagement and Capacity Building of Patient and Family Advocates: Collaborating on Ontario Health System Redesign

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Background and Objectives: Involvement of patients in healthcare service design is increasingly recognized as a means of providing more patient-centered care. However, few studies explore strategies to build patient decision-making capacity or evaluate patient involvement in service design processes. The objectives of this study were to describe how patient and family advocates (PFAs) were engaged in the planning stages of Ontario Health Teams (OHTs) and understand the facilitators and challenges associated with including PFAs in healthcare service redesign.

Approach: 125 semi-structured interviews were conducted with PFAs and non-PFAs from 12 purposefully sampled OHTs. Participants were asked about their experience in the development of OHTs. Interview transcripts were coded using inductive thematic analysis using NVivo 12.

Results: Most PFAs were engaged early in the OHT process, either in consultative roles, through focus groups, town halls, and social media, or in leadership roles, which included representation on councils and voting power. Training and education on jargon, models of care, and funding enabled PFAs to effectively participate in committee meetings and in decision-making. Participating in decision-making empowered PFAs and elicited feelings of equal partnership. Non-PFAs felt that PFAs were essential in providing unfiltered and rich perspectives through personal narratives and experience, and ensured that ‘the patient’ was always at the centre of OHT work. Participants shared concern over how and whether PFAs should be compensated, expected time commitments, and the ideal amount of training PFAs should receive.

Conclusion: Understanding PFA engagement in OHT development and exploring the associated challenges can help inform and prioritize positive and sustainable engagement and capacity-building strategies as OHTs evolve and mature. Training and compensation considerations are required to ensure PFAs are able to fully participate in decision-making structures.

Primary Theme: Patient and Public Engagement

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

AuthorNames: Shannon Sibbald, Gayathri Embuldeniya, Walter Wodchis, Kristina Kokorelias

ID: 349

Factors associated with the mental health of Canadians with pre-existing conditions during the COVID-19 pandemic – an ordered logistic regression and Monte Carlo simulation

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Background and Objectives: While some work has been done to understand the impacts of COVID-19 on the mental health of individuals with pre-existing conditions, there are still many unknowns related to what characteristics may mitigate or exacerbate its mental health toll.

Approach: Using ordered logistic regression models and a Monte Carlo simulation, we analyzed survey data collected from 13,487 Canadians with long-term conditions or disabilities by Statistics Canada in late June to early July 2020. The study aimed to understand what characteristics influenced whether individuals' mental health was worse, better, or stayed the same after COVID-19. Characteristics included in the model were financial vulnerability, changes in income, changes in access to medical services, gender, age, household composition, physical disability, province or region, and rurality.

Results: Regression results revealed that the greatest odds of worsened mental health were among those whose access to needed medical services was impacted (OR = 1.54, p =

Conclusion: This study adds important knowledge about the impact of COVID-19 on the mental health of people living with long-term conditions or disabilities in the Canadian context. The relative resilience of Quebec residents, those aged 50+, and rural/remote dwellers is of note, and warrants further exploration in future research.

Primary Theme: Mental Health and Addictions

Secondary Theme: COVID-19

Methods: Statistics/ Econometrics

AuthorNames: Donna Plett, Audrey Laporte, Nicolas Iragorri

ID: 350

Coping Strategies Used by Patients in Regard of Telehealth Services offered in Family Medicine Clinics During the First Wave of COVID-19 Pandemic

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Background and Objectives: During the COVID-19 pandemic, Québec (Canada) Public Health Agency asked family medicine clinics (FMCs) to prioritize telehealth. Despite its many positive effects, telehealth can have negative outcomes on patients. Telehealth interventions may increase stress and anxiety among patients with physical and mental chronic conditions (PCDs) or decrease patient-centered care. This study aims to explore how PCDs coped with their needs through telehealth services in FMCs during the first wave of COVID-19 pandemic.

Approach: We conducted an exploratory qualitative descriptive study in six FMCs from three regions (metropolitan, semi-urban and rural) of the province of Québec, Canada. We used semi-structured interviews to reach 40 PCDs related to a previous research project. From their perspective, we explored their satisfaction with telehealth services in FMCs, their needs and emerging coping strategies related to self-care. We also investigated appointments frequency in primary care services. We used the transactional theory of stress and coping to inform the data collection and analysis, and the COREQ appraisal grid to report the project rigor and method.

Results: All PCDs who experienced telehealth intervention were satisfied. They mentioned having an easy and quick access to their family physician or other health care professionals. PCDs appreciated telehealth and perceived that the accessibility was increased. According to them, telehealth was less appropriate for follow-ups with social workers or professionals with whom no trust relationship had been previously established. Also, several PCDs mentioned having visited primary care settings less during the pandemic than before, as most of them tried to cope on their own before getting an appointment. PCDs developed coping strategies primarily aimed at maintaining their health status, while some of them aimed to reduce stress. Consistent with the transactional model, many participants demonstrated the use of strategies that promote resilience in a pandemic context.

Conclusion: PCDs appreciate telehealth but believe it requires improvements better adapted for a follow up context. PCDs adopted coping strategies to face the pandemic but some were not optimal for their health. Combined with pandemic side-effects, this could lead to a negative impact on PCDs' health status and self-management abilities.

Primary Theme: Primary Healthcare

Secondary Theme: COVID-19

Methods: Qualitative Research Methods

AuthorNames: Caroline Cormier, Marie-Eve Poitras, Yves Couturier, Mélissa Lavoie, Vanessa Vaillancourt, Bouchard Noémie, Megan Pepin, Jessica Bernier, Monica McGraw, Mohamed Ag Ali Ahmed, Gilles Gauthier, Marie-Dominique Poirier, Emmanuelle Doucet

ID: 351
Diabetes self-management and homelessness: Using concept mapping to understand and prioritize challenges

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Background and Objectives: Diabetes is a chronic medical condition which demands that patients engage in self-management to achieve optimal glycemic control and avoid severe complications. Individuals who have diabetes and are experiencing homelessness are more likely to have chronic hyperglycemia and adverse outcomes. Our objective was to collaborate with individuals experiencing homelessness and care providers to understand the barriers they face in managing diabetes, as a first step in identifying solutions for enhancing diabetes management in this population.

Approach: We recruited individuals with lived experience of homelessness and diabetes (i.e. clients; n=32) from Toronto and health and social care providers working in the areas of diabetes and/or homelessness (i.e. providers; n=27) from across Canada. We used concept mapping, a participatory research method, to engage participants in brainstorming barriers to diabetes management, which were subsequently categorized into clusters, using the Concept Systems Global MAX software, and rated based on their perceived impact on diabetes management. The ratings were standardized for each participant group, and the average cluster ratings for the clients and providers were compared using t-tests.

Results: The brainstorming identified 43 unique barriers to diabetes management. The clients' map featured 9 clusters of barriers: Challenges to getting healthy food, Inadequate income, Navigating services, Not having a place of your own, Relationships with professionals, Diabetes education, Emotional wellbeing, Competing priorities, and Weather-related issues. The providers' map had 7 clusters: Access to healthy food, Dietary choices in the context of homelessness, Limited finances, Lack of stable, private housing, Navigating the health and social sectors, Emotional distress and competing priorities, and Mental health and addictions. The highest rated clusters were Challenges to getting healthy food (clients) and Mental health and addictions (providers). Challenges to getting healthy food was rated significantly higher by clients (p=0.01) and Competing priorities was rated significantly higher by providers (p=0.03).

Conclusion: Experiencing homelessness poses numerous barriers to managing diabetes, the greatest of which according to clients, are challenges to getting healthy food. This study showed that the way clients and providers perceive these barriers differs considerably, which highlights the importance of including clients' insights when assessing needs and designing effective solutions.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Chronic Disease Management

Methods: Emerging Methods (e.g. new developments in observational study design)

AuthorNames: Eshleen Grewal, David Campbell, Rachel Campbell, Gillian Booth, Kerry McBrien, Stephen Hwang, Patricia O'Campo

ID: 353

Foundations, functions, and current state of collaborative leadership: a case of newly developing integrated care in Ontario, Canada

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Background and Objectives: The Ontario Government recently introduced Ontario Health Teams (OHTs), composed of health and social organizations, mandated to collaborate and integrate care for target populations within defined regions. This therefore requires collaborative leadership that builds trust and distributes accountability, power, and funding across organizational boundaries. Accordingly, leadership should be peer-driven and include patients, communities, and frontline workers as well as health administrators. This study describes how leadership was conceptualized, executed, and its effectiveness across OHTs.

Approach: This mixed-methods case study used surveys and interviews. In-depth interviews were conducted with individuals from a sample of 12 OHTs (n=109). Participants were asked to describe how OHT initiatives were formulated and how different constituents came together to create them. A universal deductive coding scheme was created for analysis of interview transcripts. Across 30 OHTs, 480 participants responded to the survey (response rate = 63%). The 42-item survey covered several domains of capacity and capabilities for integrated care.

Results: Collaborative leadership was required to facilitate shared approaches, visions, and goals. OHTs' mandate to collaborate resulted in informal working agreements and consensus-based decision-making models. Participants considered trust an essential component of collaborative leadership but described different stages of trust within their respective OHTs. Those who felt trust was present during initial OHT development were wary that it may be challenged by increasingly complex problems during implementation. Some participants expressed concern that choosing a 'lead organization' within OHTs may hinder collaborative leadership. Others struggled to agree on how lead organizations are determined. Leadership strategies, including breaking members into working groups, gave smaller stakeholder groups an equal voice. Time constraints were a major barrier to a truly collaborative approach, resulting in fewer community consultations and feedback opportunities.

Conclusion: Collaborative leadership was commonly found across OHTs, but approaches and leadership structures varied by context (e.g. history of collaboration, existing infrastructure, etc.). Most participants felt their leadership had established trust and highlighted its importance. As OHTs mature, leadership models must adjust to maintain trust and collaboration between all partners.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Mixed Methods

AuthorNames: Shannon Sibbald, Gayathri Embuldeniya, Walter Wodchis, Jennifer Gutberg, Ruth Hall

ID: 354
Review of digital tools used by professionals to support care integration

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Background and Objectives: There is a consensus that an integrated approach to care can contribute to reduce the current fragmentation of care, leading to better performance, care quality and patient satisfaction. Digital tools can contribute to support care integration as shown during the current pandemic, but little is known on how they are used between care organizations at the regional level. This project maps and presents the digital tools used to support regional care integration.

Approach: This scoping reviews looks at peer-reviewed literature on the use of digital tools published during the last 10 years about digital tools used in the OECD countries. The search was made on the PubMed, EMBASE and Scopus databases using keywords related to eHealth and to integrated care are used as well as their associated MeSH terms. Selected papers are related to digital tools used by healthcare professionals to support care integration across the care continuum at the regional level. Included papers look at integration initiatives between at least two care organizations at a regional level.

Results: The results of this review provide an assessment of the types of digital tools used in healthcare organizations at the regional level, as well as how they support care integration between the stakeholders. The tools are categorized according to the type of function they offer, on whether or not they enable patient collaboration, as well as according to how they contribute to care coordination. Their contribution to integration can range from simple e-Referrals between professionals, to full exchange of information about a patient, his diagnosis, care notes, care protocols and medication. The current pandemic contributed to a growing interest and use of digital tools especially to support better access and created a favourable environment for the adoption digital tools by professionals.

Conclusion: The current pandemic shows the need of integrated care and the potential of digital tools to support this aim. The result from this research can act as a guide for policy makers as well as public and private actors in building a foundation for integrated care throughout Canada.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Informatics

Methods: Knowledge Synthesis

AuthorNames: Jonathan Lapointe, Aude Motulsky, Jean-Louis Denis

ID: 355

Development and Testing of an Electronic Clinical Quality Measure (eCQM) to Report the Risk-Standardized Postoperative Respiratory Depression Rate after Total Joint Arthroplasty

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Background and Objectives: Postoperative respiratory depression is a serious event that places patients at risk for hypoxia, anoxia, severe brain damage, cardiac arrest, and death. Key challenges to accurate and comparable measurement are lack of a universal definition, variability in measurement approaches, and heterogeneous populations. The objective of this work was to develop and test an electronic clinical quality measure (eCQM) that reports the inpatient respiratory depression rate following total hip arthroplasty (THA) and total knee arthroplasty (TKA).

Approach: Measure specifications were informed by a review of the literature, existing clinical quality measures as well as those under development, and consultations with a technical expert panel. Respiratory depression was measured using information routinely documented in electronic health records (EHR): respiratory depression-related diagnoses (e.g., hypoxemia) or respiratory failure; mechanical ventilation or intubation procedure codes; and oxygen saturation (i.e., SP02) levels. Testing was conducted using data captured in the Mass General Brigham (MGB) EHR. The percentage of patients who experienced postoperative respiratory depression during the inpatient stay was calculated (unadjusted and risk-standardized), overall and stratified by clinician group.

Results: At MGB, 16,474 patients received an inpatient elective primary THA or TKA in 2016-2019 and were included for measure testing. Most patients were white (90%), female (58%), over the age of 65 years (58%) and spoke English as their primary language (96%). Overall, 545 patients experienced respiratory depression during the inpatient stay for an unadjusted rate of 3.3%. Respiratory depression was identified based on documented diagnostic or procedure codes for 252 patients. An additional 293 patients (~50% of cases) were identified using documented oxygen saturation levels. There were 6 orthopedic clinician groups at MGB, and inpatient respiratory depression rates ranged from 2.5 to 6.7% (unadjusted). The overall risk-standardized inpatient respiratory depression rate at MGB was 2.7% with clinician-group rates ranging from 2.3 to 3.7%.

Conclusion: Development of this eCQM addressed challenges associated with measurement of respiratory depression by leveraging data elements (specifically vital signs) routinely documented in EHRs but not available in administrative health data. This approach allowed for more accurate estimates of respiratory depression and fair comparisons of performance between orthopedic clinician groups.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Informatics

Methods: Data Mining/Big Data Analytics

AuthorNames: Ania Syrowatka, Avery Pullman, Woongki Kim, Michael Sainlaire, Tien Thai, Wenyu Song, Troy Li, Alexandra Businger, David W Bates, Patricia C Dykes, Stuart R Lipsitz

ID: 359
How Nationalism is Undercutting Global Access to a COVID-19 Vaccine

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Background and Objectives: COVID-19 is fomenting dangerous trends in some countries, including protectionism, nationalism, and xenophobia. All which presents imminent dangers to achieving global health equity. The presence of certain containment policies, each having their degree of “coerciveness and scope,” are undercutting collective gains that we desperately need. This study aims to examine the politicization of COVID-19 vaccines, with a focus on the United States and China, and analyze how nationalism is affecting global vaccine access.

Approach: A thematic content analysis of media reporting on COVID-19 vaccines will be conducted. A systematic search of news articles will be carried out using the following databases: 1) US Newsstand, 2) Factiva and 3) LexisNexis and individual websites of major US news media. English and Chinese articles published between March 11, 2020, and January 20, 2021, related to US-sponsored or Chinese sponsored vaccines will be retrieved. Additional sources from Chinese Databases like CNKI and individual websites of major Chinese newspapers may be used. NVivo will be used to conduct a thematic analysis of data from collected articles.

Results: Efforts to address COVID-19 demand collective action so that individual countries do not act in their own interest but rather in the interest of a global community. Vaccine nationalism or a ‘my-nation-first’ approach to the discovery and deployment of vaccines present a threat to global cooperation. In short, we have found that vaccine competition amongst countries has hindered efforts for global cooperation in the fight against the pandemic.

Conclusion: Through examination of the United States and China, we illuminate how nationalism has filtered into vaccine policy. Shifts towards global cooperation and advancement of more trust between countries is critical. To achieve this, countries will need to consider how cooperating to serve the collective good is beneficial for national interests.

Primary Theme: COVID-19

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

AuthorNames: Andrea He, jillian Kohler

ID: 362

Canadian Veteran health and health services use in the five-years following release: a matched retrospective cohort study using routinely collected data

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Background and Objectives: Military Veterans may experience different chronic disease burden and use health services differently than non-Veterans as a result of their occupational experiences. Research comparing the health of Veterans and civilians is often complicated by the healthy worker effect. Therefore, the objective of this study was compare the physical health and health services use of Canadian Veterans living in Ontario to civilians using multiple matched cohorts to account for selection bias.

Approach: We employed a retrospective, matched cohort design using administrative health data held at ICES. Sociodemographic, hospitalization, emergency department, physician billing and home care data were linked. Veteran status was identified from provincial health insurance application forms. Civilian cohorts were selected 4:1 based on age and sex; age, sex, geography; and from those most likely to be employed during the military service time frame. Outcomes included the prevalence of chronic diseases (e.g., diabetes, hypertension) and the use of publicly funded health services (e.g., yes/no use and rates). Comparisons were made using multivariable logistic, Poisson, and modified Poisson

Results: 31,760 Veterans were included. Veterans had a significantly lower prevalence of all measured chronic diseases than the general population. Veterans were more likely to have a primary care visit or a specialist visit than the general population. Veterans were as likely as the general population to have at least one visit to the ED, a hospital admission or to receive homecare. Veterans had a slightly higher relative rate of primary care physician visits, specialist physician visits, and ED visits, than the general population. Hospitalization and home care rates were similar. Relationships were consistent for male and female Veterans. Results were robust across the three comparator cohorts.

Conclusion: Canadian Veterans are less likely to experience many common chronic illnesses than the general population. After adjusting for differences in health, Veterans are more likely to use health services. Differences in health related to military service, such as disability, hearing loss, or musculoskeletal injuries need to be investigated.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Chronic Disease Management

Methods: Healthcare Service or Policy Initiative

AuthorNames: Alyson Mahar, Kate St Cyr, Alice Aiken, Marlo Whitehead, Heidi Cramm, Paul Kurdyak

ID: 363
Exploring TiC among patients with cancer: A scoping review

Background and Objectives: Transitions in care (TiC), are patient transfers between providers/institutions, that compromise safety of care, decrease patient satisfaction, and lead to excessive cost. Patients with cancer often require complex multimodal treatment, increasing the number of TiC. However, there remains a paucity of evidence regarding TiC among patients with cancer. Our objective is to systematically map and characterize existing literature on TiC among patients with cancer utilising scoping review methodology.

Approach: This scoping review followed the PRISMA-ScR and Joanna Briggs Institute methodology. The PubMed cancer filter and underlying search strategy for the cancer was tailored to each database utilized. Title, abstracts, and full text manuscripts were screened for eligibility in duplicate by two independent reviewers. Studies describing TiC among adult patients with cancer at any stage of their cancer journey were included. A standardized data abstraction form was used to abstract data by two independent reviewers. Descriptive statistics were used to summarize evidence, study characteristics and quantitative data. A narrative synthesis of evidence sources was used to further describe the findings.

Results: We identified and screened 18388 unique references. After title/abstract screening we identified 1455 articles for full-text review. Preliminary analysis of 110 articles found evidence on TiC among several types of cancer: non distinct (n=62), breast (n=9), colorectal (n=7), head and neck (n=6), lung (n=5) and gynecological (n=3). The topics addressed in these evidence sources include: supportive care (n=36), supportive care needs (n=11), continuity of care (n=7), and sources of distress (n=3).TiC topics include TiC between institutions/providers (n=7), active to survivorship care (n=4), active to palliative care (n=7), pre to post treatment (n=2) and primary care to oncology (n=1) .

Conclusion: This scoping review will describe the existing evidence around TiC and gaps in literature. The findings will inform a larger mixed-methods study consisting of a retrospective cohort study, quantitative surveys, qualitative interviews and a modified Delphi process.

Primary Theme: Cancer

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Qualitative Research Methods

AuthorNames: Jaling Kersen, Joseph Dort, Shamir Chandarana, Rosemary Twomey, Khara Sauro

ID: 364

Linking Vulnerable Older Adults to Health and Support Services: The Role of Collaborative Partnerships between Social Housing Providers and Health Service Agencies

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Background and Objectives: Housing is an important determinant of health; however, 25% of Canadian older adults have a core housing need. Social housing programs are one opportunity to support low-income seniors, but the lack of integration between housing and health services makes it difficult for older tenants to access needed supports, negatively impacting their ability to age at home. We examined barriers and facilitators health service agencies face providing on-site services to support older tenants.

Approach: We conducted semi-structured interviews and focus groups with older tenants (n=58) and health and social service professionals (n=58) that support older tenants through community programs. Tenant interviews explored the types of services they wanted to see in their buildings and how they wanted to access them. Interviews with professionals examined their experiences supporting older tenants, including the barriers and facilitators they faced providing on-site services. Following these interviews, we hosted a half-day consultation with service providers (n=74) to identify strategies to enhance access to health and support services for older adults living in the buildings.

Results: Participants recognised the need for on-site health services to support aging in place, and an on-site community hub model was suggested as the best way to facilitate access to services. Service providers indicated there was no mechanism to identify vulnerable tenants who needed supports, and they relied on inconsistent referrals from housing staff. Service providers identified a number of other challenges offering on-site services, including a lack of coordination between partner agencies offering duplicative services in the building, inconsistent 'red tape' for establishing formal agreements with the landlord, ineffective partnerships with on-site housing staff, and conflicting practices and regulations between housing and health. Tenants and service providers also highlighted several safety concerns within the buildings that negatively impacted access to services.

Conclusion: Findings highlight the need for more effective integration of housing and health services, including simplified processes for establishing partnerships with service agencies and more opportunities for communication and collaboration with housing staff, to ensure that services are reaching the most vulnerable tenants.

Primary Theme: Collaborative Healthcare Improvement Partnerships

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Qualitative Research Methods

AuthorNames: Christine Sheppard, Sander Hitzig, Andrea Austen, Sarah Gould, Jorge Rios, Meena Bhardwaj, Emma Helfand-Green, Vanessa Campisi, Paloma Millones

ID: 366
Trends in Acute Mental Health Service Use After the COVID-19 Pandemic in Ontario, Canada.

Background and Objectives: There has been widespread concern about the mental health consequences of the COVID-19 pandemic. The degree to which the heightened distress associated with the COVID-19 pandemic translates into increased demand for mental health and addictions-related services is unknown. The objective of this study was to describe trends in acute mental health and addictions-related service use prior to and following the onset of the pandemic (March, 2020).

Approach: In this population-based, repeated cross-sectional study, we included all individuals between the ages of 0 and 105 years living in Ontario between January 1, 2019, and June 20, 2020 for hospitalizations, and between January 1, 2019 and August 31, 2020 for Emergency Department (ED) visits and ED visits for intentional self-harm. For hospitalizations and ED visits, we also stratified our analyses by age and diagnostic categories. For ED visits for intentional self-harm, we also measured the proportion of those visits that were hospitalized and that were admitted to the intensive care unit (ICU) or died during the ED visit.

Results: There was a noticeable drop in ED visits, hospitalizations and ED visits for intentional self-harm. Overall, the rates of ED visits, hospitalizations and ED visits for intentional self-harm returned to near pre-pandemic levels by June 2020 (hospitalizations) and by August 2020 (ED visits and ED visits for intentional self-harm). For ED visits and hospitalizations, transitional-age youth (16-24 years old) had not returned to pre-pandemic levels by the end of the study period. For both ED visits and hospitalizations, mood disorder-related and trauma and stressor-related visits had not returned to pre-pandemic levels. For ED visits for intentional self-harm, the proportion of ED visits admitted or transferred to the ICU or died was lower than pre-pandemic.

Conclusion: We found that rates of acute mental health service utilization had reached pre-pandemic levels, but not exceeded, pre-pandemic levels post-pandemic. The severity of ED visits for intentional self-harm was lower post-pandemic. Acute mental health service utilization should be continuously monitored to understand the mental health consequences of the COVID-19 pandemic.

Primary Theme: Mental Health and Addictions

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Economic Analysis or Evaluation

AuthorNames: Paul Kurdyak, Natasha Saunders, Alene Toulany, Bhumika Deb, Rachel Strauss, Anjie Huang, Kinwah Fung, Simon Chen

ID: 368

Factors influencing utilization of public healthcare and social services in the last year of life in Canada: a mixed methods systematic review protocol

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Background and Objectives: Healthcare use at the end of life is under scrutiny as the number of adults aged 65 years and over grows rapidly with an increasing healthcare utilization during this period. The care of patients is evolving from a management model strongly related to the pathology to a model accounting for multiple social, economical, political, and environmental factors. Thus, the objective of this review is to identify factors influencing healthcare utilization at the end of life.

Approach: We conducted a systematic review in accordance with the JBI methodology for mixed methods. An initial limited search of PubMED was undertaken to identify relevant index terms and develop a full search strategy for MEDLINE, PsychINFO, CINAHL, SocINDEX and ASSIA, from inception to July 24th, 2019. Relevant journals and reviews were searched for additional reports and studies. Qualitative, mixed and quantitative empirical and observational studies reporting an association between any factors and health care received by older adults were included. The protocol was registered with PROSPERO (CRD42019147245).

Results: After duplicate removal, 6 622 papers were identified. After titles and abstract and full texts screening against the inclusion criteria (patients' age, identification of influencing factor(s) and influenced resources …), by two independent reviewers, 909 papers were included. Among them, 97 reported results originating from Canadian databases and were selected for preliminary analysis. Factors reported as potentially influencing healthcare utilization included patients-related (such as age, sex, the marital or the socio-economic status, the presence of advance directives), but also health system-related (hospital characteristics, the composition or the experience of the medical team, the communication between team members) and structural factors (culture and policy).

Conclusion: Preliminary results suggest that a broad spectrum of contextual factors influence the utilization of healthcare services at the end of life. In order to improve the quality of life of those older adults and tailor services to their needs, it becomes increasingly important to take those factors into consideration.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Synthesis

AuthorNames: Sebastien Barbat, Delphine Bosson-Rieutort, Nevena Veljanovic, Juliette Duc

ID: 369

Language Barriers among Seniors Living in Toronto’s Social Housing: Current Challenges and Policy Options

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Background and Objectives: Seniors living in Toronto Community Housing (TCH)’s social housing are from diverse backgrounds. Nearly half of the tenants in TCH’s seniors-designated buildings speak a language other than English. This paper explores the main language barriers experienced by tenants and their implications on accessing support to age in place. It aims to inform the work of the City of Toronto on implementing a newly-developed housing services model to integrate housing and health services for senior tenants.

Approach: Qualitative interviews were conducted with 58 senior tenants (aged 59+) living in 26 different TCH buildings and 58 practitioners representing 17 different programs that support seniors living in TCH. The qualitative data was collected through in-person and telephone interviews and focus groups between November 2019 and February 2020. The interviews and focus groups with senior tenants were conducted in English, Cantonese, Mandarin, or Tamil. The research team analyzed transcribed, translated data using thematic analysis strategies to identify themes and patterns that reflect the commonalities and differences in participant experiences.

Results: Research participants shared their views on the need for improving communication supports for senior tenants with limited English proficiency (LEP). Four main issues regarding language barriers were identified. First, tenants with LEP faced barriers to access the information about their buildings and available resources. Second, tenants with LEP faced difficulties communicating with housing staff and health service providers. Third, tenants with LEP experienced additional challenges in managing tenancy issues. Fourth, language barriers had significant implications on tenants’ housing, living, and health conditions. Many tenants reported feeling frustrated, excluded, and disempowered and raised concerns about safety as they could not understand announcements and notices around the buildings. Language barriers also made it difficult for senior tenants with LEP to access health care or other community supports.

Conclusion: To address language barriers faced by senior tenants, more proactive and accessible communication support is required. This paper focuses on five areas for improvement: i) understanding of implications of language barriers; ii) language data collection and utilization; iii) written/verbal communication in accessible languages; iv) staff training; and v) tenant education.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Qualitative Research Methods

AuthorNames: Seong-gee Um, Brenda Roche, Christine Sheppard, Andrea Austen, Sarah Gould, Sander Hitzig

ID: 371
Building Capacity for E-Mental Health Implementation: Case Scenarios & FAQs Resource

Background and Objectives: E-Mental Health (E-MH) or virtual care are services delivered through the Internet and related technologies. The process of integrating E-MH as a routine health care tool faces can be very complex. To support the uptake of E-MH, the MHCC released the E-MH Toolkit, which presents best and promising resources on how to successfully implement E-MH into practice, as well as practical Case Scenarios and FAQs for people looking to implement virtual care.

Approach: The MHCC partnered with Dr. Lori Wozney and the IWK Health Centre in Halifax, NS to undertake the development of the Case Scenarios and FAQs. Following from work completed on the Implementation Toolkit, the team undertook stakeholder consultations, data gathering, and toolkit mapping; sought out additional resources; and completed a journey mapping exercise to ensure these resources were practical, appropriate and promoted practice change.

Results: Through the processed described above, nine E-MH case scenarios were developed on the following topics: mood monitor for depression, stepped care for integration, social media for prevention, privacy guidelines, teletherapy, peer support, teleconsult, clinical practice and self harm. These case scenarios are all interactive and include objectives, background, reflections, key considerations and linked resources. Ten implementation FAQs for leaders were also developed and include the top ten questions leaders should ask themselves to advance E-MH, including how to select tools, manage risk and promote equity. Each FAQ includes background, key information and/or actions, and tools and resources. These resources are available on the MHCC website.

Conclusion: More virtual care implementation tools and practical resources for healthcare providers and change makers are needed. By providing evidence-informed implementation resources, providers may be better-equipped to implement and adopt E-MH, which can help to create greater access to mental health services.

Primary Theme: Mental Health and Addictions

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Healthcare Service or Policy Initiative

AuthorNames: Danielle Impey, Kelsey Kavic, Lori Wozney

ID: 372
Transforming continuing care in Alberta

Background and Objectives: Alberta was one of the first Canadian provinces to undergo significant province-wide policy reform in the Continuing Care (CC) system. One of the main outcomes of this reform is the shift from long-term care (LTC) to designated supported living (DSL) beds over the last decade. In this paper, we discuss the reform of the Alberta's continuing care system, using administrative data to highlight the way it affected health outcomes in CC residents.

Approach: We used descriptive statistics to summarize demographics, health-related characteristics, and healthcare utilization in CC clients, by level of care, using administrative data collected in the 2015-2016 fiscal year. These levels of care are: LTC, DSL (further categorized in DSL3, DSL4 and DSL4D), non-DSL and home living. We compared the likelihoods of emergency department (ED) visits and hospital admissions in these cohorts, using Cox proportional modeling. Further, we discussed these results in the light of policies that were adopted in the past decade in the province.

Results: The analysis by care setting of the client cohorts' demographic and health related characteristics confirmed that long-term (LTC) clients had highest complexity and needs in all important measures among all levels of care. Compared to LTC clients, clients living at home had double the risk of visiting the ED (HR=1.9 with 95%CI: 1.9-2.09 and HR=2.08 with 95% CI:1.98-2.19, respectively) and being hospitalized (HR=2.03 with 95% CI:1.90-2.17). DSL clients had an increased risk of visiting the ED and/or and being hospitalized when compared to LTC clients, but at a lower order of magnitude. When interpreting these results, the proportion of "do-not-resuscitate" vs. "do-not-hospitalize" orders in various CC settings, as well as negative financial incentives for LTC operators should be taken into account.

Conclusion: The establishment of DSL/NDSL facilities has created a level of care for a distinct population that would have otherwise resided in LTC. The higher likelihood of ED visits and hospitalizations in DSL clients versus LTC clients reflect differences in services available, but also personal preferences and operational restrictions.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Knowledge Synthesis

AuthorNames: Monica Cepoiu-Martin, Max Jajszczok , Jeff Poss, Alexei Potapov

ID: 373
Directly-Funded Care Programs in Canada

Background and Objectives: Directly-funded (DF) home care provides clients and carers with cash or a budget to arrange their own services. DF programs were initially targeted at young adults with disabilities, but are increasingly growing in scope and size to serve older adults and their carers. Our report describes 20 DF care programs across the country, synthesizes and summarizes key features of the programs, and provides seven recommendations for the development and evolution of DF care in Canada.

Approach: From August 2017 to April 2018, we conducted a national environmental scan to identify and collect information on DF programs available in the public domain, including provincial health websites, policy documents, and departmental and consultant reports. Data for each program was collated into a partially-completed standardized questionnaire. We then identified 23 key informants, comprised of people working in, administering, or overseeing each DF program, and had them correct and complete the questionnaire based on expert knowledge. Key informants also participated in semi-structured confirmation interviews to further verify the questionnaire data, and discuss program history and regional issues.

Results: There were 20 DF programs across the country in 2017-18 (this has since grown to at least 21). DF has three main purposes: home care for support with the activities of daily living, individualized funding for people with intellectual disabilities, and respite for unpaid caregivers. Half of the DF programs focus on individualized funding or respite, and half are aimed at home care or a combination of purposes. Each jurisdiction has variable policy responses linked to hiring and paying family members, and whether clients may purchase agency services or must hire their own workers. The majority of jurisdictions indicated policy movement aimed at growing or expanding DF home care to increasingly serve the needs of older adults and their families.

Conclusion: We provide seven broad recommendations for the development and evolution of DF in Canada. We caution that careful planning is needed to ensure DF programs and policies support clients across the care continuum, while also attending to the local context and the concerns of families and workers.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

AuthorNames: Lisette Dansereau, Christine Kelly, Kevin Balkaran, Katie Aubrecht, Mary Jean Hande, Elizabeth Tingey, Allison Williams

ID: 376

Patient, Family, and Caregiver Engagement in Policy for Primary Health Care Teams Integration

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Background and Objectives: This patient-oriented research study is being carried out in British Columbia (BC), Alberta (AB), and Ontario (ON) to improve health services integration for patients with two or more chronic health conditions. Our main objectives are to understand if and how patients, family members or their caregivers are involved in building, applying and evaluating policies related to primary health care (PHC) teams, and to develop recommendations and actions to support integration through PHC team-based care.

Approach: Data are being collected using semi-structured interviews and deliberative dialogue (DD) sessions with the patient-participants. In interviews, participants were asked to share their views and experiences as a patient, caregiver or family member in planning, implementing, and evaluating policies for PHC teams. Following interviews, online DD sessions are being conducted in each province to co-create actions for engaging patients and caregivers in policy activities. Following the completion of all study activities, a virtual national knowledge translation event will be completed with patients, researchers, policymakers, decision-makers, and providers to disseminate results and gather feedback on and finalize recommendations.

Results: We will present key themes identified from patient-participant interviews. Barriers and enablers to participation in policy will also be presented. The interview findings formed the basis of knowledge synthesis for the DD sessions. In the DD sessions, patient participants will be asked to co-create actions and strategies to enhance patients, family members, and caregivers' engagement throughout the policy process related to PHC teams and integrated services delivery. These actions and strategies will be shared.

Conclusion: An in-depth understanding of how patients, caregivers or family members want to be engaged in policy development, implementation, and evaluation will guide policymakers in increasing patient engagement in such activities. Furthermore, the study results have the potential to improve health outcomes.

Primary Theme: Primary Healthcare

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Qualitative Research Methods

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ID: 380
COVID-19 Vaccines and Corruption Risks: Preventing Corruption in the Manufacture, Allocation and Distribution of Vaccines

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Background and Objectives: The COVID-19 pandemic has been met with urgent, multilateral, global health efforts in the pharmaceutical sector. In November 2020, numerous vaccine candidates were granted approval under exceptional circumstances. A critical response is required of governments to ensure equitable access to the procurement of safe and effective COVID-19 vaccines, while reducing corruption risks which threaten public health goals. This policy paper identifies potential corruption risks in the deployment of a COVID-19 vaccine and innovative mitigation strategies.

Approach: This paper identifies vulnerabilities in the manufacture, allocation and distribution of vaccines, and outlines innovative strategies and response measures to curb corruption. Immediate domestic response measures and long-term response measures are informed by the United Nations Convention against Corruption, which provides a solid global framework for tackling corruption in global health systems. Some immediate domestic response measures include; specialized committees to oversee emergency funds and vaccine deployment, secure storage and distribution systems to mitigate corruption risks, and upholding the right to health. Some long-term response measures include; strengthening anti-corruption laws and policies, and identifying and protecting vulnerable individuals and communities.

Results: Corruption poses multifarious challenges to the implementation of fair and successful COVID-19 vaccination programmes, particularly considering the necessity for robust supply systems with increased opportunities for exploitation and interference throughout the vaccine deployment process. Likelihood of corruption is exacerbated by limited vaccine supplies, incentivizing those with financial resources to bribe public health professionals, and medical personnel to engage in the act of theft and resale of detrimental supplies. This paper outlines corruption risks, which include; the entry of substandard and falsified vaccines into markets, theft of vaccines within the distribution systems, leakages in emergency funding designated for the development and distribution of vaccines, nepotism, favouritism, and corrupted procurement systems. These risks are particularly harmful to poor, marginalized and vulnerable groups.

Conclusion: Achieving public health goals through collective cooperation from various public organizations remains central to combatting corruption and effectively reducing the spread of COVID-19. It is critical to recognize vulnerabilities within the health system during exceptional times where overcapacities and unprecedented health needs result in the weakening of systems of accountability.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: COVID-19

Methods: Policy Case Study

AuthorNames: jillian Kohler

ID: 381
Stratégies numériques en santé : le profil des pays de l’OCDE

Background and Objectives: La santé numérique connait un essor depuis plusieurs années et représente un levier pour répondre aux besoins des populations et des systèmes de soins. Pour atteindre son plein potentiel, elle nécessite la mise en place des stratégies intégrées permettant d’encadrer le déploiement de technologies numériques en santé. Peu de pays ayant développé de telles stratégies, cette étude vise à explorer les stratégies numériques déployées dans les pays de l’OCDE ayant un système de santé universel.

Approach: L’approche scan environnemental est utilisée pour l’étude. Elle comprend une revue de la littérature grise et des sites gouvernementaux des pays de l’OCDE et des provinces du Canada ainsi que des entrevues avec des acteurs clés. Elle vise : 1) identifier les stratégies et politiques publiques de santé numérique développées dans les différentes juridictions 2) comparer les domaines d’action et les caractéristiques de ces stratégies. Le modèle du quadruple Aim visant l’optimisation des systèmes de santé, est retenu pour analyser et comparer les stratégies et politiques publiques.

Results: Les résultats préliminaires démontrent d’abord que le déploiement de la santé numérique est inégal à travers les pays et que peu de pays ont développé des stratégies intégrées ou des politiques publiques propres à la santé numérique. On constate aussi que même si certaines stratégies ont vu le jour, leur mise en application sur le plan pratique dans le système de santé est plus difficile et parfois peu documentée. La comparaison des stratégies met en évidence des conceptions et approches différentes à travers les juridictions. Si certaines stratégies s’articulent autour de la transformation humaine et sociale qui accompagne la digitalisation du système de santé et la place des patients et des usagers, d’autres sont surtout axées sur des aspects technologiques de gestion des données.

Conclusion: Le développement de stratégies numériques en santé reste embryonnaire et hétérogène entre les pays. Analyser et comparer les composantes de ces stratégies permet d’informer les parties prenantes et de formuler des recommandations pour l’élaboration de nouvelles politiques permettant d’accompagner et d’optimiser la digitalisation du système de santé universels.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Health Informatics

Methods: Program or Policy Evaluation

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ID: 382

Family physicians’ utilization patterns of a centralized waiting list to access specialized health services in Quebec: A realist evaluation.

Background and Objectives: A unique program for the management of demand for access to specialized care (Accès priorisé en soins spécialisés and Centres de répartition des demandes de services (APSS-CRDS)) was implemented in Quebec. It comprises centralized regional access points for processing requests and harmonized referral forms (HRF) for each specialty, defining homogeneous waiting groups according to clinical priority. We aim to describe how family physicians (FPs)’ APSS-CRDS utilization is influenced by intervention mechanisms and context.

Approach: We conducted a realist evaluation based on the middle-range theory for centralized waiting list developed by Breton et al. (2020). Hypothesized Context-Intervention-Mechanisms-Outcomes configurations (CIMO) were empirically tested from semi-structured interviews with 10 FPs in four Quebec regions. Data were analyzed thematically according to the 3 APSS-CRDS sequential components: Step 1) patient registration at the access point; Step 2) patient prioritization; and Step 3) patient assignment to specialists in the patient’s region. Analysis was conducted to construct recurring patterns of how Context influences Intervention processes or Mechanisms (referring physicians’ behaviours) to produce intended and unintended Outcomes.

Results: Step 1) Family physicians are accustomed to making referral decisions based on their evaluation of patient’s need for care. HRFs and recommended pre-requisites for referrals, although respectively lacking specificity and flexibility, did not seem to negatively interfere with FPs’ clinical judgement. Step 2) FPs had limited involvement in the development of the program’s prioritization scheme, but the opportunity to provide supplemental clinical information or to demand a change in priority levels was perceived as a fair process. Adhesion to referral and prioritization criteria was high: they were perceived as helpful to avoid unintended outcomes such as vertical or horizontal inequities in care access. Step 3) APSS-CRDS utilization by FPs is highly dependant on its uptake by specialists.

Conclusion: Identified program mechanisms in this evaluation contribute to the understanding of how a demand management program is received, interpreted in a specific context, and acted upon by the referring physicians. Decisions to design and implement similar programs in Canada should consider these mechanisms to foster FPs’ uptake and utilization.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Primary Healthcare

Methods: Qualitative Research Methods

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ID: 390
Using a mixed-method approach to investigate health equity in Northern Ontario

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Background and Objectives: The current climate in Ontario, Canada is one where access to health and social services, healthcare experience and health/social outcomes vary widely across the province. The existing health disparities in Ontario disproportionately affect those living in rural and northern areas. Current indicators used to measure this variability have been developed in the context of health systems in more densely populated areas and may not be relevant for more rural and remote geographic areas.

Approach: Using an exploratory sequential design, this study sought to develop and test a set of health equity indicators that reflect the realities of health opportunities in a Northern Ontario context. As a mixed-methods study, this investigation began with in-depth interviews with Northern Ontario health equity key informants. The resulting thematic analysis of interview transcripts was used to inform health equity indicator selection for the Northern Ontario health equity analysis. Data for the selected indicator reporting was obtained from the array of linked provincial health services data housed at ICES North.

Results: The thematic analysis revealed four health equity indicators of particular relevance to Northern Ontario. Such indicators included: infant mortality, overall mortality, perceived health status, and satisfaction of health care received. Interestingly, a significant portion of the ‘indicators’ referenced during the interviews would be more clearly defined as stratifiers, in fact 32% of the indicators extracted from the interview text were deemed to be ‘stratifiers’. Two stratifiers were identified as uniquely important to measuring health equity in Northern Ontario contexts. These two stratifiers included geographic position (rurality), as well as material welfare (income). Rurality and remoteness were captured by two alternate methods of census subdivision (CSD) indexing (SACType and Remoteness Index).

Conclusion: This novel mixed-methods approach to the development of a health equity measurement strategy proved to be a feasible and productive way to engage a broad reaching group of community stakeholders in indicator development. The emphasis on health equity stratifiers speaks to the underlying impact of the social determinants of health.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Mixed Methods

AuthorNames: Grace Scott, Jennifer Walker, Laura Rosella, Penny Sutcliffe, Cynthia Whissell

ID: 392
Changes in Canadian Guidelines for Conducting Budget Impact Analysis

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Background and Objectives: A thorough review and revision of the 2007 Budget Impact Analysis (BIA) Guidelines was undertaken by Patented Medicine Prices Review Board (PMPRB) to more closely align them with the current Canadian requirements and international approaches. With the new Guidelines and a streamlined Excel model template released in 2020, this presentation outlines the main changes and explain the reasoning behind the updates.

Approach: To inform the changes, the PMPRB undertook a systematic review of national and international BIA guidelines and best practices in collaboration with the Cornerstone Research Group. In addition, regulatory and public funding reviewers were surveyed to gather input on the main issues to be addressed: gaps and challenges in the former Guidelines, the time horizon, non-drug and condition-related costs, comparators, and multiple indications.

Results: The major updates to the Guidelines involve added flexibility in selecting the time horizon and new recommendations for the target population assessment, the consideration of compliance and persistence in the cost of treatments, evolving indications, and off-label comparators. Other modifications include a new Excel model, updated methods used in uncertainty analysis, and selecting relevant comparators.

Conclusion: The resulting enhanced methodology, as well as the increased transparency and consistency afforded by these revised Guidelines, will ensure that they continue to be a reliable and comprehensive reference for conducting BIAs in Canada.

Primary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Economic Analysis or Evaluation

AuthorNames: PMPRB CEPMB, Nevzeta Bosnic, Yvonne Zhang, Naghmeh Foroutan, Jeffrey Menzies

ID: 397
Weighing the burden of drug shortages on publicly insured Canadians

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Background and Objectives: Drug shortages are a growing concern in Canada and multiple monitoring and policy initiatives have been deployed in recent years to mitigate them. However, while there have been many anecdotal accounts of their effect on patients, the overall impact of drug shortages on Canadians is yet undocumented. Our research aims to provide new evidence on the strain from drug shortages by documenting the challenges to access they elicit for Canadian public plan beneficiaries.

Approach: The analysis pulls from prescription drug shortage reports from the Drug Shortages Canada website as well as data from public drug plans affiliated with the National Prescription Drug Utilization Information System initiative (NPDUIS) for the period of March 2017 to December 2019. Using this information, which accounts for approximately 8 million active beneficiaries, we document declines in monthly counts of active beneficiaries and claims during the reported shortages and characterize their potential impact on patients using descriptive statistics.

Results: Of the 7,895 shortages reported during the study period, 6,576 (83%) involved medicines reimbursed by the public plans represented in the NPDUIS data. A meaningful proportion of these shortages (39%) saw a >20% decline in the number of beneficiaries filing claims for the drug during the shortage relative to the preceding months. In total, a reduction of over 20 million claims was estimated for drugs impacted by shortages, of which nearly 375,000 were for single-source drugs with no direct substitute.

Conclusion: Drug shortages impede access to drugs for a considerable portion of the Canadian population, bringing potentially serious consequences for patient care and the health and well-being of Canadians.

Primary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Secondary Theme: Pharmaceutical Policy

Methods: Economic Analysis or Evaluation

AuthorNames: PMPRB CEPMB, Étienne Gaudette, Jeffrey Menzies

ID: 398

Health promotion in the healthcare environment: Examining a hospital retail food environment intervention using time series analysis over longer periods

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Background and Objectives: Healthcare food retail is an important setting within the broader consumer nutrition environment. Interventions within hospitals have been shown to influence purchasing behavior as well as dietary intake. Longitudinal designs have strengthened the evaluation of such interventions. However, most interventions have been studied over a relatively short period of time (typically

Approach: The intervention altered price, promotion and placement for five healthy and five less healthy snack items. The organizational point-of-sales system captured 66 weeks pre-intervention and 21 weeks during the intervention period, from April 2018 to December 2019 (total 87 weeks study period; intervention duration continued past the study period). We used an interrupted time-series analysis to analyze purchasing over time. The main outcome was proportion of healthy items purchased (units/week) relative to total units of food/beverages purchased. The secondary outcome was the proportion of less healthy items purchased relative to total units of food/beverages purchased.

Results: 2,829,322 total food/beverage items were purchased representing $7,319,04 dollars in total sales across all four retail sites. A healthy retailing intervention encompassing price, promotion, and placement of specific snack product items adopted at the healthcare organizational level in Nova Scotia had a negligible effect magnitude for the proportion of healthy items purchased relative to total units of food/beverages purchased. For less healthy items, however, we found an increase in purchases immediately following the onset of the intervention ($\beta 2 = 4.54e\text{-}02$) (p

Conclusion: Longitudinal study design has the potential to offer insight into the consumer nutrition environment literature, and illustrates how food environments within institutions can be shaped to be health promoting over longer periods of time. These results can be used by decision makers as they seek to improve food environments.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Collaborative Healthcare Improvement Partnerships

Methods: Program or Policy Evaluation

AuthorNames: Laura Kennedy, Catherine Mah, Emily Jago, Brenda MacDonald, Taylor Nicholson, Nathan G.A. Taylor

ID: 399
Development of an Equity and Diversity in Medicine Policy Platform

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Background and Objectives: In response to calls from membership and stakeholders, and in acknowledgement of momentum building nationally and internationally, the Canadian Medical Association (CMA) created its first Equity and Diversity in Medicine policy platform in 2019. The objective was to provide guidance to physicians and institutions by identifying a set of principles, commitments, and recommendations to promote equity and diversity in medicine in three key areas: medical education (trainees), medical professionalism (colleagues), and medical practice (patients).

Approach: In June 2019, a literature review and scan of relevant policy - legislative environments was conducted for the period 1980-2019 and a Background to Policy drafted. Informant interviews (internal and external stakeholders, partners) followed to support drafting of the Equity and Diversity in Medicine Policy. Review by targeted internal and external stakeholders and partners, and posting to the CMA website facilitated extensive feedback. The final policy and Statement on Equity and Diversity in Medicine were posted December 2019. To contribute to public conversation about racism in the Spring 2020, the policy was modestly revised following reevaluation by stakeholders and partners.

Results: The Equity and Diversity in Medicine policy platform produced: a) Background to Policy and Glossary of Terms in the three focal areas: education (recruitment, training, retention), work environment (discrimination, harassment, pay inequity, leadership), and patient care (access, provider diversity, language); b) Equity and Diversity in Medicine Policy providing Guiding Principles and Recommendations; and c) Statement on Equity and Diversity in Medicine summarizing Principles and outlining Key Commitments. Immediate impact: incorporation of equity and diversity as two of CMA's six Guiding Principles, their operationalization into two of CMA's six Strategic Opportunities in the 20-year strategic plan, Impact 2040; policy products used to encourage policy change in federal and provincial governments (e.g., highlighting inequities in COVID plans, informing federal advocacy initiatives).

Conclusion: CMA's inaugural Equity and Diversity in Medicine policy platform is intended to not only guide its membership but contribute to the national conversation. It follows in the association's 150-year tradition of driving positive social change in healthcare by advocating on key issues faced by its membership and their patients.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Healthcare Service or Policy Initiative

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ID: 401
Use of a Learning Health System Framework to Examine a Health System Response to COVID-19

Background and Objectives: COVID-19 has presented an unparalleled opportunity to explore how health systems adapt under rapid and constant change. Learning healthcare systems (LHSs) have been proposed as an ideal structure to inform a data-driven response to a public-health emergency like COVID-19. This structure is critical to accelerate the most up-to-date research into real-word practice. This project used a LHS lens to identify assets and opportunities in the initial COVID-19 planning and preparedness work at IWK Health.

Approach: Guided by an integrated knowledge translation approach, our mixed methods design examined data from a range of sources and involved iterative cycles of data collection, data confirmation and data analysis. Our team of clinicians, managers, researchers and administrators met to discuss project milestones, preliminary impressions, gaps in data collection and data analysis. The team worked together to identify health-system receptors and research-system supports relevant to the seven characteristics of LHS. Initial findings were shared with the full research team for verification and clarification. Key findings were merged to reveal assets and gaps in the initial COVID-19 pandemic response.

Results: 1. Engaged patients: Actively engaging patients and caregivers in rapid policy and practice change during early pandemic planning was challenging. Communication and support mechanisms need to ensure patient needs and perspectives are heard during rapid change. 2. Digital capture and sharing of data: Opportunities exist to strengthen sharing of patient and administrative data within and between institutions. 3. Timely production of research: National and international research resources were valuable 4. Aligned governance: Systems shifted to align with local, provincial and national decisions and directives. 5. Culture of rapid learning: Provincial partners worked to coordinate innovative service delivery. Opportunities exist for greater provider input. 6. Competencies for rapid learning: Mechanisms were rapidly implemented to capture important process and outcome data. Strategies are underway to address gaps.

Conclusion: LHS framework was useful for examining a health system response to COVID-19. A key finding was limited opportunity for local researchers to work collaboratively with decision makers to design policy and practice change in the early months of the pandemic. Work from home mandate for non-essential staff was likely a factor.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Knowledge Translation & Exchange (includes KTE methods)

Methods: Mixed Methods

AuthorNames: Janet Curran, Christine Cassidy, Meaghan Sim, Mari Somerville

ID: 402

Person-Centered Care for Family Caregivers of People living with Dementia: Co-Designing an Education Program for the Healthcare Workforce

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Background and Objectives: Background: Research recommends the healthcare workforce receive competency-based education to support family-caregivers (FCGs0. Although rising FCG anxiety is well documented, typically education has been directed at FCG’s to increase their care skills rather than at healthcare providers to provide person-centered care to FCGs. Objectives: We present the co-design process used to create a competency-based education program for the healthcare workforce that ensures a person-centered focus on FCGs and introduce our Health Workforce Caregiver-Centered Care Education.

Approach: Approach: Co-design is the act of creating with stakeholders to ensure useable results that meet stakeholder’s needs. We began by coining the concept “caregiver-centered care,” defined as a collaborative working relationship between families and healthcare providers aimed at supporting FCGs in their caregiving role, decisions about care management, and advocacy. From this definition, we co-designed, then validated the Caregiver-Centered Care Competency Framework using a Delphi Process. Stakeholders (n= 101), including FCGs, providers, policy makers, community organizations, researchers, and educational designers, then used effective practices for health workforce education to co-design the ‘foundational’ level of a Caregiver Centered Care education.

Results: Results: Teaching and learning resources included six competency-aligned educational modules with videos and interactive exercises that encourage reflection. With the COVID-19 pandemic, we moved the education online (caregivercare.ca). In the first two months online, November 9, 2020-January 9, 2021, 352 healthcare providers completed the education. To date, learners’ qualitative evaluations have been positive, “Very good information for professionals working with caregivers; especially relevant to homecare, geriatricians, allied health, and others working within the Seniors’ Health realm. Engaging format that really evokes empathy for caregivers. Well done!” We continue to use mixed methods to evaluate the Caregiver-Centered Care Education, for acceptability and effectiveness, in five care contexts (primary, acute, home, supportive living, long-term care).

Conclusion: Conclusion: We expect that our education will support caregiver-centered care in all healthcare settings. Person-centered support from healthcare providers is one element of a collective impact approach to supporting FCG's throughout the care trajectory.

Primary Theme: Collaborative Healthcare Improvement Partnerships

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Participatory or Action Research Methods

AuthorNames: Sharon Anderson, Jasneet Parmar, Cheryl Pollard, Lyn Sonnenberg, Sharlene Standing, Lesley Charles, Lisa Poole, Gwen McGhan, Arlene Huhn, Sandy Sereda, Cecelia Marion, Charlotte Pooler, Nicola MacFarland, Carolyn Weir, Diane Valiquette, Suzette Brémault-Phillips, Myles Leslie, Denise Melenberg

ID: 403
Correlates of concurrent benzodiazepine and gabapentinoid use among Ontario Long-Term Care residents receiving opioids: a cross-sectional study

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Background and Objectives: In 2017, approximately 17% of Ontario Long-Term Care (LTC) residents receiving an opioid were co-prescribed a benzodiazepine. This prescribing behaviour, in addition to the concurrent use of opioids and gabapentin and/or pregabalin (i.e., gabapentinoids), may place older LTC residents at increased risk for adverse health outcomes. To better understand the potential drivers of common and potentially inappropriate opioid medication combinations, we examined the correlates of concurrent benzodiazepine and gabapentinoid use among LTC residents receiving opioids.

Approach: We used health administrative datasets to conduct a population-based cross-sectional study. We selected LTC residents on the date of their earliest full clinical assessment, using the Resident Assessment Instrument version 2.0, between April 2018 and March 2019 and included those with opioid drug claims overlapping their assessment date. Residents with cancer or recent palliative care were excluded. Drug claims overlapping the assessment date were used to identify concurrent use of benzodiazepines and gabapentinoids. Poisson regression, accounting for the clustering of residents within LTC facilities, was used to examine the associations between resident-level clinical characteristics and concurrent opioid-benzodiazepine and opioid-gabapentinoid use.

Results: There were 13,896 LTC residents receiving opioids on their earliest full assessment, of which 2,094 (15.1%) were concurrently using benzodiazepines, and 3,593 (25.9%) were concurrently using gabapentinoids. After adjustment, residents aged ≥75 years were more likely to use benzodiazepines (adjusted relative risk [aRR]=1.81, 95% Confidence Interval [95%CI] 1.64-2.01) and gabapentinoids (aRR 1.59, 95%CI 1.48-1.71) compared with those aged ≥86 years. Residents with meaningful cognitive impairment (aRR 0.76, 95%CI 0.70-0.81) and who were categorized as frail (aRR 0.81, 95%CI 0.76-0.87) were less likely to use gabapentinoids. Residents with hyper-polypharmacy (i.e., use of 10+drugs; excluding opioids, benzodiazepines, gabapentin, and pregabalin) were more likely to exhibit concurrent use of benzodiazepines (aRR 1.64, 95%CI 1.43-1.87) and gabapentinoids (aRR 2.41, 95%CI 2.14-2.73) compared with those receiving 0-4 drugs.

Conclusion: Concurrent use of high-risk drug combinations (opioids with benzodiazepines and/or gabapentinoids) remains common in LTC residents. These combinations were relatively less likely among older and frail residents but more likely among those with high overall medication use. The health consequences of high-risk opioid combinations in LTC residents warrant further research.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Statistics/ Econometrics

AuthorNames: Michael Campitelli, Susan Bronskill, Laura Maclagan, Charity Evans, Andrea Gruneir, Andrea Iaboni, Colleen Maxwell

ID: 404
Strategies for engaging patients and families in collaborative mental health care programs: a systematic review

Background and Objectives: Collaborative mental health care (CMHC) is an evidence-based model of care that is currently being implemented worldwide to improve the quality and integration of mental health care in primary care. Patients and families are considered important actors in collaborative care, yet it remains unclear how to concretely engage them as partners. We aimed to identify and describe the various strategies used in CMHC programs to engage patients and families affected by depression and anxiety disorders.

Approach: We performed systematic review of CMHC programs for depression or anxiety disorders, building on a previous 2012 Cochrane review on this topic. Multiple search strategies were used (until June 2020), including searches in Cochrane CCDAN and CINAHL databases and three clinical trials registers. The selection process was conducted independently by multiple review authors. Relevant articles included controlled trials of CMHC programs and sibling articles (e.g. protocols, follow-up studies, qualitative studies) that provided additional information about engagement strategies. Conceptual frameworks on patient engagement in healthcare guided the extraction of data on patient and family engagement strategies adopted in each program.

Results: The systematic review identified 150 CMHC programs described in 597 trial and sibling articles. Programs adopted 15 different engagement strategies overall, with a median of two strategies per program (range 0-9 strategies). The most common strategies were patient education (87% of programs), supports for self-management (47% of programs), and behavioural interventions like motivational interviewing or behavioural activation (38% of programs). Strategies such as personalized care planning, shared decision making, family supports and peer supports were observed in fewer than one third of programs. Programs similarly infrequently involved patients or families in the training of professionals in collaborative care (only 4 programs) or in research or evaluation activities related to CMHC programs (only 10 programs). Care managers often played a critical role in supporting engagement.

Conclusion: Integrating mental health care in primary care is a shared priority across Canada. Our findings highlight gaps in the engagement of patients and families in CMHC programs, but also clarify the range of strategies that can be used to achieve more person- and family-centered services for depression and anxiety disorders.

Primary Theme: Mental Health and Addictions

Secondary Theme: Primary Healthcare

Methods: Knowledge Synthesis

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ID: 406
The Association between Frailty and Health Care Use from a Population Health Perspective Using data from the Canadian Longitudinal Study on Aging

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Background and Objectives: While studies have demonstrated that frailty levels differ by social determinants of health, few of them have examined how social determinants impact the relationship between frailty and health care utilization. In this study we estimate the association between frailty level and emergency department and hospital admissions, family and specialist physician use, and formal and informal care and examine how it differs by household income level using data from the Canadian Longitudinal Study on Aging (CLSA).

Approach: A Frailty Index (FI) based on the presence of potential health deficits was calculated on 50,324 community-living CLSA participants aged 45-85 years. Health care utilization (HCU) was measured by self-report. We examined patterns of association between the FI and self-reported HCU across subpopulations defined by household income level ($150K). We estimated the association between a 1% increase in FI and each type of health care use using risk difference (linear binomial) and a risk ratio (logistic binomial) regressions. Regression models were adjusted for sex and education and stratified by household income level.

Results: Participants were 51% female. The mean FI increased with age from 0.114 (45-54) to 0.157 (75-85). Those reporting HCU had higher mean FIs than those who did not (GP visits 0.13±0.07 vs. 0.10±0.06, specialist visits 0.14±0.08 vs. 0.11±0.06, ED visits 0.15±0.09 vs. 0.12±0.07, hospital stays 0.17±0.09 vs. 0.12±0.07, receipt of formal 0.23±0.11 vs. 0.12±0.07, and informal home care 0.19±0.10 vs. 0.12±0.07). A 1% (0.01 unit) increase in the FI was associated with a 0.01%-1.4% increase in the probability of one of these types of HCU in the past year. Risk differences for emergency, hospital, and home care were higher for participants with lower levels of income but risk ratios showed an opposite trend because baseline risk for HCU was higher in participants with lower income.

Conclusion: We found a positive association between FI and HCU for all outcomes and the strength of the association was found to vary by income level. Absolute measures of association (risk difference) are more appropriate than relative measures of association (relative risk or odds ratio) for reporting associations across income groups.

Primary Theme: Primary Healthcare

Secondary Theme: Primary Healthcare

Methods: Survey Research Methods

AuthorNames: Lauren E. Griffith, David Kanters, David Hogan, Christopher Patterson, Alexandra Papaioannou, Julie Richardson, Edwin van den Heuvel, Parminder Raina

ID: 409
Co-designing and implementing SMART technologies to improve wellbeing and quality of life in continuing care

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Background and Objectives: SMART (Self-Monitoring Analysis and Reporting Technology) technologies have the potential to foster healthy aging and independence of older adults in continuing care settings (e.g. home care, long-term care). Current SMART technologies are largely targeted at individual users living in private homes and there has been insufficient research and policy development to guide successful implementation in continuing care by mitigating common barriers to adoption (e.g. cost, digital literacy, infrastructure, integration with organizational policies and enterprise networks).

Approach: Our research addresses an identified need of our community partner - Northwood continuing care – and is embedded in this real-life setting. We apply a participatory and iterative approach to co-develop our SMART solution, implementation tools, and processes with Northwood, industry partners, older adults, and carers. Partners have been engaged in development of processes and tools to support adoption and integration with organizational policies and practices and will continuously be engaged in the evaluation of our SMART solution. Our evaluation will be longitudinal and involve multiple data collection methods, including design workshops, surveys, semi-structured interviews, field observations, organizational document review.

Results: Academic, community, and industry partners came together to address an identified need in continuing care. The solution: combining partners' proprietary and off-the-shelf SMART devices, with training resources and assessment tools that support customization of devices to individual clients' needs and the environment. To enable the use and integration of these devices into care assessment and planning, a new rehabilitation service was developed and implemented. An occupational therapist and rehabilitation assistants assess clients' needs for SMART devices and their environment, provide troubleshooting, and liaise with care staff and partners. Knowledge translation tools were co-developed to facilitate understanding of: the functions and capabilities of devices; potential personal privacy and security risks; information collected by devices and our partners; and suggestions for how clients can minimize risk/information sharing.

Conclusion: We have developed policies and processes to support the implementation of our SMART solution to enhance the independence, autonomy, and wellbeing of older adults aging with or into disabilities in continuing care. Our solution will be cost-effective, sustainable, and offer evidence-based therapeutic interventions that are scalable across continuing care settings.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Patient and Public Engagement

Methods: Participatory or Action Research Methods

AuthorNames: Alisa Grigorovich, Susan Kirkland, Amanda Jenkins, Ashley-Ann Marcotte, Margaret Szabo, Wayne Tucker, Michael Cullen, Kim Parker, John Hamblin, Samina Abidi, Pia Kontos, Ian Philp, Alka Modi

ID: 412
The COVID-19 Vulnerability Screener: Preliminary Results of a Surveillance Initiative for Vulnerable Older Adults During the Pandemic

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Background and Objectives: Older adults are especially vulnerable to adverse outcomes of COVID-19 and measures to control its spread. Many avoided accessing care, and vital community-based services that support them to live independently were largely restricted or made virtual. The interRAI COVID-19 Vulnerability Screener (CVS) is a standardized surveillance tool to identify at-risk community-dwelling older adults and facilitate triage for further assessment and referral to health/social services. Our objectives were to describe the characteristics and needs of those

Approach: The CVS is generally administered over the phone by a lay-person and includes items related to COVID-19 (diagnosis, symptoms, and mortality risk due to comorbidities) and functional and psychosocial indicators of vulnerability. It was developed using items from validated clinical tools used across Canada and internationally. The CVS was implemented in 11 organizations across primary care practices, out-patient geriatric medicine practices, community support services organizations, and retirement homes. Organizations received training to assess and generate individual and system-level information to monitor the condition of community-dwelling older adults. We used descriptive statistics to report on the preliminary results of data collected.

Results: The sample included 772 adults assessed between April 15th, 2020 and November 16th, 2020 (mean age=79). Less than 1% had a positive test or COVID-19 diagnosis, and only 12.9% reported any potential symptoms. Overall, 54.9% of individuals assessed had indicators of vulnerability (21.9% reported depressed mood, 21.7% reported loneliness, 5.0% were worried about making ends meet, 7.3% had limited access to food/medications needed, and 31.5% needed urgent assessment due to impaired functioning). However, only 45.7% had any visits with a doctor or nurse practitioner in the 90 days prior.

Conclusion: The sample represents a population largely unaffected by COVID-19 itself but still vulnerable in many ways. Yet, the majority had no contact with the health system during this time. This tool allows providers to stay connected with vulnerable patients and obtain a better understanding of their needs during the pandemic.

Primary Theme: COVID-19

Secondary Theme: Home Care, Long Term Care and Aging

Methods: Healthcare Service or Policy Initiative

AuthorNames: Sophie Hogeveen, Chi-Ling Sinn, Margaret Saari , George Heckman, John Hirdes, Megan Donaghy-Hughes

ID: 413

Using A New Service Day Methodology to Calculate Primary Care Physician Supply in Alberta and Ontario

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Background and Objectives: Understanding physician supply by number and service activity levels is important for meeting the population health needs. In Canada, physician numbers are derived from head counts and estimates of full-time equivalents (FTE) based on income percentiles, which assume each unit of FTE supplies an equal amount of service. We compared that method to a new service days method to calculate primary care physician (PCP) supply in Alberta and Ontario.

Approach: Using an observational study design and provincial physician claims data from 2017/18, we compared two measures of PCP supply as calculated by the income percentiles FTE method from the Canadian Institute of Health Information and a new service day activity method. In the new method, full-time physicians had at least 3 or more service days per week of 10 visits per day over 46 weeks of the year. Part-time and full-time PCPs numbers and demographics were described along with practice characteristics including panel size, level of continuity, daily visit volume and gross median revenue.

Results: The two methods agreed on part-time and full-time physician classification for approximately 85% (2805) of PCPs in Alberta, and 75% (9370) of PCPs in Ontario. The demographics/practice characteristics of PT/FT PCPs where the methods agreed were similar between ON and AB. The results diverged when classifying two main groups. The first were part-time by service days but full-time by income percentile and included 300 (9%) PCPs in Alberta and 1725 (13%) PCPs in Ontario. The second were full-time by the service days but part-time by income percentile, accounting for 6% (197) of PCPs in Alberta, and 13% (1727) of PCPs in Ontario. There are notable differences between these latter two groups including panel size, service days provided, gross median revenue and level of patient continuity.

Conclusion: The service day methodology offers a useful additional view of primary care physician supply in Canada. This new methodology highlights significant practice pattern differences that the older method does not. These differences have important implications for health care funding and physician supply policy.

Primary Theme: Primary Healthcare

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Emerging Methods (e.g. new developments in observational study design)

AuthorNames: Terrence McDonald, Lee Green, Susan Schultz, Cord Lethebe, Richard Glazier

ID: 414
Determinants of Access to Geriatric Medicine in the Community: the Geriatric 5Ms and Beyond

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Background and Objectives: The Geriatric 5Ms describe core competencies in geriatric medicine and may guide referrals to specialized care for older adults with complex needs. Domains include mind, mobility, medications, multicomplexity, and matters most. However, little is known about the actual determinants of access to this resource in the community. We aimed to explore the association of the Geriatric 5Ms with access to care, and to investigate other characteristics associated with out-patient geriatric medicine contact.

Approach: We conducted a population-based, retrospective cohort study of frail community-dwelling adults (≥60 years) with complex needs in Ontario receiving publicly funded home care services (2012-2015, n=196,444). Secondary health assessment information was linked to administrative health service use data. Multivariable generalized estimating equation modelling was used to identify individual characteristics associated with geriatric medicine contact following home care admission. The dependent variable was ≥1 geriatrician visits in 90 days post admission according to physician billing records. Independent variables included a derived Geriatric 5Ms score, and predisposing, enabling, and need factors obtained from clinical assessments.

Results: Despite frequent contact with physicians in general, only 5.2% of the sample had contact with geriatric medicine on an out-patient basis in the 90 days post-home care admission. Derived Geriatric 5Ms score was associated with higher odds of contact, but the model had weak discriminatory power. The final multivariable model had moderate discriminatory power. In this model (adjusted for regional differences), female sex, difficulties accessing home, impaired locomotion, recovery potential, hemiplegia/hemiparesis, and cancer were associated with lower odds of geriatric medicine contact. Age, worsened decision-making, dementia, hallucinations, Parkinsonism, osteoporosis, and caregiver distress/institutionalization risk were associated with higher odds of contact.

Conclusion: Discrepancies exist between actual factors associated with geriatric medicine contact and the Geriatric 5Ms. Contact was mainly driven by conditions common in older adults, rather than medical complexity and instability. These findings suggest a need to re-consider the role of community geriatric medicine and the allocation of limited specialized resources.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Data Mining/Big Data Analytics

AuthorNames: Sophie Hogeveen, George Heckman, John Hirdes

ID: 418
Building the Foundations for Development of Value-Based Person-Centered Standards for Spinal Cord Injury

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Background and Objectives: Health Standards and assessment programs assess the quality and safety of health systems and facilitate health system improvements. In 2012, the first acute and rehabilitation Spinal Cord Injury (SCI) standards were developed in Canada. To date, 16 organizations are accredited using these standards. The objective of this project was to assess gaps in the existing SCI Health Standards and identify opportunities to enhance the standards to align with the values of person-centered care.

Approach: In 2019, 149 individuals living with SCI, family members and caregivers, health care providers, researchers, hospital administrators, and community organization representatives participated in a national survey to identify gaps in the current system of SCI care and provide input on the quality and use of current standards and assessment programs. Ten interviews were conducted to gain a deeper understanding of the needs and experiences of the SCI Community. Furthermore, 12 individuals with SCI participated in mapping of their experiences of transitioning from inpatient settings back to communities up to 18 months following their injuries using the Photo-Voice methodology (August-December 2020).

Results: Findings from the survey, interviews and journey-mapping indicated there is a need for better coordination during transitions between phases of care, particularly during transition to community. Transitioning to community was identified as challenging as individuals felt unsupported and had difficulties navigating the system of care; accessing health care services, supports and equipment; and returning to employment and community participation. Additionally, results indicated that system of care for SCI is largely health care provider-focused across Canada and there is an opportunity for engagement of people with SCI in their own care planning to ensure individuals' care journey is informed by their needs and values as well as by environmental and socioeconomic factors that impairs individual's ability to access optimum care, and achieve best possible outcomes.

Conclusion: Findings from this project will inform the development of value-based, person-centered SCI rehabilitation standard. This revised standard will outline the requirements for timely access to well-coordinated SCI rehabilitation teams and services, informed by the needs of individuals with SCI and defined by the person's continuum and trajectory of care.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Knowledge Translation & Exchange (includes KTE methods)

Methods: Mixed Methods

AuthorNames: Charlene Yousefi, Vanessa Noonan, John Chernesky, Jessica Parsons, Élizabeth Côté-Boileau, Louise Clément, Nadine Ibrahim, Christiana Cheng

ID: 419

Gender differences in the utilization of group and online prenatal education services

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Background and Objectives: Prenatal education is a core component of perinatal care and services provided by health institutions. Group prenatal education is the most common educational model. In order to address accessibility issues and the evolving needs of expectant parents, some health institutions have opted to implement online prenatal education. This study aims to identify gender differences in the utilization of group prenatal education (GPE) and asynchronous online prenatal education (OPE) services for expectant mothers and fathers.

Approach: Based on a prospective cohort study, we used a pre-pandemic sample of 830 expectant mothers (n = 635) and fathers (n= 195) living in two CISSS/CIUSSS territories in Quebec. Data from questionnaires administered between 10th-23th weeks and at 34 weeks of pregnancy allowed us to perform logistic regressions to determine the gender differences in the use of GPE and OPE. We included sociodemographic variables and the type of professional in charge of the clinical follow-up as control variables. Descriptive analyses were also conducted to highlight gender differences in exposure to prenatal education topics.

Results: Overall, 25% of participants report having used the GPE under study, while this proportion rises to 71% for OPE. Expectant mothers (61%) declared using OPE (without GPE) more than fathers (29%) ($p \leq 0.001$). Conversely, the use of GPE (without OPE) is more frequent for fathers (13%) than for mothers (4,1%) ($p \leq 0.001$). Fathers (14%) are less attracted by combined use of OPE and GPE than mothers (20%) ($p=0.033$) and are more likely to consult other sources(41% vs 15%; $p \leq 0.001$). Multivariate analyses confirm these findings ($p \leq 0.001$), except for the combined used of GPE and OPE ($p=0,351$). However, descriptive analyses show that expectant fathers, when using GPE and OPE, are significantly ($p \leq 0.05$) more exposed to four of the eight proposed topics than expectant mother.

Conclusion: These findings are of major importance in understanding the gender distinctive use of GPE and OPE services. From a family health perspective, prenatal education remains a key way of reaching future parents. With the required adaptations to COVID-19, it is critical to consider utilization patterns to cater for their needs.

Primary Theme: Maternal and Child Health

Secondary Theme: Primary Healthcare

Methods: Survey Research Methods

AuthorNames: Geneviève Roch, Alexandre Prud'homme, Stéphane Turcotte, Roxane Borgès Da Silva, Laura-Mihaela Bogza, Tamarha Pierce, Julie Poissant, Blouin Camille, Camille Brault-Tremblay, Marie-Pierre Gagnon

ID: 421
Person-Centered Care for Family Caregivers of People living with Dementia: Evaluating an Education Program for the Healthcare Workforce

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Background and Objectives: Background: While family caregivers [FCGs] provide 75- 90% of care for people living in the community, most healthcare providers do not meaningfully involve FCGs as partners in care or support FCGs in maintaining their own wellbeing. We followed research which recommends competency-based education for the healthcare workforce to identify, assess, support and partner with FCGs across the care trajectory. Objective: Report on a mixed methods evaluation of a person-centered competency-based education program

Approach: Approach: We began by coining the concept “caregiver-centered care,” defining it as a collaborative working relationship between families and healthcare providers aimed at person-centered support for FCGs. From this definition, multi-level, interdisciplinary stakeholders including FCGs (n=101) co-designed the Foundational Caregiver-Centered Care education. Learning resources included six competency-aligned educational modules with videos and interactive exercises that encourage reflection. Kirkpatrick Barr’s healthcare training evaluation framework underpinned our mixed methods evaluation. We measured participant’s reaction to the education (Level 1) and changes in learner’s knowledge and confidence to work with FCGs using the Caregiver-Centered Care Knowledge Assessment Test [CKAT] (Level 2).

Results: Results: In the first two months, 352 healthcare providers completed the education through caregivercare.ca. Learners were satisfied with the overall quality of education (Mean 4.75/5; SD=.5). Video content increased their understanding of FCGs (Mean 4.76/5; SD=.7) and the education increased their motivation to learn more about caregiver-centered care (Mean 4.75/5; SD .5). Student’s paired samples T-test indicates pre-post education changes in knowledge and confidence to work with FCGs were significant [Pre (M=37.8, Sd=7.6) to post (M=47.2, SD=3.5) t (125) = -14.39, p

Conclusion: Conclusion: Educating the health workforce is a population health approach to address known gaps in supporting and working with FCGs across the care trajectory. The Caregiver-Centered Care education provides a foundation for educating healthcare providers working with FCGs to provide person-centered care to FCGs to maintain their wellbeing and sustain

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Participatory or Action Research Methods

AuthorNames: Sharon Anderson, Jasneet Parmar, Cheryl Pollard, Lyn Sonnenberg, Sharlene Standing, Lesley Charles, Lisa Poole, Myles Leslie, Gwen McGhan, Arlene Huhn, Sandy Sereda, Cecelia Marion, Charlotte Pooler, Denise Melenberg, Carolyn Weir, Diane Valiquette, Suzette Brémault-Phillips

ID: 424

Impact on waiting times of changes in referral volume and alternative routing policies for referrals to rheumatology in a centralized intake system

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Background and Objectives: In Alberta, access to a rheumatologist requires a referral. Waiting times can be long and sometimes exceed established benchmarks for timely assessment and treatment of patients. The Calgary Rheumatology Central Intake (CI) was designed to assess and triage referrals for a rheumatologist consultation. Our objective is to evaluate the impact of changes in the volume of referrals for rheumatologist consultation and alternative routing policies for managing waiting times against established waiting time benchmarks.

Approach: The receipt of ~3,000 referrals annually for initial consultation with one of the 28 rheumatologists who are part of the Calgary Rheumatology CI, and the subsequent follow-up visits in the rheumatology clinics were modelled as a discrete-event simulation model. The base case model logic was derived from observed clinic data over three years and consultation with CI personnel and clinicians. The calibrated base case model results were within 1% agreement against the observed clinical patterns. We compared the base case results with simulated results of three scenarios: maximum wait time guarantee (MWTG) policy; 10% increase/decrease in number of referrals.

Results: Overall average wait time to see a rheumatologist (T0-T1) increased from 178 days (95%CI: 176-179) in the base case to 269 days (95%CI: 268-269) (51% increase) with the MWTG policy ensuring all patients (100%) are seen within benchmark urgency level wait time. A 10% increase in the number of referrals received increases the overall average T0-T1 to 293 days (95%CI: 291-294) (65% increase), with the percentage of patients seen within their benchmark urgency level decreasing across all urgency levels. A 10% decrease in the number of referrals received results in an overall T0-T1 decrease to 43 days (95%CI: 41-44) (76% decrease), with the percentage of patients seen within their urgency levels increasing to at least 97% across all urgency levels.

Conclusion: Using simulation modeling, we can compare effects of various changes against established waiting time benchmarks. MWTG policy ensures that all patients are seen within benchmark values but increases overall waiting times. Relatively small changes in referral volumes result in significant changes in the percentage of patients seen within benchmark values.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Program or Policy Evaluation

AuthorNames: Toni Tagimacruz, Deborah A Marshall, Monica Cepoiu-Martin, Sharon LeClerq, Jill Robert, Claire EH Barber, Elena Lopatina, Dianne Mosher, Theresa Lupton, Jatin Patel, Barb Kathol

ID: 425
Proposed standards for race-based and Indigenous identity data collection and health reporting in Canada

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Background and Objectives: There is growing awareness of the importance of collecting race-based, ethnic and Indigenous identity data to understand patient diversity and to measure inequalities. The lack of race-based data in the health sector in Canada makes it difficult to measure health inequalities and to identify inequities that may stem from racism and discrimination. To harmonize collection and ensure high-quality data, CIHI is proposing pan-Canadian standards for collecting race-based and Indigenous identity data in health systems.

Approach: This work has included a detailed literature review and engagement with researchers, clinicians, organizations representing racialized communities and federal, provincial and territorial governments. An interim standard was released in May 2020 in response to the urgent call to understand the impact of the COVID-19 pandemic within racialized communities. In July 2020, we released a discussion document that contains proposed race-based and Indigenous identity standards and detailed considerations for their appropriate collection and use. These proposed standards are adapted from the Ontario Anti-Racism Directorate's standards that are currently supporting race-based data collection in the education, justice and health sectors in Ontario.

Results: Key learnings include: (1) race and ethnicity are separate social constructs with no biological basis to the identification of population groups; (2) Indigenous identity is distinct and should be considered independently; and (3) preliminary results from the implementation of these standards in primary care and in the context of COVID-19 case reporting are promising. Further engagement is required to determine the value and acceptability of pan-Canadian standards. Key information gaps include: understanding the risks and benefits of collecting, analyzing and/or reporting race and ethnicity data; determining how best to include data on Indigenous populations; appropriate data governance; as well as considering strategies to ensure appropriate race and ethnicity data collection, use and interpretation.

Conclusion: Canada's racial and ethnic diversity continues to steadily increase each year, and Indigenous people in Canada are the fastest growing demographic group within the country. To advance equity in health care, Canada's health systems need to be able to recognize and respond to health inequalities experienced by racialized groups.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Healthcare Service or Policy Initiative

AuthorNames: Dana Riley, Geoffrey Hynes, Jean Harvey, Meredith Nichols, Clement Li, Noura Redding, Evasha Rasasakaram

ID: 426

Home-care, long-term care, and retirement-home preferences among immigrant and non-immigrant older adults in Ontario: a mixed-methods study

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Background and Objectives: With an increasing aging population and economic burden on hospitals, there has been a push in Canada to move care to the home and community. Home-care, long-term care and retirement-home use (elderly-care services) remains low in immigrant populations. Preferences for elderly-care services are largely unknown in Canada, especially among immigrants. Our objective is to understand preferences for elderly-care services and their characteristics (i.e. number of caregivers) among older adults (immigrants and non-immigrants) in Ontario.

Approach: Our mixed-methods study has four steps: rapid-review, qualitative-interviews, pilot-survey, and discrete-choice-experiment. We will focus on the first two steps. For our review, we created search-terms and inclusion criteria, searched Medline and EconLit for quantitative literature focusing on preferences for elderly-care services, screened articles for relevance, and extracted data. Next, using Sandowloski's qualitative-description methodology, we recruited decision-makers, service-providers, researchers, and potential users via multiple approaches, and conducted semi-structured-interviews. Our interviews focused on obtaining data on seniors-care context in Ontario, experiences of immigrants/non-immigrants with services, trade-offs that people make when choosing care and Covid-19's influence on the system. Content analysis was conducted.

Results: We extracted 84 studies on population and study characteristics, preferences for care, contextual influences on services use, study results, and methods. Of the 13 studies that focused on immigrant/ethnic populations, majority showed that preferences for elderly-care services differ by immigrant status/ethnicity. In the seven discrete-choice-experiments included, public coverage and low co-payment were preferred. Three cross-sectional Canadian studies were included, focusing on Chinese-elders' caregivers, veterans, and senior clients. Two studies showed that home-care is preferred over institutional-care, and one study found that preference for long-term-care increases with caregiver's age and decreases with income. From the interviews (will complete by May), we hope to expand on what we found in our review as well as understand the current and future context of elderly-care services in Ontario.

Conclusion: Review showed that home-care is preferred over institutional-care and that there is a difference in preferences among immigrants and non-immigrants. As Ontario prioritizes community-care, and demand-for-care increases with aging-seniors, many of whom will be immigrants, our study can help to understand seniors' preferences and try to inform future policies/programming.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Equity and Vulnerable Populations

Methods: Mixed Methods

AuthorNames: Sophiya Garasia

ID: 429

You Can Never Have Too Much of a Good Thing: Collaboration and Engagement in the Development of a New Pan-Canadian Mental Health and/or Addictions Services Indicator

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Background and Objectives: In 2017, federal, provincial, and territorial governments agreed to a Common Statement of Principles on Shared Health Priorities (SHP) to improve access to mental health and addictions (MHA) services and home and community care. As part of this work, CIHI is developing an indicator to measure the navigation of MHA services. This work involves collaboration and engagement with partners and people with lived and/or living experience (PWLE) to conceptualize this complex area of health care.

Approach: When initiating indicator development, interviews with 17 subject matter experts identified central themes related to system navigation in a conceptual report. Jurisdictional representatives, measurement experts, and clinicians from across Canada formed an Expert Advisory Group (EAG) to evaluate how to measure navigation given the central themes highlighted in the conceptual report. PWLE in the Mental Health Commission of Canada's Hallway Group identified important supports that would have helped with navigating MHA services. Feedback from these groups through teleconferences and questionnaires helped with the refinement of survey questions and ensured they reflected the experiences of people navigating MHA services.

Results: Collaboration and engagement with the EAG and Hallway Group has been critical to the development of the survey tool to measure the navigation of MHA services. The survey tool has also gone through field-testing with our target population to ensure the questions resonate with respondents, that they are respectful of the unique experiences of respondents, and are easy to understand. Future engagement activities include collaborating with and consulting the EAG and Hallway Group to provide contextual information about our findings, and help to frame and position our results in a way that is meaningful to a public audience. CIHI is currently preparing for data collection and is targeting the first public release of indicator results in 2022.

Conclusion: Over time, the SHP indicators will tell a clearer story about access to care across the country, identify where there are gaps, and help make meaningful changes to improve the experiences of Canadians. In this session, we will seek feedback and insights on the indicator's ongoing development.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Mental Health and Addictions

Methods: Program or Policy Evaluation

AuthorNames: Lyndsey Dossett

ID: 430
Digital health literacy of Canadian adults: Evidence from the 2020 Canadian Digital Health Survey

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Background and Objectives: Digital health literacy is increasingly important especially as the COVID-19 global pandemic is making health encounters more virtual. The goal of this study is to assess the digital health literacy of Canadian adults using eHEALS and investigate how factors such as gender, age, and socioeconomic status interact with digital health literacy to determine individuals' interactions with the health care system. This would lay the foundations for structuring targeted digital health literacy campaign in the future.

Approach: Survey data were collected from 6,002 individuals between August 13-31 of 2020 using an online-survey tool. Using the 2016 census reference variables, the data was analyzed and weighted to render a representative sample of the general population. Digital health literacy is measured using the self-reported eHealth Literacy Scale (eHEALS). Descriptive analysis and univariate exploratory analysis will be conduced to determine inequities in digital health literacy in the adult population. In addition, multivariate regression analysis will be used to investigate the factors that influence digital health literacy and health care system utilization patterns in Canadian adults.

Results: The mean age of the survey sample is 47 (SD17.8) years, with 48% male, 44% employed full-time, 75% speak English as primary language and 47% educated at university level and above. Preliminary results show that digital health literacy is associated with age, those above the age of 25 self-reported lower digital health literacy scores compared to young people below the age of 25. We found non-significant associations between digital health literacy and gender. Higher digital health literacy score was found to be associated with a higher likelihood to use digital health services (e.g., access to PHI, virtual visits with physicians) as well as a higher likelihood to use virtual care services (e.g., video visits, telephone visits).

Conclusion: Preliminary findings indicate that Canadians vary in their perceived skill and confidence in using the internet for gathering and assessing health-related information. Digital health literacy plays a role in the way Canadian adults engage with the health care system.

Primary Theme: Patient and Public Engagement

Secondary Theme: Equity and Vulnerable Populations

Methods: Survey Research Methods

AuthorNames: ellie yu, Waldo Beausejour , Simon Hagens

ID: 432

Changes in home care assessment and service provision during the first wave of the COVID-19 pandemic in Ontario, Canada

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Background and Objectives: Publicly funded home care provides an array of essential supports for Canadians of all ages that promote recovery after hospital and support independence and quality of life, among other reasons. To date, little is known about the effect of the pandemic on home care recipients. We sought to describe the trends in home care episode, standardised assessment, and service volumes in Ontario during the first six months of the COVID-19 pandemic.

Approach: We plotted cross-sectional time series data from March 2019 to September 2020 for publicly funded home care recipients in Ontario. Home care referrals were linked to interRAI Home Care assessments (comprehensive assessments), interRAI Contact Assessments (screening assessments), and home care services. Health status measures from the patient's most recent assessment was used to stratify the receipt of personal support, nursing, and occupational or physical therapy services. Statistical testing of differences was done using Chi-Square tests for categorical variables and Kruskal-Wallis tests for continuous variables.

Results: Although the number of active home care patients continued to increase during the first wave of the COVID-19 pandemic, fewer individuals were admitted to home care services overall and assessed with a standardised assessment. Between March and April 2020, comprehensive and screening assessments declined by 28% and 44%, respectively. Among comprehensive assessments, intake assessments and routine re-assessments were the most affected. Between March and April 2020, the absolute number of home visits declined by 16%. Stratified analyses by service type and health status show that patients were less likely to receive any amount of personal support services and received fewer OT/PT visits compared to the previous year.

Conclusion: The first six months of the pandemic were associated with substantial changes in home care assessment and service provision. Where home care supports individuals with complex needs, standardised assessments are important for monitoring individual- and system-level measures of patient and caregiving well-being.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: COVID-19

Methods: Data Mining/Big Data Analytics

AuthorNames: Chi-Ling Sinn, Luke Turcotte, Caitlin McArthur, John Hirdes

ID: 433

Use of Policy Lab Methodology in Canada to support the Safe Reintegration of Essential Care Partners During COVID-19

Background and Objectives: In response to the COVID-19 pandemic, many healthcare facilities in Canada changed their visitation policies, to restrict all visitors – including essential care partners - from entering facilities and partnering in patient care. The Canadian Foundation for Healthcare Improvement and Canadian Patient Safety Institute conducted a "policy lab" to examine the reason for these changes and to co-create policy guidance to support a safe and consistent reintegration of essential care partners into health and care facilities.

Approach: This process for policy development brought together people with a diverse range of COVID-19 related experience including policy makers, healthcare administrators, providers, patients, families and caregivers. Each group was engaged fully and had an equal voice in the design process. It adopted innovative approaches to collaboratively create policy tools. The lab began with activities to explore issues more widely (divergent thinking) and then focused on solutions (convergent thinking). It used a systemic design approach that enabled participants to understand the system and leverage points in order to develop policy which works for those who make, implement and experience policy.

Results: Twenty-nine participants from across Canada and one participant from the United States collaborated to co-create policy guidance for the reintegration of caregivers as essential partners in care. Through a series of five virtual workshops, participants were provided with the opportunity to empathize with the experience of others; design an ideal map for reintegration-- which outlines the important steps in the reintegration process; identify policy solutions and guidance for the various steps in the journey; and use scenarios to test assumptions and ensure fulsome policy solutions. Using a trauma-informed approach to policy design, the policy lab ensured that patients, families and caregivers and policy implementers were at the centre of co-creating the policy that would impact their experiences in the context of COVID and beyond.

Conclusion: Policy design is often done without the full contribution of those who implement and experience the policy. The lab approach allowed us to meaningfully engage people with various lived experiences and develop guidance which supports the reintegration of essential care partners in order to improve care, experience, safety and outcomes.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: COVID-19

Methods: Emerging Methods (e.g. new developments in observational study design)

AuthorNames: Jenny Buckley, Jan Byrd, Donald Lepp

ID: 434
Characteristics and Billing Patterns of High Users of Telemedicine: A Population-based Study

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Background and Objectives: The COVID-19 pandemic has necessitated a shift to telemedicine, with adoption differing between providers. In Ontario, telemedicine was enabled by temporary billing codes that reimbursed physicians equally for in-person, telephone and video visits and eliminated restrictions on the types of technology platforms that could be used. The objective of this study was to determine the characteristics of physicians who are high-users of telemedicine and their billing practices.

Approach: We conducted a retrospective cohort study of all ambulatory care billed (in-person and telemedicine visits) between January 1 to June 30, 2020 using Ontario health administrative data housed at ICES. All physicians who billed patient visits during this period were included. High-users were defined as those physicians who billed >1000 telemedicine visits during the study period. We compared modality of use among high-users by enumerating the number of phone and video visits billed per week and the proportion of phone and video visits out of total visits. Physician characteristics, including specialty, age, sex, and practice volume were also assessed.

Results: Of the 24,673 physicians in Ontario, 2,654 (10.7%) physicians billed >1000 telemedicine visits from January to June 2020. High-users billed 40.1% of all telemedicine visits and 31.6% of all ambulatory visits (in-person and telemedicine visits) in the study period. These physicians were older, male, primary care physicians who had larger practices than average use physicians. High-users tended to see a greater proportion of patients using telemedicine, compared to average use physicians, with the majority of high-user physicians billing 31-65% of their visits as telemedicine visits. Phone visits constituted 86% of all of the telemedicine visits, with video platforms used for only 14%.

Conclusion: During the COVID-19 pandemic, adoption of telemedicine was widespread, facilitated by liberal reimbursement codes. Billing practices exhibited a high-level of clustering with a small group of physicians accounting for nearly half of all virtual visits. Further research into the appropriateness and quality of care of telemedicine is warranted.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: COVID-19

Methods: Healthcare Service or Policy Initiative

AuthorNames: Ahmad Shakeri, Mina Tadrous, Vess Stamenova, Andrea Pang, Peter Cram, Sacha Bhatia, Cherry Chu

ID: 440

Delivering on the Quadruple Aim in Midwifery Care: Stakeholder Perspectives on the Mental Health, Leave of Absence and Return to Work Experiences of Canadian Midwives

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Background and Objectives: Across Canada, high rates of attrition within the midwifery workforce suggest that the decreased healthcare costs, enhanced patient satisfaction, and improved population health outcomes associated with midwifery care cannot be fully realized without attending to the fourth element of the quadruple aim (Bodenheimer & Sinsky, 2014): care team wellbeing. This study adopted an intersectional and contextualized approach to explore factors shaping the mental health, leave of absence and return to work experiences of Canadian midwives.

Approach: We conducted 19 semi-structured stakeholder interviews, covering six broad categories of questions: 1)mental health issues, causes and interventions, 2)workplace mental health promotion policies and programs, 3)presenteeism and absenteeism, 4)leave of absence factors, policies and programs, 5)return to work factors, policies and programs, and 6)gendered experiences. Participating stakeholder organizations include national and provincial professional associations, regulators, insurers and service providers, educators, managers, employers, and experts. Participants represented a variety of provincial and territorial jurisdictions, including Alberta, British Columbia, Manitoba, Nova Scotia, Nunavut, Ontario, and Québec. All interviews were recorded, transcribed, coded using NVivo 12 Pro, and thematically analyzed by the authors.

Results: The context of midwifery work -including interpersonal dynamics, organizational integration, models of care, and discrimination- can foster stress, anxiety, and ultimately burnout amongst midwives. Furthermore, when heavy workloads are combined with critical incidents, the content of midwifery work can result in post-traumatic stress. Age and career stage appear to influence how personal and familial factors affect the mental health experiences of midwives, with early-career midwives with young families facing a myriad of personal and professional transitions that can compound work-related stressors and render work-life balance difficult to maintain. The lack of flexibility embedded into current structures of midwifery work -including their models of care, employment and remuneration- limit the accommodations available to midwives experiencing mental health issues and the resources available to their practice groups.

Conclusion: To deliver on the quadruple aim in midwifery care, interventions aimed at improving the mental health, wellbeing, and retention of the midwifery workforce must address the underlying causes embedded within their work environments and provincial/territorial health care systems, and be tailored to the gendered realities of this uniquely feminized workforce.

Primary Theme: Health Human Resources

Secondary Theme: Mental Health and Addictions

Methods: Qualitative Research Methods

AuthorNames: Caroline Chamberland-Rowe, Jelena Atanackovic, Cecilia Benoit, Kellie Thiessen, Elena Neiterman , Angela Freeman, Ivy Bourgeault

ID: 443

Do changes in primary care service use over time differ by neighbourhood income? Population-based longitudinal study in British Columbia, Canada

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Background and Objectives: Strong primary care systems have been associated with improved health equity, but equity implications of ongoing reforms to primary care in British Columbia (BC) have not been studied.

Approach: We examined primary care service use among all BC residents eligible for provincial health insurance between 1999/2000 and 2017/2018 using linked administrative databases. We tracked annual primary care visits, continuity of care, emergency department visits, specialist referrals, and prescriptions dispensed. We examined differences in the magnitude of change by neighbourhood income quintile, adjusting for age, sex/gender, and comorbidity, and stratified by urban/rural location of residence. We also compared the characteristics of physicians providing care to people living in low- and high-income neighbourhoods at two points in time.

Results: Between 1999/2000 and 2017/8 the average number of primary care visits per person fell from 4.7 to 3.9 in urban settings and from 4.1 to 3.6 in rural/remote settings, while ED visits and prescriptions dispensed increased. In urban settings primary care visits, continuity, and specialist referrals fell more rapidly the in low vs. high income neighbourhoods while ED visits increased more rapidly. The percentage of physicians who provide a majority of visits to patient in neighbourhoods in the lower two income quintiles has declined from 30.6% to 26.3%. Higher percentages of physicians early in their careers and in rural settings provide a majority of visits to patient in neighbourhoods in the lower two income quintiles.

Conclusion: Taken as a whole, results raise concerns that equity in access to primary care has deteriorated in BC. Reforms to primary care that aren’t attentive to the needs of underserved communities may further entrench existing inequities.

Primary Theme: Primary Healthcare

Secondary Theme: Equity and Vulnerable Populations

Methods: Data Mining/Big Data Analytics

AuthorNames: Ruth Lavergne, Aidan Bodner, Sandra Peterson, David Rudoler, Emily Marshall

ID: 445
State of COPD care in Ontario: A landscape study

Background and Objectives: COPD is a chronic, progressive lung disease characterized by partially reversible airway obstruction, limitation of expiratory flow, hyperventilation, systemic manifestations, and repeat exacerbations. COPD imposes a significant social and economic burden to patients, families, and healthcare systems. This study enhanced our understanding about access, availability, characteristics, and patient services of several COPD disease management programs. Gaps of COPD care in different communities were identified to help serve the patient population and improve quality of care.

Approach: Forty in-depth, semi-structured interviews were conducted with patients, health care providers, administrators, and decision makers. The sample considered years of experience, health care discipline (i.e., respiratory therapists), and geography (urban, semi-urban and rural settings) of health care providers, administrators, and decision makers. The same criteria for geography and access to COPD management programs and services, including family health teams, private clinics, pharmacies, and hospitals, were considered for patients. Employing a constant comparative analysis guided by a grounded theory approach, codes and categories were developed and then organized by themes through a reflexive, iterative process, resulting in theoretical coding and analysis.

Results: Integration and sustainability of COPD care within community settings in Ontario are dependent on several key success factors identified in this study. Early diagnosis through spirometry testing and providing interactive educational information online can facilitate meaningful patient engagement and improved self-management. Primary care is continuously identified as an entry into effective care pathways, including improving chances of early identification and diagnosis. Patients with COPD and co/multi morbidities would benefit from improved access to patient centered COPD care. Barriers to creating sustainable pathways for patient participation in COPD care include the separation between hospital, home, and community care. Restructuring of funding models and distribution will establish a sustainable and integrated approach to COPD care which advances continuity of care from hospital to community to the home.

Conclusion: Improving COPD care requires further integration and collaboration across health and social services. The healthcare system has responded to the needs of COPD patients through refining integrated care management pathways. Policy-led initiatives bridging multiple stand-alone projects/programs into a cohesive collaboration will lead towards sustainable and accessible COPD care for patients.

Primary Theme: Chronic Disease Management

Secondary Theme: Collaborative Healthcare Improvement Partnerships

Methods: Qualitative Research Methods

AuthorNames: Sonia Meerai, Suzanne Chung, Lusine Abrahamyan, Murray Krahn, Valeria Rac

ID: 448

How can Artificial Intelligence Help Reduce the Frequency of Adverse Drug Events? A Scoping Review

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Background and Objectives: Adverse drug events (ADEs) represent one of the most significant types of healthcare-related harm, both inside and outside the hospital, and it is an area with substantial room for improvement. The objective of this scoping review was to identify key use cases for artificial intelligence (AI) to inform safer pharmacological management of conditions and reduce the frequency of harm by providing patient-specific estimates or recommendations for prediction, early detection, and prevention of ADEs.

Approach: Two databases (PubMed, Embase) were searched to identify relevant, peer-reviewed literature published from 1998-2020 in order to correspond with the release of the Institute of Medicine's report "To Err is Human: Building a Safer Health System." Screening was conducted in duplicate and abstraction was independently validated. The following information was abstracted: citation information, use case domain (prediction or early detection), population under study, sample size, AI models, medication class, outcomes, ADE category, performance metrics, data sources, and quality ratings. Key use cases were narratively synthesized for prediction and early detection, including commonly used AI approaches, main insights, and future directions.

Results: The review identified 84 articles. Most (75%) were published within the last five years. Half focused on four medication classes: antineoplastics, analgesics, antibiotics, and anticoagulants. Cardiovascular and renal ADEs were most commonly studied. Seventy-three studies (87%) developed and/or validated prediction algorithms focused on five outcomes: ADEs, treatment response, optimal dosing, medication non-adherence, or most appropriate treatment. Tree-based machine learning methods performed well across prediction use cases. One limitation was that algorithms were developed using structured data. Eleven studies (13%) developed and/or validated algorithms for early detection and focused on identification of ADEs or medication errors including dose outliers, medication duplications, or other prescribing irregularities. Various AI methods performed well for detection use cases; given the small sample, it was unclear which models performed comparatively better.

Conclusion: We identified several use cases where AI may be useful for reducing the frequency, severity, or duration of ADEs. Availability of new types of data, such as patient genetic information and access to unstructured clinical notes, may further accelerate progress. Our findings can help guide the direction of future work.

Primary Theme: Health Informatics

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Synthesis

AuthorNames: Ania Syrowatka, Wenyu Song, Mary G Amato, Dinah Foer, Heba Edrees, Zoe Co, Masha Kuznetsova, Sevan M Dulgarian, Diane L Seger, Aurélien Simona, Paul A Bain, Gretchen Purcell Jackson, Kyu Rhee, David W Bates

ID: 451
A Qualitative Study Exploring the Factors Influencing Exercise and Physical Activity in People with Lower Limb Amputations

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Background and Objectives: People with lower limb amputations (LLA) have persistent challenges with mobility and low levels of participation in physical activity. Exercise and physical activity are recommended for the management of amputation, common comorbid conditions (e.g. diabetes), and prevention of cardiovascular morbidity and mortality. Innovative interventions to support exercise and physical activity following traditional prosthetic rehabilitation are needed. This study aimed to explore the barriers and facilitators to physical activity and exercise in individuals with LLA.

Approach: We conducted a qualitative descriptive study situated within an interpretive research paradigm. Data were collected using semi-structured interviews by telephone or in-person. Adults with major LLAs were recruited from rehabilitation hospitals in Toronto, Canada and advertisements on social media. Purposive sampling was employed to ensure variation by sex and cause and level of amputation. We recruited health professionals with at least two years experience in amputation care from across Canada using snowball sampling. We purposively sampled for variation in profession and geographical location. Data were analysed using thematic analysis.

Results: Participants included 33 individuals with LLA (23 men, 10 women; age range: 28-84 years) and 18 health professionals (10 physiotherapists, six physiatrists, one prosthetist, and one lead of a community program). Six themes were generated which represent the perceived barriers and facilitators to performing physical activity or exercise including: External Supports, Availability of and Access to Community Resources, The Prosthesis, Pain and Comorbid Conditions, Motivation and Attitude, and Fear of Falling. Most of the themes were perceived as a facilitator for some people with LLA, while acting as a barrier for others depending on the context and an individual's unique circumstances.

Conclusion: Individuals with amputations often have complex health issues that benefit from exercise and physical activity. These findings provide us with a basis to begin to address modifiable barriers to exercise and physical activity for people with LLA and will inform the development of patient-centred interventions that address individuals' complex needs.

Primary Theme: Chronic Disease Management

Secondary Theme: Primary Healthcare

Methods: Qualitative Research Methods

AuthorNames: Crystal MacKay, Sander Hitzig, Amanda Mayo, Michael Devlin, Dilkas Steven, Leanna Lee

ID: 457
Hospitalization Experience of Patients with Non-Traumatic Spinal Cord Dysfunction: A Population-Based Study

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Background and Objectives: Spinal cord injury is devasting and costly. Despite robust data on traumatic injuries, non-traumatic spinal cord dysfunction (NTSCD) accounts for at least 50% of those affected, with increasing incidence expected as the Canadian population ages. To date, most research has been limited to clinical-based samples. A validated administrative data algorithm for case identification was recently developed in Canada. We use this approach to describe hospitalization experiences in a population-based sample of NTSCD in New Brunswick.

Approach: We characterized hospitalizations among NTSCD cases in NB using population-based administrative health data from the New Brunswick Institute for Research, Data and Training. A validated algorithm derived from ICD-10 diagnostic codes, that searched Discharge Abstract Data (DAD) (from April 1, 2003 to March 31, 2018) and National Rehabilitation System records (April 1, 2003 to March 31, 2013), was used to identify NTSCD cases. DAD records were used to characterize patient demographics and hospitalization experience. Hospitalizations were defined as NTSCD-related or non-NTSCD-related based on the presence or absence of NTSCD-related ICD10 code(s) as a significant diagnosis type in DAD records.

Results: We identified 368 NTSCD cases over a median follow-up 14.8 years. NTSCD was more frequent in males (65%), and in those over age 45 (with similar proportions for ages 45-64 (41%) and age 65+ (44%)). In total, there were 2528 hospitalizations over 4283 person-years (0.59 hospitalizations per person-year), with 25% of hospitalizations being NTSCD-related (0.15 per person-year) and remaining were related to other reasons (0.44 per person-year). All-cause hospitalization rate was highest among females age 65+ (0.72 per person-year) and lowest among females age 18-44 (0.38 per person-year). Length of stay (LOS) varied greatly; overall, median LOS was 8 days, whereas mean LOS was 24 days (sd: 58, range: 1650). LOS was longer for NTSCD-related (median: 19 days) than non-NTSCD-related (6 days) hospitalizations.

Conclusion: Our findings contribute to the limited population-based research characterizing NTSCD and are among the first to describe hospitalization experience in this population. Among NTSCD patients, we show hospitalization experience varies by age and sex, and that NTSCD-related hospitalizations are less frequent but longer in duration than hospitalizations for other reasons.

Primary Theme: Chronic Disease Management

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Healthcare Service or Policy Initiative

AuthorNames: Sandra Magalhaes, Colleen O'Connell, Chris Folkins, Paramdeep Singh, Ted McDonald

ID: 459
Transformation numérique du système de santé Albertain : Vers un système unifié

Background and Objectives: Le système de santé Albertain est le seul système de santé du Canada à être complètement unifié à travers la province. Les avantages que cette intégration lui procure sont nombreux, notamment dans la mesure de sa performance, donc la prise de décisions basées sur des données, et pour mener des changements significatifs à travers l'ensemble du système. Cette étude retrace le processus de transformation numérique (TN) ayant permis l'émergence du système de santé Albertain actuel.

Approach: L'approche privilégiée a été l'analyse documentaire, faite à partir des documents gouvernementaux, des rapports annuels du ministère de la santé et du système de santé albertain, ainsi que de la littérature scientifiques et grises disponibles. Une reconstruction chronologique du développement du système de santé de 1993 à aujourd'hui a permis d'effectuer une analyse des changements structurels majeurs et d'identifier les facteurs systémiques ayant permis cette transformation numérique. L'approche top-down employée permet de distinguer différentes phases importantes durant le développement du système de santé, puis de cibler les facteurs et le moments les plus pertinents de ce processus.

Results: Trois phases sont ressorties de notre analyse. La première phase (avant 2008), fait état d'un système de santé divisé, cherchant à s'intégrer davantage à travers des restructurations majeures. La deuxième phase (2008-2016), débute avec l'arrivée d'Alberta Health Services, le nouveau service unifié des soins de santé. Cette période a permis de mettre en place les bases structurelles qui permettront au système de santé de s'unifier. On assiste entre autres à l'émergence des Strategic Clinical networks, ainsi qu'à des législations gouvernementales sur le partage des données. Sous le couvert de l'intégration des soins, on assiste à la TN du système de santé. La troisième phase (2016 à aujourd'hui), est celle de l'intégration des différentes bases, caractérisée par l'implantation de Connect Care, un seul système d'information clinique.

Conclusion: Le système de santé albertain mise sur une approche intersectorielle pour évoluer et aborder les grands enjeux de santé de la province. L'analyse de leur processus de TN est une opportunité de mettre en lumières les nombreux enjeux pouvant survenir lors de l'unification numérique d'un système de santé provincial.

Primary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Secondary Theme: Health Informatics

Methods: Policy Case Study

AuthorNames: Yan Bertrand, Jean-Louis Denis, Aude Motulsky, Marie-Pierre Moreault

ID: 461

Improving the quality of prescription information in primary care EMR data using a machine learning approach

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Background and Objectives: Prescribed medication information from community primary care settings is important for quality improvement, medication recall lists, and prescribing surveillance. The wide variety of electronic medical record (EMR) systems in Canada means that this information is variable and often captured inconsistently, creating difficulties when using prescription data for secondary purposes. The objective of this study is to build a machine learning tool to clean unstructured (free text) prescribing data from primary care EMRs into consistent, standardized terms.

Approach: All unique de-identified prescriptions from the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) database will be used (~41 million records), representing approximately 1.8 million patients from 7 provinces. A machine learning algorithm will be developed to map unstructured/free text prescribing information from the EMR data to a standardized medication list (i.e. Health Canada’s Drug Product Database). A random sample of 5,000 prescriptions will be manually reviewed to measure the validity of the coding algorithm (e.g., sensitivity, specificity, PPV, NPV), as well as the accuracy of the algorithm in producing a correctly coded element for each field (e.g. name, dose, route).

Results: The first phase of the data ingestion process has been completed. A semi-supervised linear classifier was developed and the testing and tuning of this model are underway. Preliminary findings suggest a notable observed improvement in accuracy and processing speed compared to the previous CPCSSN pattern-matching approach for data cleaning. These advances are anticipated to demonstrate corollary effects for CPCSSN; for instance, enhancing the accuracy of CPCSSN case detection algorithms for those that rely on using prescribed medications in the definition. The outcomes of the validity assessment will be presented at the time of the conference.

Conclusion: This work will establish a method for cleaning prescribing data using a national standard, which will enable better use of primary care EMR prescribing data for secondary purposes. This process could potentially be applied to other types of free-text EMR data in the future.

Primary Theme: Health Informatics

Secondary Theme: Primary Healthcare

Methods: Data Mining/Big Data Analytics

AuthorNames: Stephanie Garies, Matt Taylor, Michael Cummings, Neil Drummond, Cliff Lindeman, Larka Soos, Colin Weaver, Sylvia Aponte-Hao, Rebecca Miyagishima, Anh Pham, Tyler Williamson

ID: 464
Understanding hospital competition in government-funded health systems

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Background and Objectives: The theoretical premise behind competition is that the self-interests of individuals inadvertently advance societal interests. The notion of competition found its way across health systems with the emergence of New Public Management. However, we do not understand how competition operates in health systems. The issue may be particularly obscure in government-funded settings where there is a significant role of regulatory bodies. We also do not know how health system actors conceptualize competition.

Approach: We approached the research question – how can we understand competition among hospitals in single-payer settings – with the philosophical orientation of social constructivism. Bain-Mason and Berwick's frameworks were used to develop the study's conceptual framework and interview guide. The study used an exploratory case study research design. The primary data collection tool was semi-structured interviews with stakeholders who have access to that information due to their roles in the health systems. The interview method was particularly fit to enable back and forth interactions, thereby revealing the drivers behind their decision-making and perceptions.

Results: In line with earlier studies, demand-side factors do not drive competition. Despite the absence of a profit motive and market exclusion threat, competition is present in both systems, even across hospital sites merged into a single provincial authority. Similarities in the manifestation of competition across systems may result from common organizational features and system pressures, including advocacy by hospital/site leaders, scarcity, technological innovations, uncertainty, and stakeholder expectations. Key contextual factors such as funding allocation strategies and performance management regimes can induce different types of competition. There are also conceptual distinctions in the characterization of healthy and unhealthy competition.

Conclusion: How competition manifests is a function of how system traits create specific forces in each system. The drivers of competition hold important implications for how health policies can stimulate positive competition and avoid destructive types of competition.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Qualitative Research Methods

AuthorNames: Nusrat Farhana, Adalsteinn Brown

ID: 467
Living or Dying Together: Exploring Frailty Concordance among Community Dwelling Older Couples

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Background and Objectives: Emerging literature suggests that among older couples, frailty in one increases risk of frailty in the other, setting the stage for potentially unmanageable burden and compromised caregiving capacity within the couple when both members are becoming frail. Considering the amplification of vulnerability resulting from such a scenario, research to improve our understanding of the co-evolution of frailty among spouses is urgently needed. We examined the concordance between frailty levels in community dwelling older couples.

Approach: A cross-sectional study design developed from administrative health data was used to compare levels of frailty in community dwelling couples over age 65 over a two-year period (April 1, 2017 to March 31, 2019). The validated hospital claims-based Hospital Frailty Risk Score was used to derive a frailty risk score that can be stratified into four categories: no, low, intermediate, and high frailty risk. Couples' frailty was modelled using logistic regression, adjusted for age, comparing high/intermediate frailty categories to the lower frailty categories.

Results: We identified over 37,000 community dwelling older couples. Overall, among the 74,000+ individuals, 59% were between 65-74 years of age, 34% between 75-84, and 7% over age 85. Nearly 50% of individuals were not hospitalized over the study period, 40% were hospitalized once, and the remaining were hospitalized twice. In couples in which both members were hospitalized, 11% of males and 10% of females were categorized as high/intermediate frailty risk. Unadjusted models demonstrated a 50% increased risk of frailty in one, if the other also has a high/intermediate frailty risk (OR=1.50, 95%CI: 1.33-1.69). While this effect was attenuated in age-adjusted models, frailty risk in one partner remained an important contributor to frailty risk in the other (OR=1.23, 95%CI: 1.08-1.38).

Conclusion: Our results suggest concordance among community dwelling older couples, consistent with findings from previous studies. If one is frail, their partner is more likely to be frail. While aging in place is a key priority for many jurisdictions, this may create additional burden on couples, without additional supports in place.

Primary Theme: Home Care, Long Term Care and Aging

Secondary Theme: Equity and Vulnerable Populations

Methods: Healthcare Service or Policy Initiative

AuthorNames: Sandra Magalhaes, Kyle Rogers, Chris Folkins

ID: 469

Does receipt of adequate care for common mental disorders influence costs over a 3-year period from a societal perspective?

Background and Objectives: Common mental disorders (CMD) such as depression and anxiety are associated with great societal burden. Only 50% of adults receive adequate care for CMD. However, rare are the studies assessing adequate care in older adults and associated costs from the societal perspective. This study aimed to evaluate the association between adequate care for CMD defined according to clinical guidelines and patient perspectives and the 3-year societal healthcare costs in older adults consulting in primary care.

Approach: The current study was based on 358 older adults recruited in the ESA-Services longitudinal study (2011-2016) and followed over 3-years and covered under Quebec's provincial drug plan. Treatment adequacy for CMD from the health system perspective was based on Canadian guidelines and relevant reports. Self-reported perceived adequacy of care for common mental health problems was also assessed. Health service utilization included inpatient and ambulatory visits and drugs dispensed. Unit costs were measured using provincial financial reports and the literature. Generalized linear models with gamma distribution and log link were used, while controlling for potential confounders. Analyses were stratified by severity.

Results: Overall, 39% of participants received an adequate pharmacological or psychological treatment (guidelines) for CMD and 72% of older adults self-reported adequate care for mental health problems. Participants receiving guideline adequate treatment incurred higher societal health care costs reaching 8,400$ CAD compared to individuals not receiving adequate treatment. Symptom severity influenced the association between receipt of adequate care and 3-year costs. Adequacy of care was associated with increased costs reaching $10,500 CAD in individuals with moderate to high severity of psychological distress; but not in those with low severity. Self-reported adequacy of care for common mental health problems was not associated with societal costs.

Conclusion: These results highlight the difference between patient and clinician perspectives when measuring adequate care and associated costs. From the clinician perspective, symptom severity seems to be the main driver of costs incurred. Future studies should assess how these two perspectives could be combined to better predict clinical outcomes and costs.

Primary Theme: Mental Health and Addictions

Secondary Theme: Health Economics/Financing/Funding (including cost and economic analysis)

Methods: Statistics/ Econometrics

AuthorNames: Catherine Lamoureux-Lamarche, Djamal Berbiche, Helen-Maria Vasiliadis

ID: 470
Evaluation of a Provincial eServices program during the COVID-19 pandemic

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Background and Objectives: The use of digital health tools was impacted during the coronavirus 2019 (COVID-19) pandemic. In March 2020, the Ontario eServices Program was established to support the deployment and use of digital tools within the healthcare system to improve access to health services, decrease wait times and facilitate smoother transitions to care. The objective of this study is to explore the utilization of the eServices program solutions after the onset of the COVID-19 pandemic.

Approach: We conducted a descriptive analysis of eServices data (eConsult and eReferral) from April – December 2020, after the onset of the COVID-19 pandemic. Utilization data the Ocean eReferral Network and Ontario eConsult Service (OES) was used for analysis. Data included number of cases, number of providers using the program, and regional distribution of cases. We also report on eConsult specific data such as time billed, response time, and provider survey as well as eReferral specific data such as provider and patient experience survey.

Results: During the study timeframe, 154 144 eReferrals and eConsults were submitted, representing 11 cases per 1000 Ontario residents. The OES experienced steady growth (22% increase) with an average time billed of 15 minutes and a response time of 1.2 days. 91% of providers stated that they received good advice or confirmed their course of action. After the COVID-19 early-stages (March-May), when clinics started to submit routine referrals again, eReferral saw a dramatic increase of 322% in uptake through December 2020. 87% of eReferral patients reported that they felt they waited an appropriate time to receive care. More than 5000 providers in Ontario submitted a case through the eServices program with 58% of the cases being submitted by providers in the Ontario Health West region.

Conclusion: The eServices program experienced a considerable increase in adoption, use, as well as sustained satisfaction by both providers and patients. By supporting the use of digital tools such as eConsult and eReferrals, the Ontario eServices Program aims to improve patient care delivery and overall provider and patient experience in Ontario.

Primary Theme: COVID-19

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Program or Policy Evaluation

AuthorNames: Sheena Guglani, Lori-Anne Payson, Heba Tallah Mohammed, Jatinderpreet Singh, Kayla Wierts, Andrea Miville, Tricia Wilkerson, Clare Liddy

ID: 474

Delivering person-centred care during the early stages of the COVID-19 pandemic: A scoping review.

Background and Objectives: Person-centred care (PCC) may seem at odds with public health goals during a global crisis. Providing person-centred care at the structural, process, and outcome levels can be challenging when faced with the uncertainty and restrictions imposed by COVID-19. The objective of this study was to identify what changes (modifications and adaptations) have been made to the delivery of person-centred care during the COVID-19 pandemic.

Approach: We performed a scoping review of articles published between December 2019 and August 2020 through MEDLINE, CINAHL, and EMBASE to identify changes made by providers and health systems for the delivery of person-centred care during the early stages of COVID-19. We used a PCC framework, following the Donabedian model of structure, process, and outcome to inform inclusion of study articles and classify the findings. The PCC framework provides a guideline for healthcare organizations on the delivery of quality person-centred care to patients and families.

Results: After full-text review, 127 articles identified changes to healthcare delivery that enabled or hindered PCC. Most articles (n = 58, 45.67%) were published in the USA and were published as research articles (n = 79, 62.20%). Other articles were published from the United Kingdom (n = 12, 9.45%) and Italy (n = 12, 9.45%). We found that 82.68% of articles included telemedicine to support remote care delivery. This encompassed a range of settings, from routine primary care appointments to consultations with multidisciplinary tumor boards. Structure changes identified included staff education, and reorganization of hospitals and health centres. Other changes include the restriction of visitors at hospitals and nursing homes, modified clinic hours, home delivery of prescription medicine, and the assessment of patient experience during COVID-19.

Conclusion: This review found several changes to providing person-centred care and highlights gaps in patient engagement. There is a need for future changes to actively engage patients as partners in system design and as participants in their care. Additionally, future studies should assess the impact of changes to the delivery of

Primary Theme: COVID-19

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Knowledge Synthesis

AuthorNames: Sadia Ahmed, Brian Steele, Ingrid Nielssen, Bishnu Bajgain, Kimberly Manalili, Paul Fairie, Sumedh Bele, Diane Lorenzetti, María José Santana

ID: 477
Developing an Evidence-based and Patient and Family-informed Healthcare Solution to integrate PROMs in Routine Pediatric Clinical Care

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Background and Objectives: Integrating Patient-reported Outcome Measures (PROMs) in routine clinical care positively impacts healthcare delivery and clinical outcomes, however, there is a scarcity of evidence around the implementation of PROMs in routine pediatric chronic clinical care. Therefore, KidsPRO, an innovative eHealth solution has been developed to facilitate the integration of PROMs into the routine pediatric clinical care. This project incorporates several novel ideas to make it an evidence-based, and patient and family-informed healthcare solution.

Approach: The implementation science approach is utilized to investigate the implementation of KidsPRO. A group of 10 patient/family-partners has been established from the inception to consult throughout the project. In first phase, a systematic review consolidated the existing evidence on integrating PROMs in the routine pediatric clinical care of various chronic conditions and to ensure evidence-based selection of PROMs for KidsPRO. In second phase, a qualitative study guided by the Theoretical Domains Framework (TDF) to identify barriers and enablers is currently underway. Finally, feasibility of integrating PROMs in routine pediatric clinical care is being assessed using quantitative surveys.

Results: Our systematic review yielded only 7 studies investigating the impact of PROMs on routine clinical care in pediatrics, which showed that integration of PROMs increased identification and discussion around psychosocial and emotional domains but showed mixed results with the impact on quality of care. In second phase, 13 qualitative interviews have been conducted and 10 have been analysed so far. Primary results show lack of integration of KidsPRO with currently used EMR system and lack of complete understanding of PROMs as the major barriers, which has been mitigated by developing user guides. Desire to provide patient and family-centered care and ability of PROMs to systematically understand patient’s needs are the major enablers. The feasibility study is underway, available results will be presented at the conference.

Conclusion: This study fills current literature gap integration of PROMs in pediatrics through comprehensive, systematic, and implementation science-informed exploration. Novelties of this project to develop an evidence-based and patient and family-informed healthcare solution could serve as a standard guide for designing patient-centered healthcare solutions in other health pediatric systems.

Primary Theme: Maternal and Child Health

Secondary Theme: Patient and Public Engagement

Methods: Mixed Methods

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ID: 480
Scheduling of Elective Patients in Hospitals during Pandemics: The Case of COVID-19

Background and Objectives: Thousands of elective procedures across Canada were cancelled or postponed due to the first wave of the COVID-19 pandemic. There is an argument to be made that hospitals were emptied to a greater extent than was necessary. This study aims to investigate the possibility of adaptive scheduling of elective admissions in a way that hospitals maintain higher utilization while still ensuring a level of flexibility for the admission of elective patients.

Approach: This research develops and utilizes a novel heuristic approach to solve the "patient admission scheduling" problem using advanced analytics techniques such as mathematical modelling and simulation. The solution is a schedule that allows more elective patients to be admitted during the pandemic waves while ensuring that the hospital can empty a certain number of beds for pandemic patients over a short warning period. This ability is called "nimbleness" in this study. The heuristic approach first creates schedules over a planning horizon and then determines which scheduled patients to cancel (if any) on the day of service to ensure the nimbleness.

Results: To validate the performance of the solution method, I created a sample of 2467 elective patients, 50 ICU beds, and 400 inpatient beds, comparing my scheduling policy with the prevailing scheduling policy in Canadian hospitals during the COVID-19 pandemic. The results for a 30-day planning horizon showed that the proposed scheduling policy let hospitals schedule and admit over 20.5% more elective patients than the existing policy. According to the results, with the prevailing scheduling policy, only 1797 out of the 2467 elective patients in the sample instance can be scheduled over the 30-day planning horizon, while the proposed scheduling policy enables the hospital to schedule 2167 elective patients over the same planning horizon.

Conclusion: The results suggest that if we keep the hospital nimble, we can quickly reduce the census in the hospital to make room for COVID patients as needed, rather than in a pre-emptive fashion means the hospital stands empty for months. We cannot avoid cancellations, but we can minimize them.

Primary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership)

Secondary Theme: COVID-19

Methods: Emerging Methods (e.g. new developments in observational study design)

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ID: 482

Building Hope: Mental Health Impacts of COVID-19 on Diverse Youth and Families in Canada

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Background and Objectives: From the outset, the unique circumstances of COVID-19 have not only increased uncertainties related to the sudden adjustments in daily routines, but also caused disruptions in accessing essential community supports for diverse groups. This mixed methods study focused on the lived experiences of ethnocultural youth and families in Canada, identifying key barriers and opportunities to inform service programming and policy recommendations that can better meet their mental health needs during the pandemic and beyond.

Approach: MHCC's Headstrong initiative administered the youth survey (April – June 2020) and family survey (June – August 2020) with a total sample size of 137 and 481 respondents, respectively. Thematic analysis was conducted to identify key challenges, coping strategies, and help-seeking behaviours used by diverse youth. A similar approach was applied to the family survey data, where a representative sample was collated to analyze geographically variable and ethnically diverse subgroups. Lastly, a synthesis of scientific and grey literature was conducted to identify emerging issues of COVID-19 on the unmet and anticipated mental health needs of youth and families in Canada.

Results: Multiple challenges have impacted youth and families during the pandemic, including increased feelings of isolation and loneliness, difficulties in remote learning with in-person school closures, and financial distress, to name a few. Also, marginalized groups were disproportionately affected from inequitable access to communication technologies to stay connected virtually, further deepening the digital divide. Some reported living in smaller homes with regular conflicts, thus leading to increased anxiety and potential exposure to violence. For many families, the pandemic meant parenting in with high levels of uncertainty and unpredictability while managing work commitments, navigating community resources, fulfilling care responsibilities, and homeschooling children of all ages. Despite these challenges, there was also evidence of post-traumatic growth, hope and the importance of fostering community resiliency when managing adversity.

Conclusion: Systems-level transformation is urgently needed, including 'multi-sectoral capacity bridging' to better support people at-risk of and living with mental health challenges. Lastly, disaggregated sociodemographic data on marginalization must be collected, analyzed and disseminated to improve equitable access to evidence-based and recovery-oriented mental health supports among diverse populations in Canada.

Primary Theme: COVID-19

Secondary Theme: Mental Health and Addictions

Methods: Mixed Methods

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ID: 486

Using deliberative dialogue methods for building consensus: A comparison of face-to-face and virtual approaches

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Background and Objectives: Integrated knowledge translation (IKT) is an important component for uptake of evidence and change in healthcare. It is a collaborative approach to research with equitable participation of knowledge-users (policy/decision-makers, providers) and patient partners. Deliberative dialogue (DD) is an IKT approach used to build consensus and co-create solutions. Given geographic barriers and now pandemic social distancing restrictions, there was a desire to understand if and how virtual dialogue could be used in policy and practice change.

Approach: We used mixed methods to study face-to-face and virtual DD. Dialogues were conducted in 2 different settings for health services and policy discussions. A knowledge synthesis was circulated to participants prior to the session. Dialogues were 2-3 hours in length and used workshop style activities (e.g., small and large group discussions, priority setting). Data regarding the effectiveness of the DDs were collected via surveys (adapted from McMaster Health Forum Toolkit) from participants, field notes taken during the dialogue session, as well as notes from debriefing sessions with facilitators and notetakers. Data analysis used descriptive statistics and qualitative thematic analysis.

Results: Results across dimensions measured were very similar in both the face-to-face and virtual dialogues. Dimensions included: understood the purpose of the DD; felt contributions were heard; fair representation; actions would help change policy and practice; and actions can be easily carried out. Both types of dialogues have potential barriers for participants such as accessibility (transportation, comfort of technology) and the importance of a safe and open environment. Both types of dialogue resulted in successfully bringing stakeholders together, engaging stakeholders in a structured and productive conversation, and developing appropriate actions in a timely manner.

Conclusion: Both face-to-face and virtual forms of DD resulted in successfully attaining their goals. It is critical to ensure with either approach that key components are addressed in the process. Either, can be effectively used, to achieve consensus building on actions and priorities for policy and practice change in healthcare.

Primary Theme: Knowledge Translation & Exchange (includes KTE methods)

Secondary Theme: Health Policy, Healthcare Reform (includes priority setting, politics)

Methods: Mixed Methods

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ID: 495

Patient and provider perspectives on how migrants access prescription drugs in Ontario

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Background and Objectives: In Canada, migrant populations are less likely to use health services or obtain prescription drug coverage, compared to their Canadian-born counterparts. This research examines factors that influence migrants' access to prescription drugs. It explores factors that impede migrants' access to essential medications and the mechanisms in place to assist uninsured and under-insured immigrants and refugees. This study aims to inform key policies and practices pertaining to healthcare for immigrants and prescription drug programs in Canada.

Approach: A constructivist grounded theory methodology was employed to facilitate the development of an integrated set of theoretical concepts that synthesize, interpret and display processual relationships related to prescription drug coverage access for immigrants and refugees. Following ethics approval, 25 migrant patients and migrant-serving providers were interviewed using semi-structured interviews between July and December 2019 in Ontario, Canada. Qualitative data collected from key informant interviews were analyzed using grounded theory techniques and a constant comparative approach.

Results: Participant perspectives on migrants' experiences accessing prescription drugs revealed four challenges: informational gaps, financial constraints, coverage inconsistencies and social differences. These impediments to medication access lead to refusals of care, medication anxiety, coverage unawareness, coping behaviours to manage the loss of access to prescription drugs and long-term health consequences. Supports identified include navigational aid, providers who are coverage knowledgeable and culturally sensitive, and short-term solutions such as funds, samples and compassionate programs. Gaps in short-term supports were perceived by participants who proposed key policy and practice recommendations, primarily in support of universal pharmacare.

Conclusion: Solutions to address barriers to medication access for migrant populations involves intersectoral policy approaches, such as universal pharmacare complimented by drug monitoring system safeguards and informational supports, to alleviate difficulties migrant patients experience to access the medications they need.

Primary Theme: Equity and Vulnerable Populations

Secondary Theme: Pharmaceutical Policy

Methods: Qualitative Research Methods

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ID: 497

Implementation of a Computerized Provider Order Entry System in a Pediatric Hospital in Quebec, Canada

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Background and Objectives: The Centre Hospitalier Universitaire Sainte-Justine (Montreal, Canada), a pediatric academic tertiary hospital, is one of the first institutions in the province of Quebec that has begun implementing a locally-developed computerized provider order entry system (CPOE) in October 2019 (GESPHARxLite by CGSI@SOLUTIONS-TI). This paper aims to 1) describe the implementation process, 2) measure the impact of the CPOE system on medication errors, and 3) identify vulnerability issues related to the configuration of the CPOE system's design.

Approach: i) Prescription problems, identified through 1) the interventions reported from the clinical pharmacists and 2) the manual review of the clinical records, were collected daily for one workweek before CPOE implementation and one year later. Additionally, we reviewed medication incident reports from the year before and following CPOE implementation to understand the clinical process step during which they occurred. ii) To identify usability problems related to the CPOE system, four experts completed a walkthrough of seventeen erroneous testing orders. Experts were asked to enter these orders and evaluate the degree of difficulty associated with entering these orders (from easy to impossible).

Results: A total of 375 and 521 medication orders were collected in August 2019 and August 2020, respectively. Implementing a CPOE system that requires filling mandatory fields has eliminated previous issues with prescription conformity (e.g., missing information, which represented 38% of all medication order errors). Pharmacists intervened to adjust orders that were entered incorrectly in the system. Other clinical tasks (e.g., prescribing or adjusting orders) remained similar before and after implementation. The CPOE system was robust at detecting interactions, duplicate medications, and some allergies. Seven erroneous test orders were scored as an easy order and had no workarounds or alerts preventing the provider from prescribing them. There is a need for a more advanced clinical decision support system to identify these issues and improve patient safety.

Conclusion: This paper is the first study in Quebec that describes and evaluates the impact of a locally-developed CPOE. We developed indicators adapted to the local context and the pediatric setting to assess the safety of the medication orders. The CPOE system eliminated orders with missing information but generated other errors.

Primary Theme: Health Informatics

Secondary Theme: Health System Performance (including access to care, quality, safety, efficiency, leadership

Methods: Experimental or Quasi-experimental Methods

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