Oral Presentations

BOOK OF ABSTRACTS

CAHSPR 2021

A1.1

Canadian Atlas of Palliative Care – Pilot Study: Hindsight, Insight and the Road Ahead

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Primary Theme: Health System Performance

Background and Objectives: There is considerable variation across Canada in terms of palliative care related policies and funding, access to services, integration across care settings, access for vulnerable populations, inclusion into undergraduate and postgraduate health professions curricula, and community engagement.

Work is underway toward a Canadian Atlas of Palliative Care, similar to Atlases for Europe and other jurisdictions. The pilot study utilizes a mapping approach in three regions of Ontario, with the goal to establish feasibility across Canada.

Approach: A mixed methods, multi-pronged approach across 10 domains and 55 elements/indicators - adapted from the European Atlas to the Canadian context - is used to provide a comprehensive picture. It includes:

a)   Data collection from publicly accessible sources (e.g., websites of palliative care organizations/services);

b)   Targeted requests for aggregate health human resources data;

c)   Electronic surveys of palliative care clinicians, educators and coordinators; and

d)   Key informant interviews with regional (provincial/territorial, national) palliative care leaders and educators.

Three regions - former Local Health Integration Networks (LHINs) in Ontario - are included in the pilot: Central East (CE), Champlain, and Hamilton-Niagara-Haldimand-Brant (HNHB).

Results: Data collection is currently under way within the domains of:

1.   Regional Demographics;
2.   Policy;
3.   Services:
   i.   Acute Care Sector,
   ii.   Community-Based Services;
4.   System Performance;
5.   Education;
6.   Professional Activities;
7.   Indigenous Peoples;
8.   Focused Populations (e.g., homeless and marginally housed, immigrants and refugees, pediatrics);
9.   Community Engagement; and
10.   Other Activities.

Early results are showing differences between what is being described in public-facing websites and the reality in the field.

The pilot process is informing, testing, furthering:

•   Atlas approaches;
•   Data collection, analysis, and interpretation;
•   Knowledge dissemination; and
•   Scaling up requirements (processes, resources, etc.).

As a powerful tool, the Canadian Atlas will allow for comparisons across domains and elements/indicators within Canada and its jurisdictions and internationally, and drive knowledge dissemination, best practice implementation, and systems change.

Conclusion: The pilot study is underway to provide a graphical depiction of the state of palliative care. A useful tool for policymakers, planners, and funders, it will test approaches for feasibility, highlight areas of excellence/gaps, describe best practices for evidence-based decision making and serve as a springboard for pan-Canadian roll out.

Digging Deeper: A Qualitative Study of the Unintended Consequences of Performance Management in Healthcare Delivery Systems

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Primary Theme: Health System Performance

Background and Objectives: Health systems are increasingly implementing large-scale programs to incentivize performance using contracts, scorecards, rankings, rewards, and sanctions. Studies of these "Performance Management" (PM) interventions identified unintended negative consequences. However, most studies were conducted outside Canada, focus on a single PM intervention not whole PM systems, and rarely examine unintended positive consequences. The aim of this study was to investigate the negative and positive unintended consequences (UCs) of a PM system from multiple stakeholder perspectives.

Approach: We conducted a secondary analysis of data from a qualitative study involving semi-structured interviews with 156 stakeholders involved with or impacted by a PM system used to oversee 40 care delivery networks across Ontario, Canada. The PM system consists of 10 PM interventions and is enforced by an external governance agency. Participants were recruited using purposeful and snowball sampling. We began with a rapid review of UCs of PM in healthcare to synthesize UCs into a comprehensive typology to guide our coding and analysis. We undertook a hybrid deductive-inductive approach to coding and performed a thematic analysis.

Results: Interviews were conducted with administrative and clinical stakeholders from the external governance agency (n=59) and from the networks (n=88) as well as from other stakeholder groups (n=9), including patients. Analysis of the qualitative interview data is currently underway. Participants' assessments of the PM system were largely positive. Preliminary results suggest that approximately half of the negative UCs described in the literature were identified by participants, notably increased workload, selective attention, gaming, and reduced staff morale. Participants also identified two positive UCs: (1) improved staff morale and collective efficacy and (2) improved forecasting and capacity planning. We are currently examining which UCs were most common, which PM interventions were implicated most, how perceptions of UCs differed between stakeholder groups, and possible relationships between UCs.

Conclusion: Policymakers and leaders can use our typology and the results of our qualitative analysis to inform the (re)design of PM interventions and systems. While UCs can never be fully eliminated, we can strive to minimize those that are negative and leverage those that are positive.

A1.3

Optimizing the use of person-centred quality indicators by Canadian healthcare organizations: a mixed methods study assessing the readiness, barriers and facilitators to implementation

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Primary Theme: Health System Performance

Background and Objectives: Increasingly, healthcare organizations across Canada are investing in the measurement of person-centred care (PCC). However, implementation of such measures do not often consider the factors that influence their uptake and use. Thus, impacting the effectiveness of these measures to drive meaningful changes in care. To ensure optimal implementation of Person-Centred Quality Indicators (PC-QIs), we assessed the readiness of healthcare organizations across Canada and explored their perceived barriers and facilitators to implementing and using PC-QIs.

Approach: A survey was conducted with representatives of healthcare organizations that guide the development and/or implementation of person-centred care measurement in Canada between November 2019-March 2020. The survey was comprised of two sections testing organizational readiness theory: the first, assessing readiness as they relate specifically to using PC-QIs; the second was based on the Organizational Readiness for Change Assessment tool. Follow-up interviews were conducted with a sample of survey respondents to further explore barriers and facilitators to implementing PC-QIs between September 2020-January 2021. Survey results were summarized using descriptive statistics. The interviews were analyzed using the Consolidated Framework for Implementation Research.

Results: There were 33 Canadian regional healthcare organizations represented in the survey, across all 13 provinces/territories. Across 26 PC-QIs, >85% of organizations indicated interest in implementing the indicators. Only five PC-QIs that were considered highly feasible to implement (data already being collected and quality improvement processes in place to make changes). These PC-QIs were related to coordination of care, communication, structures to report performance, engaging patients and caregivers, and overall experience. A representative sample of 10 organizations participated in interviews. Preliminary findings show key barriers were: prioritization among many indicators, resources (staff capacity for data collection, analysis, and reporting), shift in focus to COVID-19, and health provider motivation. Facilitators included: high interest in PCC measurement among leadership and alignment with provincial/regional strategic direction.

Conclusion: Despite high interest and policy alignment to use PC-QIs to improve PCC, "readiness" to implement them effectively remains a challenge. Efforts are needed to ensure that organizations have the capacity to collect, use, and report data on PCC in order to make the needed improvements that matter to patients.

Barriers and facilitators to virtual care in a tertiary hospital system during the COVID-19 pandemic: A survey evaluation

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Primary Theme: Health System Performance

Background and Objectives: Despite the availability of virtual options for healthcare providers to interact with patients, most visits continued to be conducted in person and optimal approaches remained unknown. The COVID-19 pandemic resulted in a shift from in-person to virtual visits for many outpatients, presenting an opportunity to evaluate virtual visits across a wide spectrum of care. A survey study was conducted to evaluate barriers and facilitators, feasibility, and acceptability of virtual visits in a tertiary hospital system.

Approach: Three surveys were developed to gather feedback from healthcare providers (physicians, nurses, allied health), patients, and caregivers. Survey questions addressed demographic information, use of technology, experience with virtual visits, and preferences for future virtual care. Healthcare providers from selected clinical areas were invited to complete an electronic survey and a representative convenience sample of patients and caregivers from those clinical areas were invited to complete a survey electronically or by telephone. Results from quantitative and qualitative data analyses were shared with the hospital's virtual care operations team and clinical leaders to prioritize opportunities for action in the hospital system.

Results: Surveys were completed by 50 healthcare providers, 131 patients, and 9 caregivers in the clinical areas of cardiology, rehabilitation, and neurology. Patient and caregiver acceptability of virtual visits was high, with 35% reporting they were very satisfied, 36% satisfied, and 9% somewhat satisfied with the virtual format of their visit. 60% of providers indicated they would prefer to use telephone over video for future virtual visits and 96% stated they would continue offering virtual follow-up visits for appropriate patients. 42% of providers stated virtual visits were more efficient than in-person while 34% of providers stated virtual visits were less efficient. Key opportunities for improvement included optimization of video platforms, availability of equipment and space, pre-visit patient instructions, and appropriate selection of patients for virtual visits.

Conclusion: Results indicated that virtual visits were generally feasible and acceptable to healthcare providers, patients, and caregivers in the clinical areas evaluated. Survey evaluation continues in other clinical areas. Information about key barriers and facilitators are being used to optimize virtual care both during the COVID-19 pandemic and beyond.

A1.5

Rural telemedicine use before and during the COVID-19 pandemic: A repeated cross-sectional study

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Primary Theme: Health System Performance

Background and Objectives: Accessing healthcare in rural communities has proven challenging to patients due to a scarcity of healthcare professionals serving rural populations. The COVID-19 pandemic has led to a notable increase in telemedicine adoption, however its impact on telemedicine utilization at a population level in rural/remote settings remains unclear. We aim to evaluate changes in the rate of telemedicine use among rural populations and identify patient characteristics associated with telemedicine use, prior to and during the pandemic.

Approach: We conducted a population-based, repeated cross-sectional study on all telemedicine visits stratified by rural versus urban from January 1st, 2012 to June 30th, 2020 using administrative data from Ontario, Canada. Rural patients were defined as having a Rurality Index of Ontario score of 40 or higher. Chi-square tests were conducted to assess the characteristics of patients who have used telemedicine. To investigate telemedicine adoption among vulnerable rural patient groups, we calculated the rates of telemedicine use for older adult patients (age 65+) and for several chronic disease patient groups (COPD, CHF, asthma, hypertension, diabetes, angina, mental illness).

Results: The rate of telemedicine visits among rural patients significantly increased from December 2019 to June 2020 (11 to 147 visits per 1000). A similar but steeper increase was seen among urban patients (7 to 220 visits per 1000). The number of rural patients who received at least one telemedicine visit rose from 2012 (1.4%) to 2020 (28.1%). The majority of telemedicine users were from the North pre-COVID (71.1%), however the distribution across regions became more balanced during COVID, with the East being the highest user group (33.7%). The majority of users were living in less versus more rural areas in 2020 (90.2% vs. 9.8%). There was a sharp increase in telemedicine adoption from pre- to during COVID across all chronic disease subgroups and older adults.

Conclusion: Rural patients globally face many barriers to care and telemedicine is an important way to help patients access needed healthcare. Telemedicine adoption grew in rural areas during the pandemic and this increase was prevalent across various subgroups. Sharper increases in visit rates were seen among patients from less rural regions.

The Canada Health Data Research (HDR) Alliance – increasing the "findability", accessibility and utility of important Canadian data assets

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Primary Theme: Collaborative Healthcare Improvement Partnerships

Background and Objectives: Health Data Research Network Canada (HDRN Canada) is a pan-Canadian network of organizations working to facilitate and accelerate multi-jurisdictional research. Early requests to HDRN Canada's Data Access Support Hub (DASH) made clear that many researchers are interested in linking data from other organizations to HDRN Canada member organizations' data holdings. HDRN Canada is establishing the Canada HDR Alliance to strengthen relationships with research groups interested in expanding data availability and improving Canada's health data landscape.

Approach: The nascent Canada HDR Alliance is being designed as a scalable partnership that expands the sources and types of data available in a coordinated way, minimizes duplication, and retains organizational independence. HDR Alliance membership is focused on partners with large, multi-jurisdictional cohort, clinical trial, and/or clinical data collections with the authority and intention to link and make data available to researchers. A project-based pilot approach is starting with the Canadian Partnership for Tomorrow's Health (CanPath) and the Canadian Longitudinal Study on Aging (CLSA), two longitudinal, consented cohort studies with participants across Canada. Learnings will support growth of the HDR Alliance.

Results: Multi-jurisdictional research projects using CanPath and CLSA's linked data are underway. Their data have been, or will be, linked to provincial population-level, administrative data holdings and included on DASH. Through this partnership, challenges faced by researchers in navigating different data access processes across jurisdictions are being addressed, with access to richer data made possible in an efficient and timely matter.
Through the HDR Alliance, researchers have a mechanism to conduct large-scale studies not possible without CanPath's large and pan-Canadian reach, while benefiting from HDRN Canada's expertise, tools, systems and connections with its data centres. The partnership expands the access and relevance of CLSA's detailed longitudinal data to the Canadian health services and policy community that will allow 'cell to health system' research across jurisdictions.

Conclusion: Strong partnerships are critical to unlocking the potential of Canada's data assets and expertise. The HDR Alliance provides a collaboration mechanism to increase the "findability", accessibility and utility of data assets.
The model is expected to increase research opportunities, DASH's utility and the impact of data held by Alliance members.

A2.2
Essential Together: Moving co-developed policy guidance into action

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Primary Theme: Collaborative Healthcare Improvement Partnerships

Background and Objectives: The shift to more open family presence policies in Canadian hospitals - 32% in 2015 to 73% in early 2020 - demonstrates the valuable role that caregivers play in care of their loved ones. In response to Covid-19, blanket visitor restriction policies were instituted, prohibiting caregivers from entering facilities and partnering in care. Essential together is a program that moves co-developed policy guidance into action to support facilities to safely reintegrate essential care partners in care.

Approach: A multi-phase approach has led to the development of new programming to support the safe reintegration of essential care partners. Multiple pan-Canadian webinar discussions put a spotlight on issues of family presence during the pandemic. We convened an Expert Advisory Group to co-develop next steps for safe caregiver reintegration. We took an innovative policy lab approach to co-develop policy guidance together with those that develop policy, implement policy and are impacted by policy. Building on this work, we have developed evidence-based programming that moves policy into action, ensuring an approach that balances the risks of Covid-19 with patient-centred practices.

Results: Essential Together is a multi-pronged program that targets different audiences to move policy into action. Dissemination strategies specific for the policymakers focus on differentiating the role of 'visitor' from 'essential care partner' that recognizes the value of care partners. Wraparound support has been developed for those who implement policy, starting with a call to action, self-assessment tool to identify opportunities for change, publicly available curated tools and resources to support change, peer to peer learning opportunities and individual coaching are available to health and care organizations across Canada. A steering committee led by patients, residents, caregivers is leading the development of specific programming that targets their needs to support a push-pull movement of policy into action.

Conclusion: In a time of pandemic, Essential Together is a multi-pronged program that has engaged broadly to co-develop policy guidance and has taken an evidence-informed and balanced approach to move policy into practice that supports patient-partnered practices and the safe reintegration of essential care partners during the pandemic and beyond

A2.3

Using a Learning Health System Approach to Evaluating an Ontario Health Team in East Toronto

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Primary Theme: Collaborative Healthcare Improvement Partnerships

Background and Objectives: The East Toronto Health Partners (ETHP) were one of the first Ontario Health Teams (OHT) to launch in 2019. The ETHP is co-creating an integrated model of care in which hospital, primary care, community providers and patients and families work together as one coordinated team. By embedding rapid cycles of evaluation, ETHP aims to leverage a learning health system approach to support strategic expansion of integrated models of care across our entire population.

Approach: Our integrated model of care is designed to improve population health through a range of interventions tailored to meet the changing needs of local communities. Two of the largest OHT projects were chosen for comprehensive evaluation. The evaluation examines not only whether the projects work, but why, how and for whom. Aligned with the Quadruple Aim, a developmental evaluation approach, led by an embedded researcher, is employed to assess context, mechanism of success, and outcomes. The evaluation efforts also focus on building capacity for internal teams to engage in ongoing evaluation activities.

Results: An evaluation steering committee including two patient advisors was created to support the development of an Evaluation Framework and provide advice on the ongoing evaluations of ETHP's efforts to create a more integrated system of care in East Toronto. To build capacity, three evaluation workshops were held focusing on evaluation types, developing logic models, and measurement for all involved in implementation and evaluation of the chosen projects. An evaluation template was developed for use across the projects. The embed researcher worked closely with the teams to develop logic models and choose appropriate measures. Teams have started data collection and analyses. A partnership survey is being developed to assess the integrated way of working. Assessing teams' capacity and needs for the evaluation is also underway.

Conclusion: Building on these foundational steps, the ETHP are using a Learning Health System approach to create a more integrated system of care for residents and providers across East Toronto. Presenters will share our evaluation approach and our early learnings, as well as next steps in our development.

Leveraging Community Support Services in Proactive COVID-19 Surveillance: An Embedded Approach to a Mixed Methods Research Study

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Primary Theme: Collaborative Healthcare Improvement Partnerships

Background and Objectives: The COVID-19 virus has placed unprecedented demands on the Canadian healthcare system, restricting access to care for many older adults. However, community support organizations continue to provide essential services to older adults, including meal deliveries and day programs. They are well-positioned to identify at-risk clients and triage them to required health- or social-care services. This embedded study evaluated the implementation of a standardized COVID-19 surveillance tool into a community support service agency in South-Western Ontario.

Approach: Embedded researchers partnered with a community support service agency to implement the interRAI COVID-19 Vulnerability Screener (CVS) and conduct a mixed methods analysis of the implementation process. Staff and administrators participated in a series of focus groups to share their experiences integrating the screener in their daily practices. Quantitative analysis of the results of all screened clients was conducted to describe client characteristics during the pandemic, such as frailty and caregiver burden. A working group met regularly to reflect on emerging results. An implementation science framework was used to integrate the results from both strands to generate an implementation guide.

Results: Implementation of the screener involved 500+ assessments in the first month of use and leveraged a robust network of internal and external health- and social-care services for clients in need. Approximately 20% of clients screened were identified as at-risk of negative health outcomes, or were in need of urgent support. Staff noted that clients benefited from the opportunity to socialize and receive an up-to-date care assessment. Several factors were involved in the successful implementation, including strong organizational leadership and an 'all hands-on deck' mentality. All screening staff needed a strong familiarity with both health- and social-care programs. Challenges included using the screener with a unique cultural population, initially determining post-screener processes, and establishing communication processes with primary care providers.

Conclusion: By leveraging community support service organizations, clients who may otherwise fall through the cracks during the pandemic can be identified and triaged without additional burden to the health-care system. Standardized self-report tools provide a structured manner to mobilize this sector and understand the impact of COVID-19 on a community.

A2.5

Leveraging Remote Patient Monitoring to Provide Chronic Disease Management and COVID-19 Care in Burlington and Surrounding Areas

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Primary Theme: Collaborative Healthcare Improvement Partnerships

Background and Objectives: Launched in November 2020, the Community Remote Patient Monitoring (CRPM) Program supports patients to live well at home while managing their chronic disease or isolating at-home with mild COVID-19 symptoms. The CRPM Program is an initiative of the Burlington Ontario Health Team, led by Burlington Family Health Team, Joseph Brant Hospital (JBH), Halton Region Paramedic Services, Thrive Group, and Hamilton Niagara Haldimand Brant Local Health Integration Network, and built on a pilot initiated at JBH.

Approach: The goal is to build a sustainable and expandable model of care that links patients and their circle of care (Primary Care Provider, family, caregivers) with an inter-disciplinary clinical team using remote monitoring technology. Patients submit daily measurements or surveys that prompt follow-up by a Registered Practical Nurse or Community Paramedic if concerning symptoms arise. If needed, the Team can arrange a home visit, connect with other Team members (Nurse Practitioner, Pharmacist, Allied Health, Community Connector), or facilitate connections to other care providers. A common platform enables Team members across different organisations to share in the patient's care.

Results: The embedded researcher is working with the project team to monitor program outputs and outcomes and produce a 6-month evaluation based on activity to March 2021. Outputs include referral volumes and sources, patient inputs, provider calls, and discharge disposition. Expected outcomes include improving the patient's knowledge of and ability to cope with their health condition, increasing the patient's sense of being supported, increasing the patient's comfort with technology, and improving communication between primary care and community-based providers. Over the long-term, the program is expected to reduce unscheduled non-admit ED visits.

The CRPM program aims to define a blueprint for additional remote monitoring initiatives within JBH and Burlington OHT, by validating engagement, referral, onboarding, and technology deployment processes and ultimately create a playbook for future initiatives.

Conclusion: The CRPM Program offers safe and accessible symptom monitoring and access to a care team for patients with COPD, CHF, or COVID-19 living in Burlington and surrounding areas. We anticipate this program will deliver positive results on patient experience and outcomes, provider experience, and return on investment.

A3.1

The promises and pitfalls of forty-two-year trends of public health spending: Canadian evidence

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Primary Theme: Health Economics/Financing/Funding

Background and Objectives: Globally, public health (PH) has consistently received one of the smallest shares of national health expenditures (1.6%-5.8%; OECD, 2020). There is little investigation of the evolution of PH spending compared to other sectors and data quality complicates such exercises. Our objective was two-fold: first, to examine forty-two years of PH spending trends in Canada; second, to examine potential PH reporting discrepancies between the Canadian Institute for Health Information (CIHI) estimates and provincial government budgetary expenditures.

Approach: We created spending indices, akin to the Consumer Price Index, with a base value of 100 in 1975 and computed annual per capita spending estimates in constant 1975 CAD$ from 1975 to 2017. The primary index was for PH spending; for comparative purposes, we created indices for overall health sector spending without PH, and the three largest spending sectors in Canada (hospitals, physicians, pharmaceuticals). Next, we compared CIHI estimates with publicly available provincial estimates, combined with budgets from affiliated provincial PH organizations. Analyses were conducted for seven provinces over six years (2012-17), with all completed by the conference.

Results: We observe substantial real growth in PH spending particularly after the late 1990s and multiplied by five since 1975 (2017 index average: 510). Exceptions are Nova Scotia (153) and Quebec (138) where growth in per capita spending remained relatively low. Besides spending in pharmaceuticals (1472), trends in PH spending saw greater increases compared to physicians (334) and hospitals (211). There are, however, discrepancies between official national spending estimates and sub-national governments, with the national reports being significantly larger. Estimates for Nova Scotia and Quebec report the smallest discrepancy, with the sub-national estimates representing 82% and 46% (on average) of the nationally reported estimate, respectively. While only examined over a six-year period, this discrepancy is nevertheless largely time invariant for most provinces.

Conclusion: Long-term real trends indicate that PH spending grew more quickly than some other parts of the health system in Canada. These increases could be linked with the evolution of health outcomes. Trends in public health spending need further investigation to address data discrepancies, even though those appear relatively time invariant.

A3.2

Development and validation of a cancer model to predict risk of poor performance status and severe symptoms over time: The PROVIEW+ tool

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Primary Theme: Health Economics/Financing/Funding

Background and Objectives: There are numerous predictive cancer tools that focus on survival. However, no tools predict risk of low performance status or severe symptoms, which are important for patient decision-making and early integration of palliative care. The aim of this study was to develop and validate a model for all cancer types that predicts the risk for having low performance status and severe symptoms.

Approach: A retrospective, population-based, predictive study using linked administrative data from cancer patients from 2008-2015 in Ontario, Canada. Patients were randomly selected for model derivation (60%) and validation (40%). The derivation cohort was used to develop a multivariable logistic regression model to predict the risk of having the reported outcomes in the subsequent 6 months. Model performance was assessed using discrimination and calibration plots. The main outcome was low performance status using the Palliative Performance Scale. Secondary outcomes included severe pain, dyspnea, well-being, and depression using the Edmonton Symptom Assessment System. Outcomes were recalculated after each of 4 annual survivor marks.

Results: We identified 255,494 cancer patients (57% female; median age of 64; common cancers were breast (24%) and lung (13%)). At diagnosis, the risk of having low performance status, severe pain, well-being, dyspnea, and depression in 6-months is 1%, 3%, 6%, 13% and 4%, respectively for the reference case (i.e. male, lung cancer, stage I, no symptoms). Generally these covariates increased the outcome risk by >10% across all models: obstructive lung disease, dementia, diabetes; radiation treatment; hospital admission; high pain; depression; Palliative Performance Scale score of 60-10; issues with appetite; or homecare. Discrimination was high across models.

Conclusion: The model accurately predicted changing cancer risk for low performance status and severe symptoms over time. Providing accurate predictions of future performance status and symptom severity can support decision-making and earlier initiation of palliative care, even alongside disease modifying therapies.

A3.3

Mobile Integrated Healthcare Delivered by Emergency Medical Services: An Economic Analysis of Real-World Data

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Primary Theme: Health Economics/Financing/Funding

Background and Objectives: Mobile integrated healthcare (MIH) is a new model of community-based healthcare to provide on-site acute and chronic care. Niagara emergency medical service (NEMS) started MIH in 2018. However, its economic impact is unknown. The objective of this study was to compare time on task and cost between MIH and ambulance delivered by NEMS from a public payer's perspective.

Approach: This was a secondary analysis of EMS calls received and responded by the NEMS in 2016-2019. Emergency calls serviced by MIH in 2018-2019 were used as an intervention cohort. Propensity score matching was used to identify a 1:1 matched cohort of calls serviced by regular ambulance for the same period and two years prior. The main outcomes were the time on task (including time on scene and time at hospital) and costs. Costs were calculated using cost per minute and compared among the three cohorts.

Results: In 2018-2019 there were 1,740 calls serviced by MIH for which a matched ambulance cohort was identified for the same period and two years prior. The mean (standard deviation (SD) time on task was 72.7 (51.0) minutes for MIH, compared with 84.1(52.0) minutes, 84.3 (54.1) minutes, and 79.4 (42.0) minutes for matched ambulance in 2018-2019, 2017-2018, and 2016-2017, respectively. The total cost (SD) per 1000 calls was $122,760 ($78,635) for MIH compared with $294,336 ($97,245), $299,797($104,456), $297,269 ($81,144) for ambulance in the three matched cohorts, respectively.

Conclusion: Compared with ambulance, MIH reduced ED transport by 45-50% and saved about 60% of the total costs. The MIH model is a promising and viable solution to meeting acute healthcare needs in the community, while significantly improving the use of scarce healthcare resources.

A3.4
Optimal provision of stroke rehabilitation in Alberta

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Primary Theme: Health Economics/Financing/Funding

Background and Objectives: The abstract is part of Alberta health evidence review that reshapes provision of stroke rehabilitation in terms of increasing care capacity while optimizing patient benefits and costs to health system. The analysis bridged the gap between current and optimal practices for rehabilitation. We explored most cost-effective policy options that focus future investment on early supported discharge (ESD) and outpatient rehabilitation (OPR) to improve discharge from acute care and consequently improve patient flow throughout the system.

Approach: We applied the genetic algorithm along with a discrete event simulation to search for the optimal combination of care capacities, patients receiving rehabilitation and costs. We conducted a survey of Alberta rehabilitation facilities to collect data on current practices in supplementing with rehabilitation care records. A systematic literature review was performed for evidence on eligibility for rehabilitation care. Optimal model was compared with current practices for potential patient benefits and cost implications. We created maps to visualize the distributions of the patients and facilities over service catchment areas that support allocating health resources to the appropriate communities on a need-basis.

Results: The model projected an increase of 38 and 42 patients per day for ESD and OPR, respectively. At optimal capacity, wait time is close to zero. The rehabilitation would be provided to an additional five IPR, 138 ESD, and 262 OPR patients, compared with current capacity. Though providing rehabilitation to these extra patients would require extra resources, the resulting decrease in resource consumption in acute stroke care units due to reduced wait time would compensate this reinvestment. Our model predicted a net cost savings of $25.45 million yearly under optimal capacity, compared with the status quo. The gap between patients having receiving and patients who need rehabilitation is 707, 491 and 1,158 currently provided in IPR, ESD, and OPR versus 823, 751, and 1,704 needed.

Conclusion: Reinvestment in rehabilitation capacity is cost-effective and improves performance of stroke care system, in that it provides rehabilitation to more patients who need the services while resulting in net cost savings. Optimal access to rehabilitation would minimize wait time for rehabilitation and diminish occupation of scarce resources of acute care.

Dentists and Leaves of Absence and Return to Work Experiences: A Mixed Methods Study

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Primary Theme: Health Human Resources

Background and Objectives: Research on health professionals has paid insufficient attention to mental health (MH) challenges and their impact on professional workers. Among dentists, mental illness ranks third in order of frequency of health problems. Despite the salience of MH issues for dentists, we have insufficient knowledge on the experiences of dentists who take a leave due to MH challenges. This paper examines influences shaping their decisions about taking a leave of absence and their return to work.

Approach: This paper draws on data from the stakeholder interviews (N=16) that were collected for an ongoing larger, pan- Canadian mixed-method study that examines mental health -related leaves of absence and return to work among knowledge workers in healthcare, education and accounting. Stakeholders we interviewed include representatives from dental associations, regulatory bodies, education programs, insurance organizations and other organizations relevant to dentists. The data from the interviews have been analyzed thematically using inductive methods of qualitative analysis within the key categories of mental health, leaves of absence and return to work of our overarching investigation.

Results: Our findings show that dentists' decision to take a leave of absence and return to work are shaped by a variety of factors: financial concerns, difficulty of finding a locum, stigma and fear of professional sanctions. Being an associate and not a practice owner and having support of staff/co-workers and spouse/family makes it easier for dentist to take a leave. Lack of RTW supports and support from co-workers and family can hinder the process of dentists' return to work. The interviews reveal it might be harder for women dentists to return to work given their caregiving responsibilities. Covid-19 has made the process of RTW more complex, especially for older dentists who are worried about comorbidities and thus, decide to retire earlier.

Conclusion: The paper brings important insights on the insufficiently explored issue of leaves of absence and return to work of dentists with mental health challenges. Our findings indicate the need for some important changes such as developing anti-stigma campaigns targeting dentists and their environment, and initiation of RTW supports.

A4.2

Outpatient follow-up practices and the well-being of primary care and mental health nurses in Quebec during the first wave of the COVID-19 pandemic

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Primary Theme: Health Human Resources

Background and Objectives: Outpatient follow-up by nurses, an important access mechanism for mental health services, was bound to be impacted by the COVID-19 pandemic. Moreover, frontline healthcare workers such as registered nurses were expected to be particularly vulnerable to the mental health consequences of a global public health crisis.

Objective:
To describe and contextualize changes in outpatient follow-up practices and the well-being of primary care and mental health nurses in Quebec during the first wave of the COVID-19 pandemic.

Approach: We conducted a cross-sectional study using a 20-minutes anonymous web survey from July to September 2020. Eligible participants were primary care or mental health nurses providing outpatient follow-up. Recruitment was performed using the email contact list of two provincial organizations targeting family medicine group nurses and mental health nurses, in addition to social media outreach. We collected sociodemographic, practice-related (remote follow-up practices, mental health-related activities, beliefs and attitudes), and wellbeing-related (PHQ-9, GAD-7, work-family balance) data. Data analysis was performed with the collaboration of a senior statistician.

Results: Among 200 participants from 16 regions in Quebec, 160 practiced in a primary care and 40 in a mental health setting. 92.5% were female, 73.5% aged 30-49, and 68% had a least one child. 13.5% reported moderate-severe depressive symptoms (PHQ-9 ≥ 10) and 10.5% moderate-severe anxiety symptoms (GAD-7 ≥ 10), with both numbers climbing to 25% in the younger than 30. Work-family balance had deteriorated for 54.5%, impacted by the offloading of regular clinical activities, mandatory overtime, and schools/daycare centers shutdowns. The proportion using phone calls multiple times per day with patients increased from 44% to 81.5%, but most participants (59%) reported decreased outpatient follow-up activities overall. 40% felt that their work had not been coherent with their values since the beginning of the pandemic.

Conclusion: This study provides data on the practices and well-being of nurses as clearly and openly as possible to allow stakeholders to identify potential areas for improvement. We will perform two additional data collection rounds during 2021 to complete the picture of an evolving crisis.

A4.3

Understanding the Individual, Organizational and System-Level Factors Shaping Access and Autonomy within a Regional Maternity Care System

Author Names: Caroline Chamberland-Rowe, Ivy Bourgeault

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Primary Theme: Health Human Resources

Background and Objectives: Building a system of care that supports equitable choice of maternity care provider has been identified as a provincial priority in Ontario. However, key community stakeholders in the province's Champlain Region suggest that in practice, pregnant people's choice to seek care from an obstetrician, family physician or midwife remains constrained. This project sought to understand the structural conditions that are interfering with pregnant people's ability to exercise autonomy in choosing a maternity care provider.

Approach: Employing a community-based participatory research approach, semi-structured individual and focus group interviews were conducted with patients, providers and policy-makers across the Champlain Region. Participants engaged in the identification of individual, organizational, and system-level factors that are enabling or restricting access and autonomy within the local maternity care system. All individual and focus group interviews were audio recorded, transcribed, and coded using NVivo 12 Pro. Once thematic analysis (Braun & Clarke, 2006) of these transcripts was complete, system dynamics modelling techniques (Kim & Andersen, 2012) were used to translate these data into a causal map of the regional maternity care system.

Results: At the system level, participants explained that alternative remuneration and insurance mechanisms could support pregnant people's access to the full range of maternity care providers by enabling innovative, patient-centered models of collaboration and strengthening recruitment and retention of all maternity care providers across settings. At the organizational level, facilities' policies and practices designed to ensure program sustainability and, or, to address budgetary and operational constraints can pose barriers to the optimal integration of providers into the local maternity care workforce. At the individual level, participants expressed that there is a lack of awareness amongst both patients and primary care providers in the region regarding the full range of maternity care provider options available, and their relative scopes of practice and models of care.

Conclusion: Persistent inequities in geographic access to the full range of maternity care providers, combined with informational gaps and distorted referral patterns, place the onus on pregnant people to seek out information, self-select into an appropriate provider group, and navigate access to their services, which particularly constrains vulnerable populations' reproductive autonomy.

A4.4

A systematic review and narrative synthesis on the determinants of health workforce surge capacity during the COVID-19 and other viral respiratory disease outbreaks

Author Names: Neeru Gupta, Sarah Balcom, Adrienne Gulliver, Richelle Witherspoon

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Primary Theme: Health Human Resources

Background and Objectives: Healthcare decision-makers need comprehensive evidence to mitigate surges in the demand for human resources for health (HRH) during infectious disease outbreaks, in terms of both immediate risks and longer-term impacts of pandemic responses. This study aimed to assess the state of the evidence on policy and planning responses to HRH surge capacity during the COVID-19 and other outbreaks of global significance in the 21st century.

Approach: We systematically searched eight bibliographic databases to extract primary research articles published between January 2000 and June 2020, in English or French, capturing temporal changes in HRH requirements and responses surrounding viral respiratory infection pandemics. A systems approach was used, considering providers in hospitals, out-of-hospital systems, emergency medical services, and public health. We narratively synthesized the evidence following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) standard. The review protocol was registered in the PROSPERO international database of prospectively registered systematic reviews in health and social care (record #CRD42020178650).

Results: Of the 1,155 records that were initially retrieved from the abstract and citation databases, 16 unique studies met our inclusion criteria. Five focused on COVID-19, three on H1N1, and eight modelled a hypothetical pandemic. Investigations of different training, mobilization, and redeployment options to address pandemic-time health system capacity were reviewed; however, few requirement or response scenarios drew on observational HRH data, and heterogeneity of study approaches and outcomes generally precluded comparability across contexts. Notable evidence gaps included occupational and psychosocial factors affecting healthcare workers' absenteeism and risk of burnout, gendered considerations of HRH capacity, evaluations in low- and lower-middle income countries, and policy-actionable assessments to inform post-pandemic recovery and sustainability of services for noncommunicable disease management.

Conclusion: This research emphasized the critical need for more comprehensive, internationally comparable, and equity-informative HRH data and research to enhance preparedness, response, and recovery policies for this and future pandemics.

A4.5

Associations between daily nurse staffing practices and the incidence of postoperative atrial fibrillation in cardiac surgery

Author Names: Christian Rochefort, Jonathan Bourgon Labelle, Paul Farand

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Primary Theme: Health Human Resources

Background and Objectives: Postoperative atrial fibrillation (POAF) is a frequent complication of cardiac surgery associated with increased morbidity, mortality and costs. Recent cross-sectional studies suggest that nurse staffing practices during postoperative period could be associated with POAF incidence. To increase the validity of this evidence, this study estimated the longitudinal and simultaneous associations of four nurse staffing practices – Registered Nurses' (RN) availability, levels of education and experience, and skill mix – with the incidence of POAF.

Approach: A cohort of 6,157 cardiac surgery patients admitted to two Canadian university health centers (UHC) between January 1, 2014 and December 31, 2018 was assembled (1,823 patients at UHC A and 4,334 at UHC B). Patients in the cohort were followed from post-operative day 0 to hospital discharge. We used site-specific multivariable Cox proportional hazards models to estimate the associations between patients' time-varying cumulative exposure to measures of RN understaffing, skill mix, education and experience, each relative to nursing unit and shift means, and the hazard of in-hospital POAF, while adjusting for patient and nursing unit characteristics.

Results: Overall, 487 cases of POAF occurred over 49,838 patient-shifts of follow-up at UHC A (97,7/10,000 patient-shifts), while 1,336 cases occurred over 95,305 patient-shifts at UHC B (140,2/10,000 patient-shifts). In multivariate analysis, the risk of POAF increased at both sites with leaner RN skill mixes (UHC A: HR = 1.071 over the first 12 days of follow-up; 95% CI: 1.038-1.106, $p < 0.0001$; UHC B: HR = 1.090; 95% CI: 1.069-1.112, $p < 0.0001$). In addition, the risk of POAF decreased at both sites with higher proportions of baccalaureate-prepared RNs (UHC A: HR = 0.985; 95% CI: 0.980–0.990, $p < 0.0001$; UHC B: HR = 0.991 over the first 12 days of follow-up; 95% CI : 0.987-0.995, $p < 0.0001$). Site-specific staffing patterns were also noted.

Conclusion: Our results suggest that using greater proportions of RNs (richer RN skill mix) and of baccalaureate-prepared RNs during the postoperative period in cardiac surgery could prevent the occurrence of POAF. The impact of the two other staffing practices (RNs' availability and levels experience) appears to be site-specific.

"Sometimes, I honestly feel hopeless": Social care providers' perspectives on caring for structurally vulnerable patients with substance use disorders within acute care

Author Names: Nicole Gehring, Kelsey Speed, Kathryn Dong, Bernie Pauly, Elaine Hyshka, Ginetta Salvalaggio

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Primary Theme: Mental Health and Addictions

Background and Objectives: Patients with substance use disorders (SUDs) who are structurally vulnerable — experiencing unstable housing and/or homelessness — frequently access acute care. Despite the importance of the social determinants of health, social care (i.e., supports addressing unmet material and basic needs) may not be adequately addressed within acute care. Our objectives were to explore hospital social care providers' perspectives on providing social care for this patient population, and possible solutions to better address their social needs.

Approach: We adopted a focused ethnographic design and completed 18 semi-structured interviews with social care providers (e.g., social workers, transition coordinators, peer support workers) caring for patients at a large, urban acute care hospital in Western Canada between August 8, 2018 and January 24, 2019. Interviews explored staff experiences providing social services to patients living with unstable housing, homelessness, and SUDs, as well as staff views on social care continuity between hospital and community supports. We conducted latent content analysis. Our coding framework, guided by the socioecological model, grouped findings according to individual, community, organizational, and policy levels of influence.

Results: Tensions emerged on how participants viewed patient-level barriers to providing social care. Some providers blamed poor outcomes on patient deficits in motivation, while others emphasized structural factors that impede patients' ability to secure income, housing, and other social supports. Within the hospital, some participants felt that acute care was not appropriate to address social needs, but most felt that acute care visits afford a rare opportunity to address health inequities and reach structurally vulnerable patients who otherwise have limited access to health and social care. Participants described community gaps, particularly in housing and financial supports, which limited successful social care provision. Finally, participants identified potential policy solutions, such as establishing better transitional and permanent housing supports that comprehensively address medical, income, and substance use needs.

Conclusion: Our findings suggest broader policy changes that may improve care for structurally vulnerable patients with SUDs including: 1) ending ambivalence towards acute care's role in social services; 2) addressing multi-level gaps in housing and financial support; and 3) implementing hospital-based Housing First teams and sub-acute care with integrated SUD care.

A5.2
Health service use patterns of forensic mental health clients in Québec

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Primary Theme: Mental Health and Addictions

Background and Objectives: Many people admitted to forensic mental health services with a verdict of not criminally responsible due to a mental disorder (NCRMD) had prior psychiatric contacts, including psychiatric hospitalizations. The present study seeks to examine which health services are accessed by individuals before their NCRMD offense, in order to better meet the needs of people with complex mental health needs in the community and reduce the likelihood of patients requiring forensic services.

Approach: Data of 1,014 individuals found NCRMD in the province of Québec were extracted from the National Trajectory Project, a longitudinal file-based study of people found NCRMD in Canada between 2000 and 2005. Data related to access and use of mental health, physical health and substance use services were obtained for the five years preceding the NCRMD verdict from two provincial health registries. Latent class models were used to model the heterogeneity in patterns of service use.

Results: Preliminary findings indicate that 71% of people found NCRMD were in contact with mental health services in the 12 months prior to the offense that led to the verdict, a proportion that decreased to 59% in the six months prior. Among those who received mental health services, one in five committed the offense leading to the NCRMD verdict within a week of the most recent contact. Consultations with psychiatrists were most frequent (34%, M = 6.7 in six months prior), followed closely by emergency room visits with no subsequent hospitalizations (33%, M = 5.6 in six months prior). Contact with an emergency room was the only contact with services for about one in five participants. Latent classes will emphasize the heterogeneity in these patterns.

Conclusion: Most of the people in this sample had prior contacts with mental health services, often quite recently. This suggests that there may be opportunities to intervene upstream to prevent offending and entry into forensic services, which bring deleterious consequences on the lives of patients, their families, and the victims.

A5.3

Examining the Gendered Nature of Mental Health Issues, Leaves of Absence & Return to Work Experiences of Canadian Physicians: A Case Study of the Healthy Professional Workers Partnership

Author Names: Mara Mihailescu, Sarah Simkin, Monica Aggarwal, Lindsay Hedden, Elena Neiterman , Ivy Bourgeault

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Primary Theme: Mental Health and Addictions

Background and Objectives: Mental health challenges are a growing concern among physicians. Research is sparse on the impact of these experiences on physicians' work lives, access to leaves of absence, and returning to work. The impact of gender on these experiences is also under-researched.

The goal of this project is to explore the gendered experiences of personal, familial, or work-related mental health issues among physicians and identify what factors influence decisions to take leaves of absence and return-to-work.

Approach: We employed a mixed methods approach to address the research objectives. A review of peer-reviewed and grey literature from 2010 to 2020 underpinned exploration of the issues via a survey and interviews. Semi-structured interviews with working physicians and key stakeholders, including leaders, researchers, and experts in the field of physician mental health are in progress. These data were complemented by a survey deployed online to physicians and trainees across Canada. An explicit gender perspective was taken in data collection and interpretation. Findings emerging from each method were synthesized and analyzed iteratively to achieve a holistic perspective on the issues.

Results: There is increasing awareness of mental health concerns among physicians throughout the literature. Stakeholder interviews emphasized the role of education and training curricula in shaping mental wellbeing of physicians, and the need for a shift in medical culture towards wellness. Stakeholders identified maladaptive coping strategies, regulatory stress, widespread presenteeism, and barriers to seeking care as key challenges faced by physicians. Stakeholders also discussed programs and interventions aimed at physician wellness including Physician Health Programs, Faculty Wellness Programs, Faculty Mentoring Groups, and "Meaning in Medicine." Physician interviews highlighted some additional concerns, such as lack of redundancy in the system to accommodate leaves of absence, gender-specific challenges, regulatory stress, feelings of guilt, and interrupted leaves of absence.

Conclusion: While mental health challenges are prominent in the physician population, there is a dearth of information on leaves of absence, return-to-work programs, and interventions to improve mental wellbeing among physicians. This research will contribute to closing these gaps in order to promote and support the mental wellbeing of physicians.

Provincial surveillance of prescribing pharmaceutical alternatives to the toxic drug supply during the dual public health emergencies of COVID-19 and overdose in BC

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Primary Theme: Mental Health and Addictions

Background and Objectives: On March 26th 2020, British Columbia (BC) introduced a Risk Mitigation Guidance (RMG) document for prescribing of pharmaceutical alternatives to the toxic drug supply to support physical distancing measures and reduce COVID-19 transmission among people who use substances. The present study aims to: 1) estimate the number of people who received RMG prescriptions; 2) describe demographic characteristics of people who received RMG prescriptions; 3) estimate mortality among people who received RMG prescriptions.

Approach: Data for the presented analysis were derived from datasets available through the BC Centre for Disease Control's BCC19C Cohort which was established as a platform to integrate various health datasets to support COVID-19 surveillance. Receipt of RMG prescriptions (i.e. opioids, stimulants, benzodiazepines, alcohol withdrawal management medications) between March 27th- August 31st 2020 was identified through PharmaNet (provincial drug dispensation database). Given RMG medications did not have unique identifiers in PharmaNet, an algorithm was developed to identify RMG recipients by applying restrictions to cases searches. Demographics were derived from the Client Roster, and death records were retrieved from Vital Statistics Deaths.

Results: Between March 27th-August 31st 2020, 2780 people were dispensed RMG prescriptions. Demographic characteristics of people identified as receiving RMG were similar to people experiencing overdose in BC (72% were 30-59 years of age; 64% were male). Nearly two thirds resided in Vancouver and surrounding area or Vancouver Island, reflecting prescribing in urban centres (Vancouver, Victoria). Among the 2780 people identified, there were 46,886 unique medication dispensations, nearly all (93.8%) were daily dispensed. Of all dispensations, 66.1% (n=30,955) were for opioids, 26.8% (n=12,582) were for stimulants, 3.7% (n=1,736) were for benzodiazepines, and 3.4% (N=1,593) were for alcohol withdrawal management medications. Among 2780 people who received RMG dispensations, 10 (<0.4%) were identified as having died during the study period.

Conclusion: The demographic characteristics of RMG recipients are consistent with those of people who have experienced overdose in BC. Nevertheless, unprecedented overdose rates have persisted in 2020, and in the context of dual public health emergencies, expanded implementation efforts are necessary for RMG to reach people at highest risk of overdose.

A5.5
Aging and mental health: what matters most to Canadians?

Author Names: Justine Giosa, Karthika Yogaratnam, Elizabeth Kalles, Paul Holyoke, Heather McNeil

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Primary Theme: Mental Health and Addictions

Background and Objectives: The COVID-19 pandemic has brought needed attention to social isolation, loneliness, substance use and addictions issues experienced by older Canadians. However, longstanding gaps in aging-focused mental health research has contributed to slow progress on responsive mental health care, treatment and support options broadly available to older Canadians. The objective of this work was to identify the top 10 unanswered research questions on aging and mental health, according to what matters most to Canadians.

Approach: This work is an innovative collaboration between the SE Research Centre and the Canadian Mental Health Association. A modified James Lind Alliance Priority Setting Partnership approach was applied, guided by a steering group of older adults, family caregivers, health and social care providers, and key stakeholder organizations. Consultation methods included monthly steering group meetings, two national surveys and an upcoming series of online interactive workshops. Decision-making and prioritization were guided by qualitative and quantitative data analysis of consultation data, a rapid literature review, and a nominal group technique. Project updates, findings and resources are shared on a dedicated website.

Results: Over 300 initial survey responses from older adults, family caregivers and health and social care providers across Canada generated a list of 40+ questions on aging and mental health; 25 of which were determined to be unanswered based on existing academic evidence and grey literature. Over 700 Canadians participated in a follow-up survey where they were asked to identify the unanswered questions they felt would be most important to answer through future research in Canada. A list of 18 of the most important unanswered questions remain for final prioritization and ranking. It is anticipated that a list of the top 10 unanswered research questions on aging and mental health will emerge from a series of planning priority-setting workshops in the coming months.

Conclusion: Understanding Canadians' top 10 priority questions on aging and mental health will both help to advocate for more age-focused mental health research, policy and funding overall, and better match existing care, treatment and support to the needs of older adults, family caregivers and health and social care providers across Canada.

A6.1

Approaches to psychosocial care within tertiary care diabetes centres in Canada: An environmental scan

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Primary Theme: Chronic Disease Management

Background and Objectives: Patients with diabetes who have psychosocial challenges are especially at-risk for difficulties with diabetes self-management, and thereby to complications arising from chronic hyperglycemia. Despite the Diabetes Canada Clinical Practice Guidelines' recommendations for diabetes centres to offer psychosocial services for the screening and support of patients with psychosocial barriers, the extent to which these recommendations have been implemented in centres across Canada was unknown prior to this study.

Approach: Tertiary adult diabetes centres affiliated with academic institutions were invited to participate in our quantitative survey (n=40). At each centre, a structured telephone interview was administered to a manager/clinical leader, as well as a social worker and psychologist (if employed at the centre) to inquire regarding the psychosocial services offered. Participating centres were stratified as either "main" or "satellite" diabetes centres, depending on whether they were the primary teaching site of an endocrine residency program, or instead a satellite diabetes education centre.

Results: Thirty diabetes centres (75%) completed at least one questionnaire, including 16 main and 14 satellite centres. Half of the centres do not systematically assess patients for psychosocial needs, with no difference between main and satellite sites. Most centres (24/30) report providing patients with access to psychosocial services, but only half of those centres have a dedicated, internal psychosocial team. 6/30 diabetes centres employ ≥0.1 full-time equivalents (FTE) of psychologists or mental health professionals solely dedicated to their centre, and 9/30 employ ≥0.1 FTE of dedicated social workers or social service navigators. A vast majority of managers report that their staffing and funding model provides inadequate psychosocial support and that seeking increased funding for psychosocial care is a major priority for their centre.

Conclusion: Despite their unique strengths and challenges, both main and satellite centres across Canada struggle to offer adequate psychosocial services to patients with diabetes. Greater funding for psychosocial services as well as more training for staff is required to meet the standard set out in the Diabetes Canada Clinical Practice Guidelines.

A6.2

The Impact of Multimorbidity Level and Functional Limitations on the Accuracy of Using Self-Reported Data from Community-living Adults to Measure General Practitioner and Specialist Visits

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Primary Theme: Chronic Disease Management

Background and Objectives: To study the effect of health and social variables on physician use, researchers often rely on self-reported data (typically large surveys); however, such data are vulnerable to concerns such as recall bias. How self-reported physician use compares to administrative data, the gold standard, in particular within the context of multimorbidity and functional limitations remains unclear. We examine whether multimorbidity and functional limitations are related to agreement between self-reported and administrative data for physician visit estimates.

Approach: Cross-sectional data from the Canadian Community Health Survey linked to administrative data were used to assess agreement on physician use in 52,854 community-living adults aged 45+ in Ontario, Canada. General practitioner (GP) and specialist visits in the previous year were assessed using each source; multimorbidity level (# of chronic conditions) and functional limitations (any limitation in activities of daily living) were assessed using self-report. Agreement between data sources was measured using sensitivity and specificity with administrative data as the reference. Sensitivity, specificity and 95% confidence intervals were calculated by level of multimorbidity and for those with and without functional limitations.

Results: Fewer participants self-reported any GP visit (84.8%) compared to administrative data (89.1%), but more self-reported any specialist visits (69.2% vs. 64.9%). Overall sensitivity was higher for GP visits (≥90% for all levels of multimorbidity) compared to specialist visits (ranging from approximately 75% for 0 to 90% for 4+ chronic conditions). Specificity levels for self-report tended to start higher for GP than specialist visits but decreased more swiftly with multimorbidity level; in both cases, specificity levels fell below 50%. The presence of functional limitations did not impact sensitivity and specificity. There was some evidence that younger age groups and males had higher specificity for specialist visits, but the patterns across level of multimorbidity persisted indicating that they were not strong confounders or effect modifiers.

Conclusion: Countries around the world collect health surveys to inform health policy and planning, but the extent to which these are linked with administrative, or similar, data are limited. Our study illustrates the potential for misclassification of physician use in self-report data and the need for sensitivity analyses or other corrections.

A6.3

Phase-specific health system costs of dementia in Ontario, Canada: a propensity score-matched cohort study

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Primary Theme: Chronic Disease Management

Background and Objectives: Due to increases in the prevalence of dementia across Canada, the economic burden of dementia on provincial health systems is expected to rise. A better understanding of the phase-specific costs of dementia care, such as periods immediately prior to and following diagnosis as well as other critical points in the life course are needed to support capacity planning. We estimated the phase-specific costs of dementia over time among older adults and by sex.

Approach: We identified a cohort of 164,640 Ontario residents aged 66+ years, ascertained with incident dementia and residing in the community between April 1st, 2010 and March 31st, 2017. Controls, who had no previous dementia diagnosis, were 1:1 propensity-score matched to persons with dementia and individuals were followed to death or study end (March 31st, 2018). Costs included inpatient care, emergency department care, ambulatory care, home care, long-term care, physician and healthcare professional services, and prescription drugs. Phase-based costing methodology examined mean net costs of dementia care throughout four phases of disease progression (pre-diagnosis, initial, continuing, terminal) and 5-year net costs.

Results: Persons with dementia and matched controls (mean age 81.3 years; 58.7% female) were followed for an average of 3.2 years. Mean net costs of dementia were highest in the terminal phase ($32,679), followed by the initial ($17,656) and continuing phases ($13,423). Higher costs in the dementia group in the terminal phase were driven by acute care (net cost: $16,324, 95% CI [15,478, 17,170]) and long-term care ($14,006, 95% CI [13,848, 14,164]). Net home care costs were highest in the initial phase ($1,839, 95% CI [1,796, 1,882]).   The net 5-year cost of dementia was $48,077 (95% CI [$47,183, $48,970]; women had higher 5-year net costs than men ($50,158, 95% CI [$49,053, $51,263] vs. $44,800, 95% CI [$43,323, $46,277]).

Conclusion: Observed higher net costs of dementia in specific phases (terminal) and sectors (acute care, long-term care, home care) highlight where to target interventions to optimize healthcare use and costs that respects quality of life for older adults with dementia and their family care providers.

Examining the Association Between a Dementia Care Program in Retirement Homes and Transitions to a Long-Term Care Home in Ontario, Canada: A Population-Based Cohort Study

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

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Primary Theme: Home Care, Long Term Care and Aging

Background and Objectives: Dementia care programs may reduce the demand for a bed in a long-term care home by slowing the progression of dementia. The objective of this study is to investigate whether older adults who received a new dementia diagnosis and resided in a retirement home with a dementia care program had a lower risk of transitioning to a long-term care home compared to those who did not have such a program in their retirement home.

Approach: Population-based retrospective cohort study in Ontario, Canada using linked, person-level health system administrative data on older adults living with dementia in retirement homes from 2014-2019 (n = 977). The exposure of interest is a dementia care program in a retirement home. The outcome of interest is an indefinite or long-stay transition to a long-term care home. Covariates at baseline included person-level demographic characteristics, health conditions, and publicly funded home care service use. Multivariable Cox proportional hazards regression with robust standard errors clustered on the retirement home was used to model the time-to-transition to a long-term care home.

Results: There were 203 older adults who resided in a retirement home with a dementia care program, and 66 of these older adults transitioned to a long-term care home. After adjusting for person-level demographic characteristics, health conditions, and publicly funded home care use at baseline, older adults who resided in retirement homes with a dementia care program had a 40% lower risk of transitioning to a long-term care home (Hazard Ratio [HR] = 0.60, 95% Confidence Interval [CI] 0.44-0.81) compared to those who resided in retirement homes without such a program at any point during the follow-up period. Older age, osteoarthritis, and long-stay home care client status were associated with increased risks of transitioning to a long-term care home at any point during the follow-up period.

Conclusion: The availability of a dementia care program in a retirement home can reduce transitions to a long-term care home among older adults living with dementia. These findings are relevant to clinicians and policymakers involved in strengthening health services and systems for older adults living with dementia.

Participatory research to improve partnerships between caregivers and care providers of persons living with dementia

Author Names: Paul Holyoke, Justine Giosa, Karthika Yogaratnam, Heather McNeil

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Primary Theme: Home Care, Long Term Care and Aging

Background and Objectives: Persons living with dementia (PLWD), caregivers and care providers know the dementia journey is full of changes – in mental and physical function, care settings, care providers, and roles of caregivers and care providers in providing the "clinical" versus the more "emotional, relational" care. They would like a tool to help them communicate and share their knowledge, progress and activities better so they are working better together at all times, and particular during these changes.

Approach: This study evolved over time, with each phase responding to the results from the previous one. After the specific need was identified by PLWD and their caregivers in a guided conversation (focus group) on their experiences with the dementia journey, we devised a six-session phase with different caregivers and care providers to co-design a prototype tool, combining the rigour of science and creativity of design practice. Next, we conducted community-based workshops (focus groups) to identify elements of the prototype that were not relevant and how they should be changed. Each workshop was tailored in collaboration with representatives of each community.

Results: In collaboration with caregivers and care providers from the long-term care home and home care sectors, we developed a prototype tool, Our Dementia Journey Journal, on paper and in an online app to respond to the identified need. We then engaged with PLWD and their caregivers in diverse communities across Canada to see how the prototype would need to be adapted to be culturally, linguistically and geographically relevant and useful. Overall, we heard that the essential components of the prototype Journal, adapted to local needs, will be helpful to improve the care of persons living with dementia by improving caregiver-care provider relationships and shared knowledge through various changes over time.

Conclusion: Through iterative research, we have identified core elements of a tool caregivers and care providers believe will improve their partnerships over the dementia journey with its multifaceted changes, and the necessary adaptations to make it culturally, linguistically and geographical relevant. Our next study will test its impact on people's lives.

The Evolution of Primary Care Transformation Across Canada: 6 Years Later

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Primary Theme: Primary Healthcare

Background and Objectives: Canada's provinces and territories have, to varying degrees, reformed primary health care through initiatives that focus on strengthening the infrastructure of primary health care to improve performance. In 2012, a discussion paper entitled "Towards Primary Care Strategy" identified 13 features of high performing primary healthcare systems. The purpose of this study is to examine the changes that have taken place in relation to these attributes of high performance across Canada between 2013-2019.

Approach: This research study was informed by a literature and document 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 coded and analyzed. Thematic analysis was conducted to assess the changes that have taken place between 2013-2019 for each key attribute of high performing primary care systems.

Results: Our study found that British Columbia, Alberta, Ontario and Quebec have made the greatest progress toward primary care transformation in Canada, although no jurisdiction has achieved all 13 attributes. There has been significant progress in the adoption of health information technology across the country. Four jurisdictions have advanced towards having an explicit policy direction for primary care. Some jurisdictions have or are implementing formal or informal collaborative primary care governance models to facilitate system coordination and meet population needs. More jurisdictions are supporting quality improvement and patient engagement and experimentation with interprofessional team models and funding arrangements continues. However, more investments are needed for wide-scale implementation of primary care governance mechanisms, interprofessional teams and funding arrangements, performance measurement, leadership development, evaluation and building research capacity.

Conclusion: While there has been progress towards primary care transformation, the pace in the last 6 years has been slow. Jurisdictions have distinct opportunities to advance primary care to the level of better-performing countries. Further investments are needed by federal and provincial/territorial and by regional health authorities for primary care transformation.

B1.2
Virtual Care during COVID-19 and Implications for Future Care Delivery

Author Names: Sara Bhatti, Jennifer Rayner

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Primary Theme: Primary Healthcare

Background and Objectives: Due to mandated physical distancing by governments across the globe, a greater proportion of primary care is now being offered on virtual platforms to ensure patients continue to receive care in the safety of their homes. In Ontario, Community Health Centres (CHCs) rapidly adopted and shifted their primary care services such as chronic disease management, palliative care, counselling, dietitian visits, etc, and health promotion programming such as yoga sessions, cooking demonstrations, art therapy, etc.

Approach: This mixed methods study aims to examine how CHCs shifted and implemented virtual care during COVID-19, and explore the impact of virtual care on providers and their patients using quantitative and qualitative data. Data sources include an organizational survey, semi-structured phone interviews with providers and patients, and utilization data extracted from the electronic medical record.

Results: Preliminary results are suggesting that the transition to virtual care has increased patient's access to care, in particular for those with mobility issues, or live in areas with limited/costly transportation. However, patients of CHCs located in rural areas or those with low incomes are struggling to access primary care due to digital inequity and/or low digital literacy. Providers have found they are able to manage their time more efficiently including seeing a reduction in the number of missed/cancelled appointments. However, they have experienced challenges in not being able to read their patient's body language and the inability to do a physical assessment. Overall both patients and providers would like to have virtual appointments as an option going forward.

Conclusion: Although brought about because of the pandemic, rapid adoption of virtual care will have a lasting effect on how we provide care to patients now and in the future. It is therefore imperative that we understand which aspects of care and for which populations is virtual care best suited for.

A Scoping Review on Implementing Virtual Primary Healthcare during COVID-19 in High-income Countries

Author Names: Priyanka Challa, Kristina DeVera

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Primary Theme: Primary Healthcare

Background and Objectives: Primary Healthcare physicians across the world are grappling with delivering efficient patient care virtually during the COVID-19 pandemic. The nuances of implementing telehealth can make the provision of virtual primary healthcare services difficult. The purpose of this scoping review was to map the strategies, challenges, and lessons learned from high-income countries that can be mobilized to inform decision-makers on how to best implement virtual Primary Healthcare services during and after the pandemic

Approach: The scoping review was conducted following the methodological framework proposed by Arksey and O'Malley, and Levac et al. A comprehensive search strategy was created, and seven databases were searched for relevant literature published between December 2019 and May 2020. The initial search resulted in 17627 articles, with 5872 remaining after deduplication for title and abstract screening, and all articles were double screened at each phase. 1260 articles were assessed for full text, of which 1140 were excluded. 120 articles were screened in the data extraction phase, of which 38 articles met the criteria and were included in the analysis.

Results: Of the 38 included articles, more than half of the articles (n=20, 53%) focused on equity, specifically on lack of access to the internet and smartphones for rural, seniors, and underserved populations. Lack of funding for telehealth (n= 14, 37%) was the second most common topic across the included articles, which included inadequate reimbursement policies for telehealth. Other common topics included patient and clinician perception of telehealth (n=11,29%), regulatory policies (n= 10, 26%), change in the clinical workflow (n= 9, 24%), lack of telehealth infrastructure (n= 8, 21%), and lastly, a need for appropriate virtual care training and education for physicians (n=5, 13%). Overall, the articles stated the above seven factors as prominent barriers in implementing virtual care in a primary care setting.

Conclusion: There is a significant paucity in the literature on implementing equitable and high-quality virtual care in Primary Healthcare. With many countries entering a second quarantine period, there is a strong need to better recognize barriers and implement strategies to alleviate the burden felt by patients and physicians alike.

If Continuity is King, Access is the Queen

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Primary Theme: Primary Healthcare

Background and Objectives: Access to primary care is a complex concept that describes a patient's opportunity to receive appropriate and quality health services. The question of precisely how delaying timely primary care intersects with a provider's continuity of care with their own patients has not been clearly illustrated. This study sought to determine whether a change in access to a family physician is associated with a change in provider or clinic continuity, discontinuity, or emergency department (ED) utilization.

Approach: Patient level data was used to explore the relationship between continuity of care and primary care access. Provider panels were used to aggregate weekly patient visits to their attached provider, to their clinic, to other proximate clinics, and local EDs over an eight year period and linked those visits to the provider's weekly appointment delay. Providers who had increased, decreased or had observed no change in appointment delay each year were identified. The three groups were assessed in multi-level models to determine the association with continuity at the provider, clinic and ED.

Results: Time to the third next available (TNA) appointment was used as a measure of access for each provider. Providers within each calendar year whose weekly TNA either improved (11%), worsened (12%), or exhibited no change (77%) were identified through linear regression. Compared to providers with no change in access, those with improved access had 6.8% increased provider continuity per year, 2.1% decreased discontinuity and decreased ED encounters by 78 visits per 1000 patients. Compared to providers with no change in their TNA, providers with worsening access had a 6.2% decrease in provider continuity and increased number of ED encounters (64 visits per 1000 patients). Changes in provider delay had no impact on clinic continuity.

Conclusion: Our analysis suggest improving or worsening delay to an appointment in primary care can influence how patients choose to use the healthcare system, and as a result impact provider continuity, discontinuity, and ED utilization.

B1.5

Pharmacist Prescribing in Nova Scotia: A Qualitative Analysis of Self-Perceived Barriers

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Primary Theme: Primary Healthcare

Background and Objectives: Pharmacists were first authorized to prescribe within specific categories in Nova Scotia in 2011, with this authority recently expanded to include prescribing for renewals for up to 180 days, contraception management, shingles, and uncomplicated bladder infections. Pharmacist uptake of prescribing across all categories has been reported to be variable. The overall aim of this study was to explore pharmacists' self-perceived barriers to prescribing activities.

Approach: A self-administered electronic questionnaire based on the Theoretical Domains Framework (TDF v2) was sent to all pharmacists registered to practice in Nova Scotia (n = 1,340) in July 2020. The questionnaire consisted of open- and closed-ended questions that explored self-reported prescribing activities and barriers and enablers to undertaking these activities. Three open-ended questions that captured participant narratives on barriers were included in the qualitative analysis. Deductive content analysis using the TDF was completed independently by two team members, with discrepancies in coding resolved by group consensus.

Results: A total of 190 pharmacists responded to the questionnaire (17% response rate). Of these respondents, 100 answered at least one of the optional open-ended questions. Main barriers (with corresponding TDF domain in brackets) identified included lack of reimbursement for the service (Reinforcement), patient cost for prescriptions through a pharmacist (Social Influences), lack of staff (Environmental Context and Resources), challenges associated with integrating prescribing into workflow (Environmental Context and Resources), unclear rules, processes and requirements (Behavioral Regulation), negative and positive beliefs about capability (Beliefs about Consequences/Capabilities), and difficulty recalling the processes required for each prescribing service (Memory, Attention and Decision Processes). The most commonly cited barriers were in the Environmental Context and Resources, Reinforcement, and Social Influences domains of the TDF.

Conclusion: This research highlighted perceived barriers to pharmacist prescribing at the individual, pharmacy, and health-care system level. These important insights, in conjunction with the quantitative findings of the questionnaire (reported elsewhere), may be useful to inform the development of programs and strategies that support pharmacist prescribing activities in Nova Scotia.

B2.1

A Validation of Diagnostic Codes for Benign Indications for Gynecologic Surgery in the Canadian Institutes for Health Information Discharge Abstract Database (CIHI-DAD)

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Primary Theme: Health Informatics

Background and Objectives: The Canadian Institute of Health Information Discharge Abstract Database (CIHI-DAD) is the main source of routinely-collected data for gynecologic surgery in Canada. This was originally intended for hospital administrative purposes and collection of admissions data, and therefore may not be valid for clinical research. Our objective was to investigate the validity of ICD-10-CA diagnostic codes for benign gynecologic surgery in the CIHI-DAD.

Approach: We obtained a consecutive sample of all gynecologic procedures performed at The Ottawa Hospital in April/2016-March/2017 using the CIHI-DAD. Patient data including diagnosis, procedure, and surgical approach were reabstracted from charts. Reabstracted data were compared to International Classification of Diseases (ICD-10) codes using sensitivity, specificity, positive predictive value (PPV) and kappa coefficient with associated 95% confidence intervals (CI).

Results: A total of 1079 gynecologic procedures were included.
Median age was 46 years (IQR[41-54]), and median parity was 1 (IQR[0-2]).
For uterine fibroids, sensitivity=82.5%, 95%CI[78.0-86.9%], specificity=96.6%[95.3-97.8%], PPV=89.7% [86.0-93.4%], NPV=93.8% [92.1-95.5%], and kappa=0.81[0.77-0.85]. For abnormal uterine bleeding, sensitivity=50.8% [45.4-56.1%, NS], specificity=99.1% [98.4-99.8 %], PPV=96.0% [93.1-98.9%], NPV=81.7% [79.2-84.3%], and kappa=0.57 [0.52-0.63]. For endometriosis, sensitivity=75% [68.5-81.5%], specificity=95.2% [93.8-96.6%], PPV=75% [68.5-81.5%], NPV=95.2% [93.8-96.5%], and kappa=0.70 [0.64-0.76]. For pain, sensitivity=51.6% [42-9-60.3%, NS], specificity=99.6% [99.2-100.0%], PPV=94.2% [88.7-99.7%], NPV=93.9% [92.4-95.4%], and kappa=0.64 [0.56-0.72]. For pelvic organ prolapse, sensitivity=90.7% [87.3-94.0%], specificity=98.3% [97.4-99.2%], PPV=95.3% [92.8-97.8%], NPV=96.6% [95.3-97.9%], and kappa=0.90 [0.87-0.93].

Conclusion: Despite diminished sensitivity for symptom-based diagnoses, specificity for all diagnoses were found to be excellent. These findings suggest a high level of validity for ICD-10-CA codes for gynecologic surgery in the CIHI-DAD, and support the use of these data for gynecologic research.

The value of proxy-rated health status in pediatric settings: Evidence from linked patient experience surveys and administrative data in Alberta

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Primary Theme: Health Informatics

Background and Objectives: Self-rated health (SRH) is a widely adopted single-item patient reported outcome measure that is associated with health outcomes and health utilization. In pediatric settings, SRH is not widely administered. However, hospitals and health systems increasingly record proxy-rated health status (PRHS) through the administration of pediatric inpatient experience measures, such as the Child-HCAHPS. SRH has demonstrated utility for researchers and administrators, but what is the value of PRHS in pediatric settings?

Approach: Utilizing cross-sectional data collected in Alberta, this project evaluates PRHS as a proxy-reported pediatric outcome measure for predicting post-discharge healthcare utilization. Patient experience surveys (from the Child-HCAHPS) were linked with Discharge Abstract Database (DAD) records. PRHS was measured on a five-point scale from "excellent" to "poor". Spearman correlation was performed between PRHS and administrative indicators of health status (including length of stay, resource intensity weight, number of comorbidities recorded at discharge). Logistic regression was performed with automated model selection to assess whether PRHS assisted in the prediction of health services utilization (emergency department visits, readmissions) within 90 days of discharge.

Results: Between 2014 and 2019, 6460 eligible surveys were administered. PRHS showed small but significant association with administrative indicators of health status (from rho = 0.09 to rho = 0.37). These associations persisted after adjusting PRHS for respondent characteristics (age, education, and relationship to child). When entered with other clinical and demographic variables in models to predict future healthcare utilization, automated model selection retained PRHS as a factor for predicting emergency department visits (AUC: 0.641) and readmissions (AUC: 0.824) within 90 days of discharge. Compared with patients with "excellent" PRHS, patients with lower levels of PRHS had significantly higher odds of post-discharge healthcare utilization. Limitations include aspects of survey administration and a lack of longitudinal data.

Conclusion: Proxy-rated health status in pediatric inpatient settings has potential utility as an indicator of health status for clinicians, administrators, and researchers. Further validation and research directions are discussed, with emphasis on integrating low-burden proxy and patient reported outcome measures in pediatric care.

B2.3
Virtual care use during the COVID-19 pandemic in Ontario: a retrospective cohort study

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Primary Theme: COVID-19

Background and Objectives: The COVID-19 pandemic required a dramatic change to the way our healthcare system delivers care, enabled by temporary billing codes introduced in mid-March, 2020. While virtual care services were hardly used before the pandemic, providers were required to quickly adopt virtual care in order to protect patients. The objective was to describe the extent of virtual care use changes over time and the distribution of virtual care across regions, socioeconomic groups and patient populations.

Approach: We conducted a cross-sectional time-series analysis examining the weekly number of virtual care visits across Ontario from January, 2018 to September, 2020. We used administrative claims data from ICES, specifically Ontario Health Insurance Plan (OHIP) billing codes, including telemedicine codes and the virtual care codes introduced at the start of the COVID-19 pandemic. Secondary analyses stratified analysis by sociodemographic factors (age, gender, neighborhood income quintile, rurality, and immigration status) and within patient populations.

Results: Virtual care increased from 1.6% of all ambulatory visits pre-COVID to 75% during COVID-19. The number of providers who had at least one virtual care visit grew from 4% to 86% in the first quarter of 2020 and 30% of Ontario residents received some virtual care. The sharp increase in virtual care use was followed by a slow decline between waves (from 70% down to 50% of services). This decline was steeper among specialists, followed by primary care providers, and then psychiatrists. Steeper decline was also seen in North and West Ontario and among older adults. There was a small decline in the number of providers using virtual care (about 6%) over the summer months and no differences were observed across patient income quintiles.

Conclusion: During the first half of 2020, we observed a rapid uptake of virtual care (from 2 to 75% of ambulatory care), followed by a small decline between pandemic waves. Virtual care was adopted across regions, age groups and income levels, but declines in use may vary slightly across groups.

B2.4
Can virtual care make health care more sustainable?

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Primary Theme: Health Informatics

Background and Objectives: Evidence supports the cost and time savings associated with virtual health care, less so its potential environmental benefits. As a lower-carbon alternative to traditional care delivery, virtual care plays a key role in mitigating the health sector's contribution to climate change, largely by decreasing staff, patient, and caregiver travel. Assessing the environmental benefits requires balancing reduced travel-related emissions against those generated by the technology and systems used to deliver virtual care.

Approach: To generate estimates for CO2 emission avoidance associated with virtual care, we utilized data from Canada Health Infoway's 2019 Access Digital Health Survey conducted on a representative sample of 4,335 Canadians across all provinces and territories. We calculated averages for virtual care visits, in-person visits and distance traveled by patients to visit their regular doctor or place of care for the survey sample. Then, extrapolated to the general Canadian population by applying the averages computed in step one to population data gathered from Statistics Canada. We considered passenger vehicle emissions resulted from medical care visits.

Results: Virtual care delivery has implications for carbon savings in Canada. While Canadians' cars are among the world's least fuel efficient, our energy grid is comprised largely of non-carbon-emitting sources. This allows us to replace travel via fuel-inefficient cars with technology run on relatively clean energy. If half of in-person visits were replaced by virtual visits, carbon emissions would be reduced by 325,000 metric tons. These savings are equivalent to taking more than 70,000 passenger vehicles off the road for a year.

A 50 per cent adoption rate might sound high, but we're already there. Since the beginning of the COVID-19 pandemic, approximately 60 per cent of visits have been conducted virtually, either by video, telephone or text/email.

Conclusion: Replacing in-person care with virtual care where appropriate is a key step in achieving an environmentally sustainable, carbon-neutral health system. Systematically tracking impact on healthcare-related emissions represents a key way to incorporate environmental sustainability into our health system and allows us to protect the health of patients and the planet.

B2.5

Tracking Canada's response to COVID-19: CIHI's Intervention Scan and Interactive Timeline

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Primary Theme: COVID-19

Background and Objectives: The COVID-19 pandemic and responses continues to evolve rapidly across Canada. Health systems are relying on Federal/Provincial/Territorial (F/P/T) policy interventions and public health measures to reduce transmission, improve health outcomes, and manage health workforce capacity. Our objective was to develop and maintain a comprehensive intervention scan of policy interventions across Canada to enable the monitoring and management of the current pandemic, as well as retrospectively evaluate Canada's COVID-19 response to prepare for future outbreaks.

Approach: The Canadian Institute for Health Information (CIHI) conducts ongoing systematic web searching to capture information on relevant COVID-19 interventions such as case management, distancing, health workforce capacity, health services and travel restrictions. Key websites tracked include: F/P/T, public health agencies, and professional regulatory bodies. Interventions implemented at the sub-provincial/territorial level are included if in an F/P/T announcement.
Data is checked for validity, standardized for language and added to the COVID-19 Intervention Scan (excel file) and Intervention Timeline in Canada (visualization). Daily COVID-19 case counts sourced from the COVID-19 Canada Open Data Working Group are included in the visualization for context.

Results: The COVID-19 Intervention Scan and Intervention Timeline in Canada provide high-quality information for health system managers, public health planners and researchers to:
1) Understand when F/P/T governments and regulatory bodies implemented which interventions in response to changing COVID-19 case counts;
2) Create customized timelines by jurisdiction, time-period and type of intervention;
3) Use in local level tracking initiatives (e.g. health units using CIHI's data and classification methodology);
4) Develop COVID-19 prediction tools (e.g., CIHI's Health System Capacity Planning tool predicts COVID-19 heath resource use for F/P/T, health regions and hospitals);
5) Compare Canada's response internationally (e.g., CIHI's Long Term Care and COVID-19: International Comparisons identified that Canada had a relatively low policy response, with fewer guidelines/restrictions, during the first wave compared to other countries).

Conclusion: The systematically collected and organized COVID-19 interventions available in CIHI's COVID-19 Intervention Scan and Intervention Timeline in Canada provide a repository of information to support ongoing and future work to understand Canada's pandemic response. The work continues to evolve, for example, future updates will include new vaccine related interventions.

Integration of self-management principles into medication management frameworks: A scoping review

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Primary Theme: Pharmaceutical Policy

Background and Objectives: Medication self-management is complex, with the potential to impact multiple aspects of an individual's day-to-day life. The use of multiple prescribed and unprescribed medications has become increasingly common and can be inappropriate and/or problematic; thus, it is important to improve medication self-management for persons taking medications. The purpose of this scoping review was to identify what is reported in the literature on medication management frameworks or models with a focus on self-management.

Approach: Electronic databases (Medline, Embase, CINAHL, Cochrane Library) and grey literature (government and healthcare organization websites) were searched for articles that described a framework or model that was developed or adapted for medication management, included components of self-management and published from January 2000 to January 2020. The titles and abstracts of 5,668 articles were reviewed, of which 5,242 were excluded; 426 full-text articles were reviewed and 39 articles were included. Data were extracted by the core study team using a study-specific extraction form in Microsoft Excel. The extracted data were compared and descriptive numerical analysis and thematic analysis were conducted.

Results: Of the 39 included articles, there was an approximately even distribution between quantitative (n=15) and qualitative (n=12) study designs. Other study designs included mixed methods (n=3) and reviews (n=9). Studies were conducted across 12 countries, but most were in the United States (n=24). Common target populations included adults with HIV and adults with cardiovascular disease. The majority of articles focused on medication adherence. Medical management was the most common self-management domain and the other two domains (emotional and role management) were integrated less. A limited number of frameworks incorporated all three components of self-management. About half of the frameworks were newly developed (n=20), while the other half were adapted from, or applied, a previous framework (n=19).

Conclusion: Medication self-management is a complex process and often impacts multiple areas of an individual's life. More work is needed to develop a comprehensive and holistic framework for medication self-management that is inclusive of the core components of self-management.

Opioid Agonist Therapy as treatment for opioid use disorder: comparing duration, risks and frequency of healthcare encounters

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Primary Theme: Pharmaceutical Policy

Background and Objectives: Methadone and buprenorphine/naloxone (BUP) are considered first-line treatment options for opioid use disorder (OUD). The objective of this study was to compare duration of treatment, risks of overdose, and the frequency of interactions with healthcare professionals among people newly starting treatment with one of these medications.

Approach: We conducted a population-based matched propensity-score matched cohort study among people newly initiating methadone or BUP between October 2016 and December 2018. We defined ongoing treatment on the basis of successive refills with no gap in therapy exceeding 14 days. The primary outcome was an opioid overdose during treatment which was defined using hospitalization records and coroner death records. Secondary outcomes included discontinuation of therapy receipt of a 7-day take-home supply. We used Cox Proportional Hazards regression to compare outcomes between treatment groups.

Results: Over the study period, 7,517 new methadone users were matched to an equal number of new BUP recipients. People initiating BUP were significantly less likely to experience an opioid overdose while on treatment (aHR 0.50, 95% CI 0.37-0.68), and more likely to receive a weekly take-home dose over the 1-year follow-up (aHR 2.33, 95% CI 2.20-2.46) compared to those initiating methadone. However, people treated with BUP were more likely to discontinue therapy (aHR 1.43,95% CI 1.37 to 1.49).

Conclusion: There are important differences in the risk of overdose, requirements for frequent healthcare encounters, and treatment duration among people starting treatment with methadone and BUP. These factors should be considered when balancing the clinical benefits and potential risks of different options for first-line OAT.

B3.3

The impact of OHIP+ universal pharmacare on prescription drug use and costs among children and youth under 25 years in Ontario: a time series analysis.

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Primary Theme: Pharmaceutical Policy

Background and Objectives: In January 2018, the province of Ontario (ON) began a universal Pharmacare policy called OHIP+, which gave residents < 25 years of age free access to prescription medication Ontario Drug Benefit coverage. OHIP+ was modified in April 2019 to a more restrictive model mandating the use of private insurance first. We aimed to assess utilization and cost changes over time before and during OHIP+, using British Columbia (BC) as a control province.

Approach: We used prescription drug claims data from the CIHI National Prescription Drug Utilization Information System to calculate the overall, asthma and diabetes drug prescriptions rates of utilization and drug plan expenditures for all children and youth < 25 years old from January 2016 to October 2019. We performed a population-based, time-series analysis using R studio version 1.3.1056 to estimate the effect of each of the adopted OHIP+ policies on rates of prescriptions use and plan expenditure trends in Ontario as compared to BC.

Results: Our cohort averaged 260,930 and 119,881 beneficiaries per month for ON and BC, respectively. Overall drug prescription utilization in the OHIP+ 2018 period increased by 282%, from 78,293 to 299,311 per 100,000 population then decreased post-April 2019 by 46% to 160 570 per 100,000. Overall, drug spending for residents <25 years in 2017 totalled $189 million and for 2018, $671 million. Likewise, the monthly plan expenditure increased from $115.94 (95%CI, $100.93-$130.94) in 2018, then decreased after April-2019 to $99.97(95%CI, $119.79-$80.15) per person per population. The estimated trend-change was highly significant with a monthly increase of $1.86 per person per population (95%CI, $0.27-$3.46, p=0.025) for ON compared to BC after the initial policy. Our sub-analyses for asthma and diabetes showed similar trends on the same metrics.

Conclusion: We provide the first publicly available evidence on the utilization and cost increases associated with the adoption of OHIP+ universal Pharmacare in Ontario. Future research needs to examine associations with health outcomes.

B3.4

Evaluating Pharmaceutical Alternatives to the Toxic Drug Supply: Experiences of Indigenous People who use Drugs in BC's Northern Region

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Primary Theme: Pharmaceutical Policy

Background and Objectives: In March 2020, a province-wide "safer supply" program was introduced in BC, approving prescription alternatives to the toxic drug supply to mitigate the spread of COVID-19 among people who use drugs (PWUD). Among PWUD, Indigenous people, especially living in rural and remote areas, face unique challenges accessing health care and harm reduction services. This study aims to identify the barriers, facilitators, and experiences of Indigenous PWUD seeking and accessing safer supply in BC's Northern region.

Approach: Led by the First Nations Health Authority (FNHA), this study is part of a larger provincial mixed methods evaluation of the program. Three Indigenous community-peer research associates (CPRAs) were recruited and 20 qualitative interviews will be conducted with Indigenous PWUD from across the northern region. The interview guide was culturally adapted by CPRAs and FNHA's Northern regional team to include themes such as family, culture, reconnection, housing, stigma, and goals for accessing safer supply. Findings from this embedded evaluation will be validated by Indigenous PWUD and utilized by FNHA in its provincial opioid response.

Results: Frequently, harm reduction policies and programs are designed by non-Indigenous people in urban settings and may not be accessible or appropriate for Indigenous PWUD, especially in rural and remote areas (e.g., daily dispensation requirements). Preliminary administrative data from the larger evaluation suggest limited prescribing in the Northern region based on population size and proportion of overdose deaths. Anecdotal reports from Indigenous CPRAs and FNHA's Northern regional team indicate a lack of understanding of safer supply, some community resistance to implementation, and prohibitive accessibility (e.g., provider reticence to prescribing, long distances to travel). Findings are anticipated to provide FNHA, policymakers, and clinicians with a roadmap for implementation and expansion of safer supply prescribing for Indigenous populations and populations in rural and remote areas.

Conclusion: Involving Indigenous PWUD and rural and remote populations in provincial programming and policy is critical to reduce inequities of access, promote greater relevance and uptake, and ultimately, reduce health disparities. Centring traditionally underrepresented voices is critical to the success of the current risk mitigation measures and future safe supply programs.

B3.5
Are the Best Outcomes Being Measured in Studies of Oral Anticoagulants? A Systematic Survey

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Primary Theme: Health Informatics

Background and Objectives: Oral anticoagulant (OAC) intervention trials have typically focused on clinical event outcomes (e.g., stroke, systemic embolism, VTE, mortality, and bleeding events). However, there is no standard list of outcomes to be used in OAC research. COMET (the Core Outcome Measures in Effectiveness Trials) is an international effort to develop and apply core outcome sets (COS) for clinical trials. This study aimed to determine how well OAC studies adhered to COMET COS domains.

Approach: We searched MEDLINE, EMBASE, and CINAHL databases from January 2009 to July 2019. We included prospective studies and their accompanying protocols, with an intervention or control group that included one or more OACs. Data were abstracted on all outcomes measured and categorized using the five COMET domains of outcomes (mortality/survival, physiological/clinical, life impact, resource use, and adverse events).

Results: 70 randomly selected papers were included, 52 randomized controlled trials, and 18 prospective cohort studies with 22 corresponding protocols available for review. A total of 121 different outcomes were reported. Each of the COMET domains was represented: mortality (63/70, 90.0%) [all-cause death (56/63), cardiovascular death (27/63), and death caused by bleeding (21/63)]; physiological/clinical domain (70/70, 100%) [major bleeding (61/70), any bleeding (46/70), and stroke (44/70)]; life impact domain (43/70, 61.4%) [adherence/compliance (27/43), withdrawal from the study (13/43), and patient-reported quality of life (5/43)]; resource use domain (26/70, 37.1%) [all cause hospitalization (9/26), cardiovascular hospitalization (6/26), and healthcare resource utilization (6/26)]; and adverse events domain (55/70, 78.6%) [any adverse events/effects (AE) (37/55), serious AE (13/55), and any AE severity (10/55)].

Conclusion: Outcome reporting in prospective studies of OACs frequently concentrates on mortality and physiological/clinical domains, with good representation for adverse events, less for life impact, and poor representation of resource utilization. We plan to use this analysis to develop a core outcome set (COS) for OAC research using consensus methods.

B4.1

Patients-trainers in Primary Care : A Knowledge Transfer Tool for Best Practices among Clinicians

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Primary Theme: Patient and Public Engagement

Background and Objectives: Over the last ten years, there has been an important restructuring in primary care services. Among others, the paternalistic approach is being replaced by a patient oriented approach. This approach allows patients to be directly involved in decisions regarding their health. To train the professionals to this approach, our team partnered with a new type of trainers; the patients-trainers. In order to be used efficiently, the integration of this new role must be performed adequately.

Approach: We implemented a developmental evaluation with a patient-centered approach. Six patients trainers were educated following the Train-the-trainer framework, in order to enable them to train, along with other clinicians trainers, social workers and nurses in primary care to their expected roles in family medical clinics.

Results: Patients-trainers were trained on a vast array of topics such as andragogy, clinical coaching, primary care, interprofessional collaboration and patient experience. In light of the analysis of our qualitative data, we observed that clinicians trainers were reluctant to include patients-trainers in training-related activities and also in training preparation. Moreoever, we also noted that clinicians who were trained by patients-trainers, did not quite understand the relevance of their role in clinical training. Indeed, the clinicians feared they could be judged on the quality of their care by some of their patients. As it is a rather recent role, some patients-trainers also struggled to take on their new roles as trainers. Some of them mentioned feeling excluded and inferior to their clinicians counterparts.

Conclusion: Preliminary results tend to show that the inclusion of patient-partners in work teams remains challenging in all of the assessed clinics. The promotion and enhancement of the role of patient-trainer in healthcare is necessary in order to give clinicians learning opportunities in high-quality clinical environments that also promotes patients' perspective.

B4.2

Reconciling validity and challenges of patient comfort and understanding: Guidelines to patient-oriented questionnaires

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Primary Theme: Patient and Public Engagement

Background and Objectives: In developing and validating questionnaires, it is recommended to avoid reformulating questions after the final steps of validation. However, patient partners engaged in the research design and data collection planning may seek further clarity or comfort upon reviewing validated questionnaires. Building on the experience of the participatory PriCARE research program, we propose: 1) steps to address challenges of patient comfort and understanding of the questionnaires and reach consensus; 2) patient-oriented guidelines for administering the questionnaires.

Approach: Based on a participatory approach and the patient engagement framework in the Strategy for Patient-Oriented Research of the Canadian Institutes of Health Research (CIHR), team members, including patient partners, worked together to discuss the problem, review the questionnaire, and discuss to different solutions. A working group was created to produce guidelines for the administration of the questionnaires, based on literature presenting similar processes in research projects. We present a step-by-step description of strategies used in the PriCARE research program, to reconcile good research practices for using validated questionnaires and the challenges in questionnaire development related to patient comfort and understanding.

Results: This presentation describes how patient partners were engaged and integrated into the governance of the PriCARE research program, challenges they raised with the questionnaires and how these challenges were addressed in a six-step approach: 1) Recognizing patient partner concerns, discussing to better understand and acknowledge these concerns, and reframing the challenges; 2) Detailing and sharing evidence for validity of questionnaires; 3) Evaluating potential solutions; 4) Searching literature for guidelines; 5) Creating guidelines; 6) Sharing and refining guidelines. The main output of this project is a manual including six sections presenting patient-oriented guidelines for administering the questionnaires used in the PriCARE research program.

Conclusion: This six-step approach demonstrates how research teams can integrate patient partners as equal team members, develop meaningful collaboration through recognition of individual experiences and expertise, and ensure the expression of the patient perspective in questionnaire research, the development of data collection tools, and healthcare innovation in general.

Family Caregivers as Essential Partners in Care: Examining the Impacts of Restrictive Acute Care Visiting Policies During the COVID-19 Pandemic in Canada

Author Names: Stephanie Montesanti, Gail MacKean, Kayla Fitzpatrick, Carol Fancott, Julie Drury

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Primary Theme: Patient and Public Engagement

Background and Objectives: During the COVID-19 pandemic, tight blanket restrictions were placed on 'visitors' in healthcare institutions. Restrictive family presence policies have significant impacts on the emotional well-being of patients, families, caregivers, and providers, as well as on patient safety, quality of care, and outcomes. Research commissioned by the Canadian Foundation for Healthcare Improvement (CFHI) explored the impacts of restrictive family presence policies in acute care settings on patients, families, caregivers, and providers.

Approach: The principles of Patient-and-Family Centred Care (PFCC) were used as the overarching lens to guide this research. A qualitative study design was utilized to explore the impacts of restrictive family presence policies and practices in acute care settings in response to the COVID-19 pandemic. A maximum variation sampling strategy was used to recruit 38 key informants across Canada. A particular focus was on the experience restrictive policies had on patients, caregivers, providers within non-COVID units. Frontline providers included physicians, nurses, and social workers. Semi-structured interview questions were guided by an intersectionality lens. Interviews were analyzed using thematic content analysis.

Results: Patients' desires and needs with respect to having essential care partners present to support them during their healthcare stay varied considerably. For instance, patients with complex and/or rare medical conditions, and those who have experienced some healthcare trauma, often have a greater need for family support. Some family caregivers and patients noted that there is no 'one-size-fits-all' family presence policy that will address all patient needs. In addition, frontline providers also expressed high levels of psychological stress and moral distress adhering to restrictive family presence policy guidelines, describing anxiety that they could not provide the best care in a way that was patient-and-family centred. Providers expressed some confusion due to a lack of communication and directive on visitation policies in hospitals, contributing to heightened stress.

Conclusion: The impact of the strict 'zero visitor' policies implemented at the beginning of COVID-19 has had devastatingly negative impacts for many patients, family caregivers and healthcare providers. Although some hospitals have begun to relax these policies to allow for some family presence, they continue to create great hardship for many.

B4.4

Conditionally positive: a qualitative study of public perceptions about using health data for artificial intelligence research

Author Names: P. Alison Paprica, Melissa McCradden, Tasmie Sarker

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Primary Theme: Patient and Public Engagement

Background and Objectives: Previous qualitative research studies have shown general but conditional public support for data-intensive health research. Despite widespread interest in using artificial intelligence (AI) to transform large amounts of health data into actionable knowledge, little is known about how members of the public perceive the use of health data in AI research.

Approach: The objective was to learn more about the perceptions of members of the general public about using health data in AI research. Six (6) focus groups involving a total of 41 members of the general public were performed in Ontario, Canada in 2020. Participants shared their views about AI in general then discussed three fictional but realistic health AI research scenarios. Data were analysed using qualitative description thematic analysis.

Results: Participants had low levels of knowledge and mixed, mostly negative, perceptions about AI in general. Most supported using AI as a tool for health analyses when there is strong potential for public benefit as long as concerns about privacy, consent and commercial motives are addressed. Inductive thematic analysis identified health AI-specific hopes (e.g., potential for faster and more accurate analyses), fears (e.g., lack of human touch, decrease in human skills over time) and conditions (e.g., a human must be in the loop for computer-aided health-related decisions). There were mixed views about whether consent is required when non-identifying health data are used in AI research with most participants primarily wanting to know if, how and when their data were used. Though it was not an objective

Conclusion: Notwithstanding concerns and low knowledge about AI in general, members of the general public in six focus groups in Ontario, Canada were conditionally supportive of health data being used for AI research.

B5.1
Electronic consultation in correctional facilities worldwide: A scoping review
Author Names: Claire Sethuram, Mary Helmer-Smith, Sathya Karunananthan, Erin Keely, JP Singh, Clare Liddy

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Primary Theme: Health System Performance

Background and Objectives: Accessing specialist care for offenders living in Canada's correctional facilities is challenging and costly. Electronic consultation (eConsult), a secure web-based tool allowing primary care providers to send patient-specific questions to specialists, is proven to improve access to specialist advice and reduce costs in community settings. To inform discussions with Correctional Services Canada about a nationwide eConsult service, we conducted a scoping review of the use of and evidence for eConsult services in correctional settings worldwide.

Approach: This scoping review includes published academic literature and grey literature about eConsult in correctional settings. On July 9, 2020, a literature search was conducted for English and French articles in the MEDLINE, EMBASE, and CINAHL databases. Data pertaining to characteristics of the included studies, description of the eConsult service, outcome measures, and main findings were extracted. The grey literature was searched on August 6, 2020 using keywords in the Google search engine. An advanced site search was also performed through the Google search engine to collect data from relevant government websites and organizations, which were identified by stakeholders.

Results: Of the 226 academic articles retrieved, 18 were included in our review. The majority of studies were conducted in the United States (n=8) and France (n=4). The most common study type was cost analysis (n=4). Study populations were mainly adult male offenders, with two studies describing interventions for youth offenders and three including female offenders. Thirteen articles described distinct eConsult services, 11 of which were single specialty such as dermatology or ophthalmology. Studies frequently reported improved timeliness of diagnosis and treatment, reduced costs due to avoided transportation from the facility, and high patient and provider satisfaction. Data were extracted from 18 websites, which identify eConsult services in the United States (n=14), Canada (n=3), and Spain (n=1). Analysis of the grey literature data is underway.

Conclusion: The evidence suggests eConsult use in Canada's correctional facilities will improve timely access to specialist advice for offenders, reduce cost of care, avoid unnecessary transportation, and be acceptable to both patients and providers. These results will inform ongoing discussions about eConsult service expansion to correctional facilities across Canada.

B5.2
Characterizing re-assault in Ontario, Canada: A population-based analysis

Author Names: Rachel Strauss, Natasha Saunders, Rinku Sutradhar, Jin Luo, David Gomez, Carolyn Snider

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Primary Theme: Health System Performance

Background and Objectives: Violence remains a leading cause of morbidity and mortality worldwide. Individuals who experience a violence-related injury are at high risk for subsequent and potentially preventable violence-related injuries. The extent to which characteristics of assault predict the risk and intensity of future experiences of assault is not well-described and is important for the planning of preventative interventions. Our objective was to describe the incidence of re-assault and associated sociodemographic and clinical risk factors in Ontario, Canada.

Approach: This was a population-based study using linked health administrative databases. We included all individuals seen in an emergency department (ED) or hospitalized with a physical assault between April 1st, 2005 to November 30th, 2016 and followed them until December 31st, 2016 for re-assault (including deaths due to assault). We used an Andersen-Gill recurrent events regression model to model associations between sociodemographic and clinical risk factors and rate of re-assault.

Results: 271,522 individuals experienced assault, 24,568 (9.0%) of whom were re-assaulted at least once within 1 year, 45,834 (16.9%) within 5 years, and 52,623 (19.4%) within 10 years. 40,322 (21%) males and 12,662 (17%) females experienced re-assault over the study period. Groups with increased rates of re-assault included: those aged 13-17 and 18-24, compared to older-adults [(13-17: males: relative rate [RR]=2.16;95% confidence interval [CI]:1.96-2.38; females: RR=2.79;95% CI=2.39-3.26),(18-24: males: relative rate [RR]=1.78;95% confidence interval [CI]:1.62-1.96; females: RR=2.38;95% CI=2.04-2.77)], those with the lowest neighbourhood-level income, compared to the highest (males: RR=1.38 95% [CI]:1.34-1.41; females: RR=1.32;95% CI=1.26-1.39), those living in rural areas, compared to non-rural (males: RR=1.22;95% CI=1.19-1.24; females: RR=1.32;95% CI=1.27-1.37), and individuals with a history of incarceration, compared to those without (males: RR=2.38;95% CI=2.33-2.42; females: RR=2.57;95% CI=2.48-2.67).

Conclusion: At least one in five who are assaulted experience re-assault. Those at greatest risk include adolescents and transition age youth, males, those living in low-income neighbourhoods, and those who have been incarcerated. Interventions and supports to reduce the risk of experiencing re-assault must focus on prevention for these groups.

Delays for Medical Imaging and Radiology Procedures Among Medical Inpatients: A Cohort Study

Author Names: Emily Bartsch, Lauren Lapointe-Shaw, Amol Verma, Fahad Razak, Saeha Shin

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Primary Theme: Health System Performance

Background and Objectives: Medical imaging is commonly used as part of the diagnosis and management of patients admitted under General Internal Medicine; however, delays in completing imaging and radiology procedures have not been formally studied, despite potentially contributing to patient outcomes and increased length of hospital stay. We sought to quantify these delays and identify contributing patient and physician factors.

Approach: This was a retrospective cohort study of General Internal Medicine patients admitted at 5 academic hospitals in Toronto, Ontario between 2010 and 2019. We included patients who had ≥1 advanced imaging test (CT, MRI, ultrasound, peripherally-inserted central catheter) performed after admission. The primary outcome was time to test (time of ordering to time of test completion). For each test type, a multivariable random effects model was used to identify predictors of time to test. We included variables expected to impact time to test, at the level of the test, admission, patient, and physician, with hospital modelled as a fixed effect.

Results: Among 77,562 patients included in the study cohort, the most common test ordered was CT (52%). 45.6% of all tests were ordered ≤1 day into admission. Wait times varied by hospital; for MRI, median time to test ranged from 0.70 days (IQR 0.30-1.20) at one site to 1.10 days (IQR 0.50-2.30) at another. After adjusting for all variables, we found that older patient age and having more comorbidities were associated with longer time to test. Ordering tests from the Emergency Department or Intensive Care Unit was associated with significantly reduced wait times, while ordering on the weekend was associated with significantly longer wait times, an effect most striking for ultrasound (RR 2.07, 95% CI 1.99-2.15). Physician-level variables did not significantly contribute to wait times.

Conclusion: We found that longer radiology delays were associated with older age and greater comorbid illness, as well as the specific hospital, location within hospital, and timing of test ordering. The resultant delays may contribute to potentially avoidable length of stay in hospital.

B5.4

What are the differences in health service use between persons with dementia living in rural and urban areas in Quebec?

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Primary Theme: Health System Performance

Background and Objectives: Patients with dementia have higher healthcare utilization than patients without, but little is known about how rurality modulates this relationship. Rural patients are more likely to face barriers in obtaining health care, such as experiencing longer travel times, delayed referrals to specialists, and uneven healthcare resources compared with urban patients. The aim of this study is therefore to describe healthcare service utilization between rural and urban patients with dementia in Quebec.

Approach: We used a repeated annual cross-sectional cohort design from 2000 to 2019, with linked administrative databases from the Institut national de santé publique du Québec. All incident cases of dementia in community-dwelling persons 65+ occurring between April 1st and March 31st for each year were included. Dementia diagnosis was ascertained using a validated algorithm. Rurality was defined by Statistical Area Classification (SAC) types.

Results: Overall, we present age-adjusted trends for 237259 patients with dementia. Of these people, 79,8% live in urban areas (SACtypes 1 to 3), while 20,2% live in rural areas (SACtypes 4 to 7). Graphical and visual analyses revealed that rural PWD have more emergency department visits, more hospitalizations too, but stay the shortest in hospital and are sent less to alternate level of care. Rural PWD also have fewer visits to primary care physicians and cognition specialists. Rural and urban PWD have similar rates of long-term care admission and mortality.

Conclusion: This study reveals important geographically based differences in health service use between rural and urban patients with dementia in Quebec. This is important as geographical disparities need to be addressed in dementia strategies and interventions, otherwise health inequity may be exacerbated. This research will guide researchers and decision-makers to develop

B5.5
Critical illness among patients experiencing homelessness.

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Primary Theme: Health System Performance

Background and Objectives: Intensive care units (ICUs) deliver critical yet resource-intensive care. Evidence suggests healthcare resources are used disproportionately; 75% of resources are used by 20% of patients. Patients experiencing homelessness are at greater risk of illnesses commonly associated with ICU admission (e.g. heart disease, diabetes) and are high users of some healthcare resources.
The objective of this study is to describe ICU admissions among patients experiencing homelessness, and examine healthcare resource utilization (HRU) and outcomes among these patients.

Approach: This retrospective cohort study of adults admitted to Alberta ICUs between January 2015 and March 2018, linked data from hospital admissions, emergency department visits, and ICU admissions probabilistically (personal healthcare number, hospital and ICU admission and discharge dates, and date of birth). Patients experiencing homeless were identified using shelter postal codes and a code indicating no fixed address. Descriptive statistics summarized patient characteristics. Chi-squared and Wilcoxon rank sum tests were used to compare patients experiencing homelessness and those who were not. Multivariable logistic regression models evaluated the association between these two patient groups and HRU and mortality.

Results: We identified 47848 patients admitted to ICU; 2% (n=1086) had ever experienced homeless. Patients who had experienced homelessness were younger (median aged 50 vs. 63 years old), had fewer comorbidities (44% vs. 29% with no comorbidities), and were most commonly admitted for a medical reason (60% vs. 26%). Patients experiencing homelessness used more healthcare resources; more invasive mechanical ventilation (OR=2.3, p<0.001) visit to an emergency department (2.0, p<0.001) or rehospitalization (OR=2.0, p<0.001) within 30 days of ICU discharge than non-homeless patients. This finding persisted when using a composite score of HRU and controlling for age, sex and comorbidities (p<0.001). There were no differences in mortality among those experiencing homelessness and non-homeless patients, even when controlling for age, sex and comorbidities (OR=0.9, p=0.4).

Conclusion: The number of critically ill patients experiencing homelessness is low. Patients experiencing homelessness utilize more healthcare resources during and following their critical illness, but are not more likely to die in hospital than non-homeless patients. Additional research is needed to understand healthcare resource before and after their ICU admission.

Pandémie de Covid-19: Réalités et besoins des Premières Nations vivant en milieu urbain

Author Names: Amélie Boudreault, Marie-Eve Poitras, Amanda Canapé, Kate Bacon, Sharon Hatcher, Vanessa Vaillancourt

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Primary Theme: Indigenous Health

Background and Objectives: À ce jour, l'expérience vécue et les besoins des premières nations (PN) vivant en milieu urbain en contexte pandémique demeurent méconnus. Pourtant ceux-ci sont durement touchés par les mesures de santé publique ce qui augmente leur fardeau lié au maintien de leur santé. Cette méconnaissance empêche ou freine le déploiement de services culturellement sécuritaires par et pour les membres des PN.

Approach: Notre équipe a mené une étude participative auprès de membres des communautés Innue et Atikamekw qui fréquentent le Centre d'Amitié Autochtone du Saguenay. Nous avons effectué six cercles de partage auprès de 13 membres afin de comprendre leurs vécus et leurs besoins. Les participants étaient invités à partager leurs expériences lors de la première vague, comment ils s'y sont adaptés et quels services devraient être offerts par le Centre d'Amitié en contexte pandémique. Le modèle Two-Eyed Seeing et la conception de la santé selon la roue de la médecine ont soutenu l'analyse thématique des verbatims émergents des cercles de partage.

Results: Au terme de l'analyse faite conjointement par tous les membres de l'équipe, il a été relevé des éléments clés en regard de l'expérience vécue et des services souhaités par les membres des PN en milieu urbain. L'inaccessibilité du territoire ancestral, de la famille vivant en communauté et l'impossibilité de se réunir étaient des éléments centraux amenant de la tristesse et un sentiment d'isolement chez les PN. Parmi les services souhaités, on note des rassemblements permettant d'apprendre sur la médecine traditionnelle et les savoirs ancestraux. Les membres désiraient également avoir des activités sociales en ligne. Finalement, les participants aimeraient avoir des services liés à la dimension familiale, tels que du répit pour les parents, une banque alimentaire et du soutien aux parents pour l'école à distance.

Conclusion: Cette étude participative a permis de mieux comprendre l'expérience et les besoins des PN vivant en milieu urbain en contexte pandémique. Notre équipe travaillera à coconstruire des services culturellement sécuritaires favorisant la santé globale en contexte pandémique des membres de PN vivant en milieu urbain.

B6.2

Understanding Indigenous peoples' experiences and perspectives on health research practices and priorities

Author Names: Shannon Field, Andreas Pilarinos, Brittany Bingham, Krisztina Vasarhelyi, Leslie Bonshor, Roberta Price, Doris Fox

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Primary Theme: Indigenous Health

Background and Objectives: In Canada, research and research institutions have been complicit in the colonization of Indigenous peoples, where non-consensual medical experiments were conducted in Residential Schools and Indian Hospitals. Today, research commonly continues to lack respectful engagement. These harms have resulted in distrust and avoidance of participation in research, meaning that Indigenous peoples' perspectives and experiences are underrepresented. This study engaged with Indigenous peoples in Vancouver, Canada to hear their experiences with health research practices and priorities.

Approach: This research was led by a two-eyed seeing research team, consisting of both Indigenous and non-Indigenous researchers, committed to using culturally safe approaches throughout all stages of research. For this study, two talking circles, grounded in Indigenous methodologies for data collection and led by Indigenous Elders, were conducted with 26 participants who self-identified as Indigenous and who were recruited from an urban Indigenous health and community service providers. Thematic analysis was used to identify key emerging themes pertaining to the research experiences of participants, ways in which research can be more inclusive, and Indigenous-specific health research priorities.

Results: A majority of study participants expressed feelings of distrust and skepticism when asked about their experiences and perspectives on research. Participants had little confidence that research results in any meaningful action or change to the systemic violence that they continue to experience. Participants emphasized that research should seek to meaningfully engage Indigenous participants while avoiding tokenistic inclusion, including ensuring that research spaces are welcoming of Indigenous partners and participants and that researchers remain truthful to participants in their approaches. Such practices were seen as more likely to result in research that produced positive change for Indigenous peoples. Participants listed Elders and elder care, Indigenous women's health, Indigenous youth health, health access and transportation for rural communities, and the overdose crisis as future priority research areas.

Conclusion: Despite participants' negative views and experiences with health research, many believe that better research practices could result in improved participation rates and better outcomes for Indigenous peoples. Therefore, future research among Indigenous peoples should seek to address Indigenous-specific health priorities though the use of culturally safe health research approaches.

Confronting Racism within the Canadian Healthcare System: Systemic Exclusion of First Nations from Quality and Consistent Care

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Primary Theme: Indigenous Health

Background and Objectives: Indigenous people have repeatedly reported and proven behaviors, actions and inactions indicating racism exists in the Canadian healthcare system. Understanding and confronting endemic racism is essential to improving the state of health of First Nations (FN) peoples in Canada. Supporting FN communities' priorities is critical for primary healthcare transformation. This paper shares FN people's perspectives and experiences of racism in Manitoba and outlines action to eradicate racism and create an equitable health care system.

Approach: This qualitative study is one of five within a larger program of research titled Innovation Transforming Community-based Primary Healthcare in First Nation and rural/remote communities of Manitoba, a partnership between researchers at the University of Manitoba, the First Nation Health and Social Secretariat of Manitoba (FNHSSM) and 8 Manitoba FN's. We used a grounded theory and community-based participatory approach to engage 8 First Nations communities and questions were co-developed by university-based researchers, FNHSSM and community partners. 183 interviews and 7 focus groups were conducted by community-based local research assistants. Data was collaboratively analyzed through process involving community partners.

Results: Key themes to address racism in the healthcare system include; addressing a fractured relationship and distrust by FNs towards Canadian institutions; reducing barriers that create difficulties navigating a fragmented healthcare system; reducing communication barriers; confronting a tendency to focus on biomedicine while devaluing of FN health and wellness systems; removing conditions that perpetuate of negative stereotyping; denouncing mistreatment within a system that does not meet FN healthcare needs, and positions FN needs as secondary to all other Canadians.

Conclusion: Radical transformation in healthcare systems is needed. The time has come to call out debilitating racism and create more inclusive, diverse and equitable social structures to reshape healthcare institutions. A healthy healthcare system is one devoid of discriminatory practices, that builds on the strengths of First Nations peoples and communities.

B6.4

"We need to raise the bar!" Understanding Indigenous patients' health care experiences and perspectives on promising health care practices

Author Names: Andreas Pilarinos, Shannon Field, Brittany Bingham, David Hall, Krisztina Vasarhelyi, Roberta Price, Doris Fox, Leslie Bonshor

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Primary Theme: Indigenous Health

Background and Objectives: In Canada, Indigenous peoples continue to experience persistent health inequities resulting in disproportionately poor health outcomes compared to non-Indigenous Canadians. Additionally, Indigenous communities and service users are seldom engaged by health care systems, which may explain the health discrepancies between Indigenous and non-Indigenous populations. This study sought to engage Indigenous patients accessing health care services in Vancouver, Canada in order to learn about their health care experiences and perspectives on promising health care practices.

Approach: This research was led by a two-eyed seeing research team consisting of both Indigenous and non-Indigenous researchers committed to using culturally safe approaches throughout all stages of research. For this study, two talking circles were conducted with 26 participants who self-identified as Indigenous and were recruited from health care and community settings. Talking circles were led by Indigenous Elders and were grounded in Indigenous data collection methodologies. Thematic analysis was used to identify overarching themes related to participants' health care experiences and ways that health care services and settings can be improved to meet the needs of Indigenous patients.

Results: A majority of study participants reported encountering discrimination or racism when accessing health care because of their Indigeneity. This resulted in distrust towards health care providers and health care institutions, withdrawal from health services and negative health outcomes. Nevertheless, participants were encouraged by the health care they had been receiving at an urban Indigenous health clinic that respected both traditional and Western medicine and where all staff were committed to providing culturally safe care. While emphasizing that all health care providers should receive cultural-safety training, participants also expressed the need for acknowledging the importance of and permitting traditional medicine alongside Western medicine; creating culturally safe and welcoming health care spaces; establishing more Indigenous-specific health clinics; and improving Indigenous patients' access to Indigenous health care providers.

Conclusion: Despite participants' negative health care experiences, many credited the receipt of culturally safe health care with reducing their distrust in the health care system and improving their health and well-being. Given these benefits, study findings support the investment in and expansion of Indigenous-specific, culturally safe health care services.

Stakeholder Perspectives on Indigenous Boys' and Men's Sexual Health Promotion

Author Names: Jenny Rand, Matthew Numer, Nicole Doria, Jad Sinno, Maya Biderman, Scott Lekas, L. Jane McMillan, Arthur Dave Miller, Lisa Hackett

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Primary Theme: Indigenous Health

Background and Objectives: The field of study aimed at improving the sexual health of Indigenous communities in Canada is growing. There is a lack of culturally grounded literature, however, on the sexual health needs of Indigenous boys and men specifically. The focus of this study was to explore the perspectives of community stakeholders to identify potential pathways for improved sexual health promotion with Indigenous boys and men and elicit recommendations for implementing such pathways.

Approach: Through a collaborative approach between the Sexual Health and Gender Research Lab at Dalhousie University, the Mi'kmaw Native Friendship Centre, and Healing our Nations, our research team conducted qualitative interviews with six stakeholders who work with Indigenous boys and men in the field of sexual health. The participants held a variety of roles including program manager, community leader, facilitator, educator, and director, and were in positions to share their valuable insights into the needs of sexual health promotion programming and intervention for Indigenous boys and men. Thematic analysis was used to search transcripts for overarching themes.

Results: Stakeholders identified key elements needed to improve the sexual health of Indigenous boys and men, which has been impacted by the intergenerational effects of colonization. Specifically, stakeholders recognized three potential culturally grounded pathways to promote the sexual health of Indigenous boys and men: 1) developing healthy relationships and highlighting role models, 2) providing access to comprehensive sexual health information, and 3) fostering open communication. Interventions and health promotion activities that incorporate these pathways may contribute to reduced rates of STBBIs, increased rates of sexual satisfaction, greater acceptance of diverse sexual identities, and greater capacity to participate in emotionally and physically safe relationships. Addressing these important socio-cultural dimensions of sexual health are critical for developing holistic and successful health promotion strategies with Indigenous boys and men.

Conclusion: Stakeholders provided insights into pathways for sexual health promotion among Indigenous boys and men that emphasize cultural connectedness and resiliency and help to overcome intergenerational trauma. Further research, directed by Indigenous communities, is needed to guide culturally affirming health policy and sexual health promotion initiatives with Indigenous boys and men.

C1.1
The effect of a rapid transition to online delivery of counselling services

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Primary Theme: COVID-19

Background and Objectives: The COVID-19 stay-at-home order began in Alberta, Canada mid March 2020. This order resulted in the transition of our community-based counselling program from in person, face-to-face counselling to online, virtual counselling on using Microsoft Teams. There are no published studies about virtual care during a global pandemic. This study examined counselling outcomes for virtual care and compared the sample to clients who began face-to-face counselling in the same time period one year earlier.

Approach: This study compared the outcomes for adult clients who began counselling after the start of the stay-at-home order (week 12: March 16, 2020) and completed counselling by November 30, 2020. We compared the outcomes of this group to clients who started counselling during the same time frame of the previous year (week 12: March 18, 2019) and completed counselling by November 30, 2019. Outcomes were assessed using the Outcome Questionnaire (OQ-45) at the first and last counselling session for clients who completed 2 or more sessions.

Results: : For clients who participated in virtual care, the average OQ change score was -15.3 points. This was significantly different from face-to-face counselling in 2019 which had an average OQ change score of -12.9 (p<.001). For categories of change, 50% of the 2020 virtual counselling clients improved or recovered compared to 44% of the face-to-face counselling clients in 2019 (p<0.001).

Conclusion: This finding may provide support for the use of virtual care as a routine way of delivering counselling to clients' post-pandemic. More research is needed to understand who is benefitting from virtual care and on client ratings of the therapeutic alliance with their counsellor compared to face-to-face counselling.

Health inequities and virtual mental health care uptake among children and adolescents in Ontario during the COVID-19 pandemic

Author Names: Alene Toulany, Longdi Fu, Rachel Strauss, Jun Guan, Therese Stukel, Lisa Fiksenbaum, Eyal Cohen, Astrid Guttmann, Paul Kurdyak, Simone Vigod, Maria Chiu, Charlotte Moore Hepburn, William Gardner, Mario Cappelli, Kimberly Moran, Purnima Sundar, Natasha Sau

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Primary Theme: Mental Health and Addictions

Background and Objectives: Virtual care is an innovative and effective modality in mental healthcare delivery. However, virtual care may widen health disparities, as marginalized populations may face barriers in access. In response to the recommended public health measures during the COVID-19 pandemic, virtual care uptake has been rapid and substantial. We sought to compare virtual and in-person mental healthcare utilization before and during the COVID-19 pandemic and examine the impact of health disparities on virtual care.

Approach: Using linked health and administrative data, we conducted a population-based repeated cross-sectional study of children and adolescents (3-17 years) with mental health care needs in Ontario from January 2017 to August 2020. We compared in-person outpatient and virtual mental health care visits per 1000 population, stratified by rurality based on population density, immigrant status [immigrants, refugees, non-immigrants], material deprivation quintile and residential density before and after the onset of the COVID-19 pandemic (March 15th, 2020). Annualized population-weighted rates (95%) per 1000 population are presented.

Results: Overall mental health visits rates declined for both urban (336.9 [327.0, 346.8] pre-pandemic to 306.2 [282.4, 330.0] peri-pandemic) and rural areas (286.9 [277.8, 296.0] pre-pandemic to 249.2 [228.4, 270.1] peri-pandemic) with virtual care accounting for 80.8% (urban) and 80.3% (rural) of all visits. Mental health visit rates were stable during the pandemic among immigrants and non-immigrants, with 82.1% and 80.9% of all visits done virtually, respectively. Overall mental health visits among refugees declined (188.5 [183.1, 193.8] pre-pandemic, 158.3 [143.9, 172.8] peri-pandemic) with virtual care accounting for 70.0% of visits. Youth living in the least deprived neighbourhoods experienced no change in visit rates with 82.7% virtual, whereas those in the most deprived neighbourhoods had fewer visits (353.7 [343.3, 364.1] pre-pandemic, 296.8 [273.9, 319.7] peri-pandemic; 77.9% virtual).

Conclusion: Despite substantial increases in virtual care during the pandemic, access to mental health care is disproportionally limited among refugees and those with high material deprivation. Addressing these health inequities is critical for clinicians and health policymakers moving forward.

C1.3

A mixed methods evaluation of risk mitigation measures to address the dual public health crisis of COVID-19 and overdose

Author Names: Karen Urbanoski, Charlene Burmeister, Phoenix Beck McGreevy, Erica Thomson, Katherine Hogan, Marion Selfridge, Kiffer Card, Brittany Barker, Amanda Slaunwhite, Bernie Pauly

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Primary Theme: Mental Health and Addictions

Background and Objectives: The COVID-19 pandemic is occurring alongside the overdose public health emergency in BC, with one escalating the harms of the other. The advent of dual public health emergencies has highlighted the need for innovative public health measures to support people who use substances. This study examines implementation and impacts of a provincial prescriber-based "safer supply" program, involving the prescription of alternatives to the toxic drug supply, introduced in March 2020.

Approach: This study is co-led by academic and community researchers with lived and living experience, and is part of a larger provincial evaluation. Research activities include a 10-week prospective cohort study of people who have received or are seeking a prescription (n=200), and qualitative interviews with people who use substances (n=40) and service providers and health planners (n=40). The surveys and interviews are designed to collect data on the impact of prescriptions on people's health and wellness and the barriers and facilitators to program implementation. Activities are being conducted simultaneously, with convergent analysis of data.

Results: People with lived and living experience and allies have been advocating for "safer supply" programs for years. Such programs are controversial and there remains a lack of evidence on how best to implement them. A mixed method design is well suited to evaluating the program given its novelty, and the unique context and climate in which it is has been introduced. Preliminary analyses, corroborated by anecdotal evidence from people living and working in the community, suggests that program uptake has been uneven across the province and largely restricted to cities (Vancouver and the surrounding area, and Victoria). Prescriptions are primarily for opioids, with smaller numbers for stimulants and benzodiazepines. Participants across regions report significant barriers to access and mixed experiences of the care they receive.

Conclusion: Through a strong collaboration between academic and community researchers, this study is generating evidence to support effective policy and practice. This evidence is much needed as BC continues to implement the public health response to COVID-19, while entering the fifth year of a public health emergency related to overdoses.

C1.4
The Mental Health Commission of Canada's COVID-19 Policy Response Initiative

Author Names: Mary Bartram, Katerina Kalenteridis, Francine Knoops

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Primary Theme: Mental Health and Addictions

Background and Objectives: From the outset, COVID-19 highlighted the need for a strong policy focus on preventing and mitigating mental health impacts while also fostering resiliency. After completing a preliminary scan of relevant literature and emerging mental health policy issues, the Mental Health Commission of Canada (MHCC) launched a COVID-19 policy response initiative to examine the needs of the general population, vulnerable populations, and frontline service providers across the medium and-long-term.

Approach: COVID-19 highlighted the need for a coordinated Canada-wide effort for real-time mental health and policy research, engagement with governments across the sector, as well as engagement with people with lived experience. The MHCC's COVID-19 policy response initiative has contributed to this effort through a series of policy briefs and other policy research activities on diverse topics such as serious mental illness, corrections, early years, seniors, racialized essential workers, help-seeking, and the mental health workforce. Findings are being mobilized with policymakers, the mental health sector, and the public.

Results: Four cross-cutting mental health policy issues have emerged from this initiative and are helping to shape policy decisions in Canada. First, there is a need to continuously sharpen the policy case for mental health investment in the face of competing priorities. Second, the impacts of the pivot to virtual services on community and peer-led services need to be considered alongside of efforts to sustain the benefits. Third, we need to anticipate resiliency and be careful not to pathologize distress when talking about the mental health impacts. Lastly, the mental health sector has an important role to play in sustaining policy attention on long-standing inequities that COVID-19 has brought to the fore.

Conclusion: The mental health impacts of COVID-19 are expected to be delayed, complex and long-lasting. Key findings from this initiative can contribute to system transformation, so that people living in Canada have more equitable and timely access to the full range of evidence-based, recovery-oriented mental health services and supports.

C1.5

Use of emergency departments for first contact of mental health and substance use disorders among youth and young adults in British Columbia

Author Names: Hasina Samji, Ruth Lavergne, Ridhwana Kaoser, Mehdi Shirmaleki, Megan Kaulius, William Small, Jackson Loyal

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Primary Theme: Mental Health and Addictions

Background and Objectives: Young people who use the emergency department (ED) as a first point of contact for mental health and/or substance use (MHSU) disorders without previous use of outpatient physician MHSU services may be signalling their lack of access to primary care. We describe the characteristics of young people with incident MHSU ED visits in British Columbia (BC) and compare characteristics of those with and without previous MHSU outpatient.

Approach: We used population-level linked administrative health datasets including emergency department (National Ambulatory Care Reporting System), hospital (Discharge Abstract Database), and physician services (Medical Services Plan) in BC in 2016/2017. We included young people between the ages of 10 to 34 years without an MHSU-related ED visit or hospitalization in the preceding two years to identify "first contact" MHSU ED visits. We described the demographic and clinical characteristics of young people with a first MHSU visit in an ED setting and compared to those who had a prior outpatient healthcare contact in the preceding two years with those who did not.

Results: We identified 22,213 youth and young adults with a first contact MHSU ED visit in 2017/8. First contact MHSU ED visits were evenly distributed by sex and age category (except the 10-14 age group which accounted for fewer visits) and the most common MHSU disorders were mood and anxiety (almost half) and substance use (almost a third). Just under half of the population had no previous MHSU-related outpatient visits in the preceding two years. This group was more likely to be younger, live in a rural or remote setting, present with a substance use disorder, and have fewer primary care visits in both two years and 30 days preceding their MHSU ED visit than those with an MHSU-related outpatient visit.

Conclusion: Most youth and young adults with a first contact MHSU ED visit had a primary care visit in the preceding two years, highlighting opportunities to engage young people in MHSU-related care outside of the ED.

C2.1

"They're so deconditioned that they're not able to go home": A qualitative study of the lived experiences of deconditioning in hospital

Author Names: Sara Guilcher, Lauren Cadel, Amanda Everall, Kerry Kuluski, Joyce Li

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Primary Theme: Primary Healthcare

Background and Objectives: Patient safety is a focus of healthcare systems worldwide; however, hospital-based patient harm remains an issue, especially among older adults with physical and social complexities. This population faces a higher risk of hospital-associated deconditioning, which is connected to increased stress, length of stay and readmission rates. We explored experiences and implications of hospital-associated deconditioning from the views of patients, caregivers, providers and decision-makers to gain an understanding of deconditioning from physical, social and cognitive perspectives.

Approach: This qualitative analysis was part of a larger longitudinal, qualitative multiple-case study. Participants included patients (>50 years) who had a hip fracture or delayed discharge, caregivers of patients with a hip fracture or delayed discharge, providers (nurses, physical and occupational therapists, etc.) and decision-makers (organizational leaders). Providers and decision-makers cared, or impacted care processes, for patients with hip fracture or delayed discharge. Participants were recruited from two health regions in Ontario, Canada. In-depth, semi-structured interviews were conducted with all participants. Interviews were audio-recorded and transcribed verbatim. All transcripts were coded and analyzed using constant comparative approaches and data display matrices.

Results: Eighty individuals participated in this study, including 30 patients, 22 caregivers, 17 providers and 11 decision-makers. Experiences with hospital-associated deconditioning were similar in the two health regions. Three main categories associated with hospital-associated deconditioning were identified: (1) low levels of physical, social and cognitive activity in acute care, (2) tensions around patient identity changes and care transitions' uncertainty and (3) physical and social context of deconditioning. Participants described a lack of activities while in hospital, which often led to physical and mental deconditioning. Patients were frustrated with declining physical function and described how this impacted their self-identity and ability to transition home. Providers and decision-makers acknowledged that hospital-associated deconditioning occurred but felt constrained by limited resources and factors related to the healthcare system.

Conclusion: Participants described a significant lack of physical, cognitive and social activities in hospital, resulting in deconditioning. Hospital-associated deconditioning impacted patients' physical and mental health. Recommendations to address deconditioning include: measuring physical and psychological function during hospitalization; creating safe social spaces in hospital; and increasing access to rehabilitation during hospitalization.

C2.2

Caregiving for older adults with hip fractures: Exploring the perspectives of caregivers, providers and decision-makers in Ontario, Canada

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Primary Theme: Primary Healthcare

Background and Objectives: Older adults with hip fracture often experience an increased risk of functional decline and morbidity. Caregivers play an important role in providing physical, emotional and social support to individuals with hip fracture. We explored how caregivers for older adults with hip fracture navigate their roles and responsibilities by comparing the experiences of caregivers, providers and decision-makers. We also identified key tensions that exist between caregivers and providers/ decision-makers.

Approach: This qualitative analysis was situated within a larger, longitudinal qualitative multiple-case study. Participants included caregivers, providers and decision-makers from one rural and one urban health region in Ontario, Canada. Caregivers were providing support for an older adult with a hip fracture. Providers and decision-makers care for or played a role in impacting care processes for older adults with hip fracture. We conducted in-depth, semi-structured interviews with all participants. The interviews were audio-recorded, transcribed verbatim and coded using a study-specific codebook. The coded data were analyzed descriptively and interpretively, and experiences were compared within and across participant types and regions.

Results: A number of challenges in supporting older adults with hip fracture were described by participants. These challenges mapped onto three main tensions that existed between caregivers and providers/decision-makers. The first tension was around differing expectations of caregiver roles. Some caregivers wanted increased involvement in decision-making processes, while others described stress caused by unrealistic expectations placed on them. Providers and decision-makers noted the importance of finding a balance between caregivers providing support, without being overbearing. The second tension was based on differing expectations about what the healthcare system could provide, specific to resources. The third tension was based on differing information and communication needs. Caregivers described poor communication and limited information from providers, but providers and decision-makers highlighted the importance of educating and communicating with caregivers.

Conclusion: Caregivers for older adults with hip fracture faced numerous challenges, often leading to caregiver burnout and feelings of tension between caregivers, providers and decision-makers. Managing expectations by improving communication and the consistency of information shared with caregivers could facilitate more positive caregiving experiences.

C2.3

Understanding medication self-management in community-dwelling adults with chronic medication experience: An exploratory concept mapping study

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Primary Theme: Primary Healthcare

Background and Objectives: Individuals who take medications regularly may experience challenges including making decisions about risks versus benefits, managing side effects, and integrating medication management with other aspects of life such as work and social responsibilities. Existing medication self-management frameworks are primarily adherence-focused and lack a holistic perspective that includes these challenges. This study aims to explore what Canadian adults, with at least three months experience taking daily medication, can contribute to our understanding of medication self-management.

Approach: Concept mapping is a participatory action research approach consisting of three stages: brainstorming, sorting/rating, and mapping. During brainstorming, group discussions were held with participants who generated statements about what matters to them regarding medications in their everyday lives. In sorting/rating, individual participants grouped statements into thematic piles and rated their importance and feasibility. During mapping, a group discussion was held where a subset of participants agreed on a visual map and named the clusters of statements. Following mapping, rating results were stratified by participant characteristics (gender, age, duration of medication use, number of medications and chronic conditions).

Results: Sixty-three participants generated 1044 statements during brainstorming sessions (n=8), which the researchers synthesized into 94 statements. Statements identified priorities related to medication administration, daily routines, social impact, and health care provider interactions. Fifty-four participants sorted the statements and rated their importance and feasibility. Regardless of participant characteristics, most statements were rated highly on both importance and feasibility. Eight participants attended the final mapping session. The final map had nine thematic clusters of what matters to individuals with their medications: 1) researching and becoming educated about medications, 2) social support, 3) effectiveness of medication, 4) self-ownership of medication, 5) ease of use, 6) convenience and accessibility, 7) information provided by health care provider, 8) personal interactions with health care provider, and 9) patient involvement and trust.

Conclusion: Themes generated by participants extend current conceptualizations of self-management by including medication-specific priorities. Our results complement and build on existing chronic illness self-management frameworks, but more work is needed to develop a holistic framework that incorporates the experiences and perspectives of individuals who manage medications.

C2.4

Developmental Evaluation of COVIDCare@Home, a Family Medicine Led Remote Monitoring Program for COVID-19 patients

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Primary Theme: Primary Healthcare

Background and Objectives: COVIDCare@Home (CC@H) is a multi-faceted, interprofessional team-based remote monitoring program developed at Women's College Hospital, Toronto, for newly diagnosed COVID-19 patients in the community. CC@H offers virtual visits to address the clinical and socioeconomic needs of patients during the acute phase of COVID-19, including finding them a primary care provider and support for food insecurity. This developmental evaluation is focused on implementation outcomes, service quality, and impact (patient experience, provider experience, cost, and population health).

Approach: A multi-method developmental evaluation is underway following the conceptual framework by Proctor et al. 2009, to measure implementation outcomes including: acceptability, adoption, appropriateness, implementation cost, feasibility, fidelity, penetration, and sustainability. Service quality is measured by the IOM quality domains as efficiency, safety, effectiveness, equity, patient-centeredness and timeliness. These measures are explored using utilization data (EMR data), patient-experience data (a survey, a post-discharge assessment, a video-visit survey), and from the provider (surveys, interviews and focus groups) and institutional perspectives (stakeholder interviews). Descriptive analysis is underway for survey results and EMR data. Content analysis is being conducted for interviews and focus groups.

Results: By December 8, 2020, CC@H had cared for 681 patients since launching on April 8, 2020. Preliminary analysis (n=97) demonstrated the program was safe and feasible, with 4 visits/patient (IQR 3). Full analysis is pending. In video visit surveys on patient experience (n=29), 79% of patients found video visits "very helpful", and 62% said their experience was the same as in-person visits. Three rounds of provider surveys (n=10, 6, 6) indicated providers felt supported and that the needs of their patients were being met. Provider interviews (n=3) and focus groups (n=3) discussed building a respectful and collaborative team, challenges of working with uncertainty, and ways to meet patient needs, particularly for underserved patients. Stakeholder interviews (n=8) focused on strategies for sustaining and spreading the program.

Conclusion: CC@H was launched rapidly to meet the needs of patients who tested positive for COVID-19 in Toronto. Using a multi-disciplinary approach, the CC@H team remotely supported the clinical and socioeconomical needs of their patients. Analysis on the first 8-months will describe the implementation outcomes, service quality and impact of CC@H.

C2.5

The Impacts of Enrolment Policies on Patient Affiliation with Primary Care Physicians in Quebec, Canada

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Primary Theme: Health Policy, Healthcare Reform

Background and Objectives: Affiliation, defined as the concentration of care with a primary care physician, can influence patients' care experience, continuity of care and health outcomes. Many Canadian provinces have implemented or are considering primary care enrollment policies, with the motivation that they would increase affiliation and thereby improve downstream patient outcomes. However, there is little evidence of the impacts of such policies on patient-physician affiliation.

Approach: We evaluated the effectiveness of two primary care enrolment policies in Quebec. The 2003 policy targeted the enrolment of elderly and/or chronically ill patients, whereas the entire population was eligible to enroll under the 2009 policy. Using health administrative data, we evaluated the effect of both policies using quasi-experimental study designs (difference-in-difference (DD) and interrupted-time-series (ITS)) on three measures of patient-physician affiliation; dichotomous usual provider of care (UPC), continuous UPC and the Reporting a Regular Medical Doctor (RRMD) index. Our analyses include the Quebec population aged 40+ and in a cohort restricted to persons who used health services.

Results: The DD estimates for the outcomes of the 2003 policy range from -0.250 to -0.952 percentage point changes among the regular users and -0.164 to -0.306 in the full cohort. These are very small changes on baseline rates ranging from 58% -74%. The event study did not reveal any evidence of dynamic effects. The ITS slope change estimates for the 2009 policy range from -0.490 to 0.215 for the different outcomes. Level shifts range from -0.312 to 0.691 percentage points compared with the counterfactual. As with the DD analysis, these estimated effects are very small relative to the baseline rates for the outcomes (60% -75%). Our effect estimates for both policies were stable under several robustness checks specific to each method.

Conclusion: Our results suggest that the recent Quebec enrolment policies have not had an impact on patient-physician affiliation. If enrolment policies alone are likely not sufficient to increase patient-physician affiliation, more research is needed to better understand the factors that influence both affiliation and more downstream patient outcomes.

C3.1

Follow-up after postpartum psychiatric emergency department visits: An equity-focused population-based cohort study

Author Names: Lucy Barker, Hilary Brown, Susan Bronskill, Paul Kurdyak, Peter Austin, Simone Vigod

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Primary Theme: Maternal and Child Health

Background and Objectives: Approximately 1% of postpartum women present to the emergency department (ED) due to acute mental health needs. When not admitted to hospital from the ED, these women need outpatient follow-up care. The extent to which social determinants of health (SDOH), individually and intersectionally, influence who receives timely outpatient care is unknown. This study used both traditional regression and regression tree analysis to examine relationships between SDOH and 30-day outpatient mental health follow-up in this population.

Approach: Using Ontario health administrative data/IRCC's Permanent Resident Database (2008-2017), among women with a psychiatric ED visit in their first postpartum year, we identified those with ≥1 outpatient physician visits for mental health care within 30 days post-ED visit. Considered SDOH variables were: age, neighbourhood income quintile (Q), community size, immigration category, ethnicity (Chinese/South Asian/other), and neighbourhood ethnic diversity. We compared: (1) modified Poisson regression to generate relative risks of 30-day follow-up for each SDOH, crude and adjusted for other SDOH and clinical/health service use/institutional variables, and (2) regression tree analysis to visualize relationships between SDOH, clinical/health service use/institutional variables, and 30-day follow-up.

Results: Among 10,082 women with psychiatric ED visits, 4,562 (45.2%) had 30-day outpatient follow-up. In the modified Poisson regression models, the SDOH associated with 30-day follow-up were: age (aRR 0.67, 95% CI 0.61-0.74 for age ≤19 vs. ≥35), income (aRR 0.88, 95% CI 0.82-0.95 for Q1, lowest vs. Q5), immigration category (aRR 0.81, 95% CI 0.71-0.91 for refugees vs. long-term residents), and community size (aRR 0.64, 95% CI 0.64-0.80 in areas <10,000 inhabitants with weak/no metropolitan influence vs. cities ≥1,500,000). In regression tree analysis, the initial split was based on diagnosis (anxiety/trauma-related/substance-related/other disorders vs. depressive/bipolar/psychotic disorders); subsequent splits were based on presence of usual psychiatrist provider and community size (≥100,000 inhabitants vs. <100,000). In the terminal nodes (i.e. outermost leaves), 30-day follow-up ranged from 36%-68%.

Conclusion: Among postpartum women with acute psychiatric needs, fewer than half received timely outpatient follow-up. Traditional regression identified inequities for young, low-income, immigrant, and small-community-dwelling women; regression tree analysis identified community size-based disparities specifically within context of diagnosis. Considering SDOH, individually and collectively, is important to improving equitable post-ED follow-up care.

C3.2
Postpartum acute care use among women with disabilities in Ontario: A population-based cohort study

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Primary Theme: Maternal and Child Health

Background and Objectives: The postpartum period is a time of significant physiological and psychological change for new mothers. Postpartum hospitalizations and emergency department visits are indicators of serious, and potentially avoidable, morbidity and are associated with high healthcare costs, family burden, and separation of mothers and infants. Few studies have examined postpartum acute care use among women with disabilities. We compared risks of postpartum emergency department visits and hospitalizations among women with and without disabilities.

Approach: We conducted a population-based cohort study in Ontario, Canada, of women with physical (n=144,972), sensory (n=45,259), intellectual/developmental (n=2,227), and multiple disabilities (n=8,883), and women without these disabilities (n=1,601,363), all with a singleton obstetrical delivery in 2003-2018. Outcomes were emergency department visits and hospitalizations 0-365 days after delivery hospitalization discharge, further classified by primary discharge diagnosis (obstetric, psychiatric, and other) and timing (0-7, 8-42, and 43-365 days after discharge). Relative risks (aRR) were adjusted for maternal age, parity, income quintile, region of residence, immigrant/refugee status, chronic conditions, mental illness, substance use disorders, and prenatal care provider type.

Results: The emergency department visit rate was 23.6% in women without a disability, with risks of emergency department visits elevated in women with physical (aRR 1.27, 95% CI 1.26-1.28), sensory (aRR 1.16, 95% CI 1.14-1.18), intellectual/developmental (aRR 1.38, 95% CI 1.32-1.45), and multiple disabilities (aRR 1.45, 95% CI 1.41-1.49). The hospitalization rate was 3.0% in women without a disability, with risks of hospitalization elevated in women with physical (aRR 1.37, 95% CI 1.33-1.40), sensory (aRR 1.20, 95% CI 1.14-1.26), intellectual/developmental (aRR 1.89, 95% CI 1.65-2.18), and multiple disabilities (aRR 1.73, 95% CI 1.60-1.87). Women with disabilities also had consistently elevated risks when outcomes were examined by diagnosis and timing, with particularly high risks for both emergency department visits and hospitalizations at 43-365 days postpartum.

Conclusion: Our findings demonstrate the need for proactive planning of postpartum supports for women with disabilities during the prenatal period as well as restructuring of their postpartum care, including provision of enhanced follow-up early in the postpartum period and ongoing health care beyond the routine 6-week postpartum visit.

C3.3

Lessons learned from the implementation of Canada's first alongside midwifery unit: A explanatory case study

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Primary Theme: Maternal and Child Health

Background and Objectives: In July 2018, Canada's first midwife-led alongside midwifery unit (AMU) opened at Markham Stouffville Hospital (MSH) in Markham, Ontario. Our objectives were to examine how the conditions at MSH made it possible for the hospital to create the first AMU in Canada and to examine how characteristics of the intervention, the inner and outer settings, the individuals involved, and the processes used influenced the MSH-AMU implementation process to identify lessons to inform spread.

Approach: We conducted an explanatory single case study using key informant interviews and document analysis. We used the Consolidated Framework for Implementation Research to conceptualize the study and develop semi-structured interview guides. We recruited key informants, including midwives and other health professionals, hospital leaders, leaders of midwifery organizations, and consumers, by email using both purposive and respondent driven sampling. Interviews were digitally recorded and professionally transcribed. We identified documents through key informants and searches of Nexis Uni, Hansard, and Google databases. We analysed the data using a coding framework based on Greenhalgh et al.'s evidence-informed theory of the diffusion of innovations.

Results: Between November 2018 and February 2019, we conducted fifteen key informant interviews. We identified thirteen relevant documentary sources of evidence, including news media coverage, website content, Ontario parliamentary records, and hospital documents. Conditions that influenced implementation of the AMU fell within the following domains from Greenhalgh's diffusion of innovations theory: the innovation, the outer context, the inner context – system antecedents for innovation and system readiness for innovation, communication and influence, linkage – design phase and implementation stage, and the implementation process. While several unique features of MSH supported innovation, factors that could be adopted elsewhere include organizational investment in the development of midwifery leadership skills, intentional use of change management theory, broad stakeholder involvement in the design and implementation processes, and frequent, open communication.

Conclusion: The case of the MSH-AMU illustrates the value of utilizing best practices with respect to change management and system transformation and demonstrates the potential value of using implementation theory to drive the successful implementation of AMUs. Lessons learned from the MSH-AMU can inform successful spread of this innovative service model.

C3.4

"Let me know when I'm needed": Exploring the gendered nature of digital technology use during the transition to parenting

Author Names: Bradley Hiebert, Jodi Hall, Lorie Donelle, Danica Facca

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Primary Theme: Maternal and Child Health

Background and Objectives: The transition to parenting (the period from pre-conception through postpartum) is marked by significant health information needs for individuals and families. Understanding how digital technologies are used by individuals during their transition to parenting would allow health service providers to tailor health information delivery methods to better meet the needs of new parents. However, there is limited knowledge about the gendered nature of digital technology use for health information seeking during the transition to parenting.

Approach: This paper presents results of a qualitative descriptive study conducted to understand parents' experiences with digital technologies during their transition to parenting. Purposive sampling was used to recruit individuals in southwest Ontario who had become a new parent within the previous 24 months to participate in a focus group or individual interview. Participants were asked to describe the type of technologies they/their partner used during their transition to parenthood, and how such technologies were used to support their own and their family's health. Focus groups and interviews were audio recorded, transcribed verbatim, and subjected to thematic analysis using inductive coding.

Results: 10 focus groups and three individual interviews were conducted with 26 heterosexual female participants. Participants primarily used digital technologies to 1) seek health information for a variety of reproductive health issues (e.g. ovulation, fetal development, infant feeding, infant health and developmental milestones, and maternal health) and 2) establish social and emotional connections. The nature of such health information work was markedly gendered and was categorized by 2 dominant themes. First, "'Let me know when I'm needed'", characterizes fathers' apparent avoidance of health information seeking and resultant creation of mothers as lay information mediaries. Second, "Information Curation", captures participants' belief that gender biases built-in to popular parenting apps and resources reified the gendered nature of health and health information work during the transition to parenting.

Conclusion: Overall, findings indicate that digital technology tailored to new and expecting parents actively reinforced gender norms regarding health information seeking, which creates undue burden on new mothers to become the sole health information seeker and interpreter for their family.

C3.5

Uptake of virtual mental health care among children and adolescents through the COVID-19 pandemic.

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Primary Theme: Mental Health and Addictions

Background and Objectives: Public health measures to counter COVID-19 have resulted in an accelerated shift to virtual care delivery by implementing new digital health innovations and virtual care reimbursement models. Specific to physician services, Ontario added assessments or counselling by telephone or video in 2020. Our objectives were to measure and compare the extent of uptake of virtual and overall ambulatory mental healthcare among children and adolescents before and throughout the COVID-19 pandemic.

Approach: Using linked health and administrative data, we conducted a population-based repeated cross-sectional study of children and youth (aged 3-17 years) with mental care needs in Ontario from January 2017 to August 2020. We compared in-person outpatient and virtual care weekly visit rates per 1000 population, stratified by age group, sex, and mental health diagnosis, before and after the onset of the COVID-19 pandemic. Annualized population-weighted rates (95% CI) per 1000 population are presented.

Results: Before the pandemic, the annualized rate of mental health outpatient visits was 333.4 (323.6, 343.2) per 1,000 (1.6 virtual care and 331.8 in-person). Rates of overall mental health visits decreased to 301.6 (278.1, 325.1) during the pandemic, while virtual care rates increased to 243.6 (220.9, 266.3), accounting for 80.8% of all visits. Visit rates for females were stable (pre-pandemic 302.2 visits [293.3, 311.1], peri-pandemic 291.4 [268.6, 314.2]) and decreased for males (pre-pandemic 363.0 [352.3, 373.7], peri-pandemic 311.3 [286.9, 335.7]). Adolescents (13-17 years) had stable visit rates compared to a decrease among children (3-12 years) (pre-pandemic 264.6 [256.8, 272.5], peri-pandemic 232.7 [214.2, 251.2]). Visits for non-psychotic and psychotic disorders were stable. A decline in visits was observed primarily for social problems, whereas visits increased for substance-use

Conclusion: Overall physician-based ambulatory mental health care delivery for young people in Ontario has declined during the COVID-19 pandemic, accompanied by a rapid shift to virtual mental care with four of every five visits done virtually. It is unclear whether the shift to virtual care will be sustained post-pandemic.

Safer Supply would work well if...A Concept Mapping Study

Author Names: Bernie Pauly, Fred Cameron, Heather Stuart, Heather Hobbs, Ginger Sullivan, Jane McCall, Karen Urbanoski

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Primary Theme: Equity and Vulnerable Populations

Background and Objectives: British Columbia (BC) is experiencing two declared public health emergencies, illicit drug poisoning deaths and COVID 19. In the wake of COVID 19, BC introduced Risk Mitigation Guidance to facilitate implementation of COVID precautions and provide prescribed alternatives to a deadly illicit drug market. The purpose of this research was to develop a model for effective safer supply programs from the perspective of people who use drugs.

Approach: Within a patient oriented and community-based research approach, we used concept mapping to generate a model of safer supply. Concept mapping is a structured process that begins with a focus prompt to guide brainstorming. The focus prompt for this research was 'Safer supply would work well if..' In a series of focus groups with 35 people who use drugs, over 350 statements were generated during the brainstorming and then refined to 68 unique statements. The 68 statements were sorted into groups and rated by participants. Multi-dimensional scaling was used to generate cluster maps that were reviewed by participants.

Results: Based on participant sorting, six clusters were generated. Participants identified that safer supply would work well if: 1) It were the right drug and right dose for me; 2) The program is welcoming and meets my needs; 3) Safer supply and other services are accessible to me; 4) I am treated with respect by people who I can relate too; 5) I can easily access my supply without barriers; 6) the program helps me function and improves my quality of life. Each of the 68 statements were then rated for importance and feasibility by participants. Findings related to key elements that are both high in importance and feasibility will be discussed.

Conclusion: Programs should be flexible and individualized to needs of participants. Safer supply programs should be integrated with other services such as drug checking, and informed by a culture of harm reduction that treats people with respect and dignity. Peers and peer support are central to welcoming and effective programs.

Health Equity and the Implementation of Virtual Care during COVID-19

Author Names: Simone Shahid, Sophie Hogeveen, Suman Budhwani, Shivani Chandra, Jamie Fujioka, Jay Shaw, Emily Seto, Ryan de Silva

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Primary Theme: Equity and Vulnerable Populations

Background and Objectives: As a result of physical distancing measures implemented during the COVID-19 pandemic, many health and social service organizations rapidly transitioned to virtual service delivery. While virtual solutions may be appropriate for certain health or social-related needs, they may also inadvertently exacerbate health disparities. In this presentation, we describe health equity issues in the use of virtual care during COVID-19 within five care contexts in Ontario and outline strategies for more equitable use of virtual care.

Approach: We use an exploratory, multiple case study approach informed by Yin (2008) to describe the unique implementation challenges experienced during the process of rapidly virtualizing health and social services. We further describe the ways in which the unique concerns of underserved communities were addressed or neglected during this process. Data were collected through qualitative interviews (n= 50) and document review (n=5). We used thematic analysis drawing on Woodward et al's (2019) Health Equity Implementation Framework to structure the analysis, focusing on three salient categories: clinical encounter, recipient (patient and provider) factors, and context factors.

Results: We found that positive clinical encounters between providers and patients occurred when patient preferences for virtual care modality were prioritized. Most patients opted for virtual visits by phone over video but there was an overall preference for in-person care. Patient barriers to participating in virtual appointments included a lack of access to technology, insufficient support for technology setup, and inadequate digital health literacy. Providers believed virtual care should be offered as a complement rather than replacement to in-person care. Some organizations have only recently begun addressing equity issues as an organizational priority, which had previously been left for individual providers to address. While government and professional regulatory guidelines have made virtual care delivery more feasible, the onset of COVID-19 may have exacerbated previously existing inequities.

Conclusion: Based on initial findings informed by Woodward et al's framework, our study illustrates that organizations require additional support in order to increase their capacity to address health equity more broadly and deliver virtual care in a more equitable way. We conclude with specific strategies enabling health equity in virtual care.

C4.3

Mapping the determinants of mental health among racialized and low-income communities: Considerations to building psychological resilience during COVID-19 and beyond

Author Names: Mauriene Tolentino

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Primary Theme: Equity and Vulnerable Populations

Background and Objectives: Racialized and low-income populations experience significant negative impacts of COVID-19 due to structural determinants that have long existed before the pandemic. These determinants underscore racial disparities across income, employment, education, and more – all of which are shaped by systemic racism and legacies of colonization. This synthesis informs a qualitative research project with Wellesley Institute and aims to describe the link between these multi-layered factors and the mental health among marginalized populations in Toronto.

Approach: A research synthesis of scholarly papers, polling data, and emerging reports on the topic of COVID-19 and the mental health of low-income and racialized people was conducted in October – December 2020. The search was limited to English sources and prioritized findings first from the Greater Toronto Area, then other metropolitan cities in Canada and internationally. Key scholarly papers that delineate the link between racism, colonization, social determinants of health, and mental health impacts were included to further frame and solidify the results.

Results: Results of the synthesis captures the systemic nature of racism across determinants to mental health, including individual, interpersonal, community, and institutional and structural factors. The literature collected delineates how systemic racism and colonialism are foundational factors in shaping experiences of mental health among people living on the margins, particularly those who are racialized and have low-income. Significant factors outlined include: income and employment, housing, food insecurity, care work, domestic violence, and access to health care and services. A proposed model emerged from this work, expanding on other social determinants of health models to draw the link between mental health, systemic racism, and colonialism. This review underscores the important role of health equity and upstream approaches in building psychological resilience among racialized and low-income people.

Conclusion: The disproportionate impacts of COVID-19 on the mental health of racialized and low-income populations underscore the systemic implications of racism and colonialism long before the start of the pandemic. Health equity and upstream approaches are needed to promote and sustain long-term psychological resilience among marginalized populations.

C4.4

Examining the Factors that Shaped the Adoption of Virtual or Remote Delivery of Domestic Violence and Sexual Assault Services During COVID-19 in Alberta, Canada: Perspectives from the Anti-Violence Sector

Author Names: Stephanie Montesanti, Winta Ghidei, Peter Silverstone, Lana Wells

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Primary Theme: COVID-19

Background and Objectives: To limit the transmission of COVID-19 the anti-violence sector rapidly transitioned to deliver their services and programs virtually, with limited opportunity for the sector to plan and anticipate barriers with the implementation of virtual care interventions. We explored the experience of service providers, staff, and organization leaders across the anti-violence sector in Alberta, Canada, with the adoption and implementation of virtual and remote-based interventions for individuals experiencing or at-risk of domestic violence and sexual violence.

Approach: This study adopted a qualitative descriptive approach aimed at gathering in-depth information about the experiences of service providers, staff, and organization leaders with virtual and remote-based delivery of interventions for reaching individuals and families experiencing or at-risk of domestic violence and sexual violence during the COVID-19 pandemic. 24 semi-structured interviews were conducted with key stakeholders across the anti-violence sector, including managers, psychologists, mental health therapists, crisis counselors, physicians, and outreach workers. We applied policy and organizational change theories to understand the barriers and opportunities for adoption and implementation of virtual care interventions. Thematic analysis was used to identify key themes.

Results: Key themes emerged on how organizations in the anti-violence sector adapted their organizational practices, procedures, and policies to support virtual/remote delivery of domestic violence and sexual violence-focused interventions; factors supporting the rapid adoption of virtual care interventions and the barriers; and how organizations in this sector responded to the barriers with access and uptake of virtual/remote-based interventions. Participants highlighted organizational culture, leadership, and capacity as key factors contributing to the rapid adoption of virtual/remote interventions. Multiple barriers with virtual/remote delivery were described to include systemic barriers (e.g., policies and funding), organization and provider barriers (e.g., capacity, resources, adapting to new procedures), and client barriers (e.g., access). Key informants highlighted the importance of ensuring services remain client-centred, culturally-appropriate, and trauma-informed in the virtual environment.

Conclusion: Our findings suggest that best outcomes in adopting and implementing virtual/remote interventions occurred when managers and directors skillfully combined leadership, collaboration, and teamwork to support organizational changes and service adaptations. Also, the pandemic compounded existing barriers to accessing services and spurred new challenges for clients accessing care in the virtual.

C4.5
The effect of COVID-19 on home care PSWs' work absence
Author Names: Lady Bolongaita, Katherine Zagrondey, Sandra McKay, Kathryn Nichol, Emily King

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Primary Theme: COVID-19

Background and Objectives: The COVID-19 pandemic increased the rates of work absence, especially amongst essential workers. As a vital workforce, home care Personal Support Workers (PSWs) have continued to provide essential care during the pandemic. However, PSWs' absence behaviours are not well understood and have important consequences for health human resource planning. This study aims to describe the effect of the COVID-19 pandemic on home care PSWs' absence, specifically paid and unpaid sick days, and personal emergency days.

Approach: Administrative data from a Southern Ontario home care agency employing approximately 1300 PSWs was used to capture PSWs' absences from January 2019 to August 2020. Pay data was used to identify whether an absence was paid or unpaid. The effect of the pandemic on paid and unpaid sickness absences and personal emergency days were evaluated through longitudinal trend analysis and by testing the equality of the means of the outcomes before the pandemic versus during the first wave of the pandemic (March 11 – August 31, 2020).

Results: Preliminary analyses showed an increase in PSWs' number of sickness absences and personal emergency days during the pandemic. Descriptive findings highlight both the number and proportion of the PSW workforce sample that were absent at a given time. By comparing pandemic absence levels against baseline absence from the previous year (when there was not a pandemic), we were able to account for typical seasonal trends in absence fluctuations. Results provide useful estimates to plan for an adequately sized workforce in the instance of any future pandemics or COVID-19 pandemic waves.

Conclusion: COVID-19 increased the likelihood of sickness absence and personal emergency days for PSWs. Understanding such patterns of PSW absence is valuable for informing future projections and ensuring that workforce planning strategies acknowledge such health human resource challenges and their potential impact on the ability to provide care during a pandemic.

C5.1
Using a public engaged approach to identify priority areas for cannabis policy evaluation

Author Names: Lisa Bishop, Jennifer Donnan, Maisam Najafizada

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Primary Theme: Patient and Public Engagement

Background and Objectives: When non-medical cannabis became legal in Canada in 2018, policies were designed to protect the health and safety of all Canadians. The purpose of this work was to engage with the public and stakeholders to identify priority areas for cannabis policy evaluation in Newfoundland and Labrador (NL). This work will inform policymakers about the needs and values of those impacted directly by cannabis policy, and therefore can support meaningful policy change.

Approach: We conducted a needs assessment using a public engaged approach. Stakeholder and citizen advisory panels were established to provide advice and direction to the study team, representing public and private organizations and people who have used and have never used cannabis. Provincial consumption patterns, thoughts, and perceptions from national cannabis surveys were used to help guide the needs assessment. Public opinions were gathered through a variety of channels including: citizen and stakeholder workshops, individual consultations, feedback from our website, and public comments shared through social media. All of this data was used to generate priority areas for targeted evaluation activities.

Results: Over 50 stakeholders and citizens participated in workshops, consultation, or submitted written feedback. Representation from all four regions of the province were included, as well a balance of age and gender perspectives. Three main priority areas of focus were identified: 1) Improved access to a safe supply of legal cannabis through things like expanded rural access, price and quality comparable to illicit sources, and expanded business opportunities; 2) Protecting the safety of the public (e.g., youth, unwanted exposure, road safety); 3) Providing education and awareness about cannabis (e.g., cannabis ingredients and products, health impacts, safety, public use, driving laws, stigma).

Conclusion: Identification of these priority areas will help shape the next phase of the evaluation. Although this is relevant for NL policy, these findings are applicable to other jurisdictions across Canada. Appropriate strategies to address these priority areas will be explored with the goal to protect public health and safety.

Consumer preferences for attributes of cannabis products: A qualitative assessment of drivers of purchase decisions

Author Names: Jennifer Donnan, Omar Shogan, Lisa Bishop, Maisam Najafizada

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Primary Theme: Patient and Public Engagement

Background and Objectives: Cannabis was legalized in Canada for non-medicinal use in 2018. The goal of legalization was to improve health and safety by creating access to regulated products, with accurate product labels and warnings and no risk of contamination. However, more than two years post-legalization a large proportion of purchases are still suspected to be through unlicensed retailers. This study sought to identify the factors that influence purchase decisions of cannabis consumers in Newfoundland and Labrador (NL).

Approach: Semi-structured focus groups and interviews were conducted in NL with individuals who were >19 and who had purchased cannabis within the last 12 months. All sessions were conducted virtually, audio-recorded, and transcribed. A thematic analysis was conducted, and two members of the research team coded data using NVivo. A combination of deductive and inductive coding was carried out, identifying themes from the literature, and discovery of new themes from the transcripts. A final coding template of the data was agreed upon by the team through discussion and consensus.

Results: A total of 23 individuals (30% female) participated, with 74% from urban and 26% being from rural areas. While all cannabis product types were discussed, the conversation naturally focused on dried leaf products. Participants discussed a variety of considerations categorized around 5 broad themes when making purchase decisions: 1) Price; 2) Quality; 3) Packaging and Warnings; 4) Source of Cannabis; and 5) Social Influences. The price difference between licensed and un-licensed sources was commonly discussed as a factor that influenced purchase decisions. Product quality characteristics (e.g. size, color, moisture content) and social influences were also considered in purchase decisions. Participants were generally indifferent to packaging and warning labels, but expressed concern around the excessive packaging required for regulated products.

Conclusion: This study explores the many attributes that influence purchase decisions for dried leaf cannabis. Understanding drivers of purchase decisions can help inform policy reforms to make regulated cannabis products appealing to consumers. Further research is need to measure the effect of each attribute on cannabis purchase decisions.

C5.3

Twin Innovations: Evaluating the Impact of Patient Engagement in Transforming the Health System

Author Names: Tamara McCarron, Deborah A Marshall, Nancy Marlett, Tracy Wasylak

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Primary Theme: Patient and Public Engagement

Background and Objectives: In 2012, a national grant to test the feasibility of training patients in peer-led research as an approach to patient engagement birthed the formation of a mutually productive partnership between the health system and patient partners through the Patient and Community Engagement Researcher (PaCER) Program. The Alberta Strategic Clinical Networks™ (SCNs) were created as integrated teams providing an innovative approach to health transformation. We report on the impact of this innovative twin partnership.

Approach: The impact of the program was evaluated using three approaches. The first used the Canadian Academy of Health Sciences (CAHS) impact framework which identified indicators within five domains for assessing research impact: i) advancing knowledge; ii) building capacity; iii) informing decision-making; iv) health impacts and, v) broad socioeconomic impacts (1); the second, consisted of an external evaluation, deployed by Alberta Health Services and independently analyzed by the O'Brien Institute for Public Health, with the University of Calgary; and the third report used an Outcome Mapping framework, that utilized a grounded theory approach for the analysis.

Results: Indicators were found within four domains of the CAHS framework: 1) Advancing Knowledge included grant applications, researchers engagement, and peer reviewed publications; Building Capacity included students who have graduated from the training program, patient-led research proposals, and SCNs engaged in research activities; Informing Decisions included individuals who served on provincial committees and on research review panels; and, Health Impacts included quality improvement recommendations and secured research contracts.

The AHS external evaluation identified a number of considerations to improve the overall sustainability of the program including the development of proper infrastructure, improving ongoing research and creating additional quality improvement opportunities for individuals after graduation.

The Outcomes Mapping evaluation identified a number of positive impacts such as participants reporting an increased level of empowerment, knowledge, and capability.

Conclusion: Partnerships among patients and health systems can shift health culture. Investing in building the knowledge and skills of patients and providing opportunities for researchers, patients and clinicians to work together support positive change. Success requires partnership with health authority responsible for system transformation and willingness to implement findings into practice.

C5.4
The SPOR PPE Evaluation Framework: a Consensus Building Exercise

Author Names: Audrey L'Espérance, Antoine Boivin, Alexandre Grégoire, Eleonora Bogdanova

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Primary Theme: Patient and Public Engagement

Background and Objectives: While patient and public engagement (PPE) in research is growing internationally, the Canadian research community is currently lacking a common yet adaptable evaluation framework. In 2020, our interdisciplinary team, including patient partners, conducted a virtual consensus building exercise. Being the first of a 3-phase project, this endeavor allowed to foster common understanding of PPE evaluation within the Strategy for Patient Oriented Research (SPOR) community, while generating ideas about core evaluation dimensions of PPE in research.

Approach: A broad representation of the Canadian research community was provided through collaboration with 18 national SPOR Networks, SUPPORT Units and research organizations from all provinces covering a vast array of research domains. The consensus panel for the Nominal Group Technique involved 42 participants identified through these partner organizations. The main goal of these meetings was to identify emerging process and impact dimensions as well as evaluation criteria that define or promote meaningful PPE in research. Using the Nominal Group Technique, a structured method for group brainstorming, multiple virtual meetings were held with different subgroups to identify emerging dimensions and criteria.

Results: The CIHR SPOR PPE Principles (co-build, inclusiveness, support and mutual respect) were revisited and the discussion yielded 8 general principles. Discussions helped identify 16 process dimensions considered important by participants in order to ensure meaningful patient engagement in research and 16 impact dimensions considered as what it should lead to and change. The analysis highlighted areas of strong consensus and areas of dissent mostly related to labelling dimensions and criterion. These findings supported the development of a logic model that shows the alignment from broad principles of PPE in research (criteria) on PPE activities (process) contributing to producing impacts on research and beyond. This helped us better conceptualize the logic model, while identifying gaps to be explored in the next two phases of the project.

Conclusion: Although some of these findings may reflect what we already know about PPE in research, the Consensus Building Exercise of the SPOR PPE Evaluation Framework project will serve as a basis for an innovative framework, aiding in the implementation of meaningful PPE in research and the improvement of PPE practices.

C5.5
Improving Coordination of Care through the Patient's Medical Neighbourhood
Author Names: Ruby Vidulin, Artem Safarov

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Primary Theme: Health Policy, Healthcare Reform

Background and Objectives: The Patient's Medical Neighbourhood describes a network of care involving multiple providers and services, with family practices as the hub for coordinating care. This session will explore how the Neighbourhood concept expands on the Patient's Medical Home vision for team-based primary care, and will offer an outline of how the Neighbourhood can be implemented in family practices and health systems as a model for effective collaboration and partnership between care providers.

Approach: The College of Family Physicians of Canada published a Best Advice Guide in spring 2020 to provide family physicians with an analysis of benefits and practical advice for the development of a Neighbourhood. It includes examples of practices, programs, and jurisdictions with innovative approaches to effective inter-professional coordination of patient care. A robust literature search and stakeholder consultation informed the development of the guide, focusing on the experience of Prince Edward Island, Northwest Territories and Saskatchewan. In 2021, provincial and territorial implementation kits will be released that provide specific resources available to help family physicians transition to a Neighbourhood model.

Results: The Neighborhood concept aims to expand and integrate the Patient's Medical Home vision of family practice. There have been many models of networked care developed both internationally as well as within Canada to improve health indicators and the delivery of patient care. This session will explore the successes in implementing health networks and provide an overview of lessons that can be adopted by practices or health care systems looking to reduce health care costs, avoid duplication of services, and improve patient outcomes and experiences through better coordination of patient care among providers. Improvements such as those offered by the Neighbourhood can contribute to improving primary care access throughout the country – a federal government priority committed to during the September 23rd Speech from the Throne.

Conclusion: The Patient's Medical Neighbourhood model offers better care through family practices effectively collaborating with other health and social services. By strengthening linkages between providers, the Neighbourhood may improve health outcomes, connections and efficiency in the health care system, and lower costs. Further supportive policy is needed to sustain this model.

C6.1
Long-term life care: research to drive needs-based home care

Author Names: Justine Giosa, Margaret Saari , George Heckman, Paul Holyoke, John Hirdes

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Primary Theme: Home Care, Long Term Care and Aging

Background and Objectives: The COVID-19 crisis in long-term care (LTC) is not sector specific, but a system-wide failure to act on evidence that older adults need an integrated continuum of 'life care'. Most older Canadians want to live at home, but task-based home care and an overreliance on family caregivers contribute to growing LTC home waitlists. The objective of this research was to develop an alternative model to institutional LTC to meet long-term life care needs at home.

Approach: This participatory research study followed an explanatory, sequential mixed methods design with three phases. Phase one involved historical analysis of 205,000+ Ontario home care assessments using 2017/2018 interRAI Home Care data. Phase two involved a 2-stage, modified e-Delphi approach with 40+ interdisciplinary home care clinicians including nurses, personal support workers, occupational therapists, physiotherapists, speech language pathologists, registered dieticians, and spiritual care providers. Phase three involved the development and pricing of 6 needs-based home care packages and comparisons to existing and emerging models of home care and LTC in Canada and internationally.

Results: Current LTC waitlists under-represent health system capacity issues to care for older Canadians long-term. About 80% of long-stay home care clients can be considered at risk of LTC home admission based on known medical, functional and psychosocial predictors. This at-risk population of more than 160,000 older adults can be described using 6 unique patient groups with different combinations of life-care needs. Care packages to optimize needs-based home care for each group requires coordination of more than 65 types of care and services in the community. To understand the potential economic value and societal benefit of needs-based home care, external factors like caregiver support, social interaction and care coordination must be considered, in addition to per-diem direct care costs, co-payment and capital costs of LTC beds.

Conclusion: Adoption of a new model of needs-based home care will enhance overall health system capacity to shift long-term care into the community, respond to individual life care needs, prioritize quality of life and offer older adults more choices for how to live and receive care as they age.

C6.2
Care aides' perceptions of residents' past psychological trauma histories

Author Names: Trina Thorne, Heather Titley, Peter Norton, Carole Estabrooks, Ruth Lanius

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Primary Theme: Home Care, Long Term Care and Aging

Background and Objectives: Up to 20% of residents in long-term care (LTC) homes have a history of psychological trauma. The challenges of progressive dementia and currently, of COVID-19 conditions in LTC homes, exert powerful effects on residents' behavioural symptoms and quality of life. Our objectives in this exploratory study were to assess care aides': perceptions of how often they worked with residents with trauma, the types of trauma encountered, and reasons for these beliefs.

Approach: This study combined cognitive interviews and surveys. Semi-structured cognitive interviews with care aides (n = 10) were conducted in June 2019 to inform the development of a brief (4 question) trauma needs assessment that was then included in a survey of care aides (n = 3761) in 3 western provinces from September 2019 through February 2020. Surveys were collected using computer assisted, (structured) in person interviews. Care aides were sampled from 91 urban nursing homes randomly selected and stratified by health region, owner operator model, and facility size. Basic statistics and content analyses were used to analyze data.

Results: Of 3761 care aides completing the survey, 53% (n = 2000) reported caring for at least one resident with suspected trauma in the previous 2 weeks. Approximately 12% of the reported traumatic events were disclosed to staff. The two most common, broad categories of trauma type to emerge during content analysis were abuse (40%) and war exposure (30%). Each had sub-categories. The most common signs of trauma categories identified by care aides were re-experiencing symptoms such as flashbacks and nightmares (28%), and avoidance of specific triggers, such as water or intimate care (24%). The majority of the reported signs of trauma were persistent and distressing for staff and residents.

Conclusion: Care aides can identify residents they believed have psychological trauma histories, give examples, and reasons for their beliefs. Some behaviours assumed to be responsive behaviours of dementia, may be traumatic stress symptomatology. Implementing supports for both residents and their care providers is important quality of life and person-centred care.

C6.3
Canadian Long-term care policy guidance for staff to support resident quality of life

Author Names: Mary Jean Hande, Janice Keefe, Deanne Taylor

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Primary Theme: Home Care, Long Term Care and Aging

Background and Objectives: Amidst a complex policy landscape, long-term care (LTC) staff must navigate directives to provide safe care while also considering resident-preferred quality of life (QoL) supports, which are sometimes at odds with policy expectations. These tensions are often examined using a deficit-based approach to policy analysis, which highlights policy gaps or demonstrates how what is written creates problems in practice. A broad analysis of Canadian policy is necessary to better under what promising policies might exist.

Approach: This study used an asset-based approach by scanning existing LTC regulations in four Canadian jurisdictions for promising staff-related policy guidance for enhancing resident QoL. A modified objective hermeneutics method and content analysis were used to determine how 60 existing policy documents might be interpreted to support Rosalie Kane's 11 LTC resident QoL domains.

Results: Analysis revealed regulations that covered all 11 resident QoL domains, albeit with an over-emphasis on safety, security and order. Texts that mentioned other QoL domains often outlined passive or vague roles for staff. However, policy texts were found in all four jurisdictions that provided clear language to support staff discretion and flexibility to navigate regulatory tensions and enhance resident QoL. Newer policies tend to reflect more interpretive approaches to staff flexibility and broader QoL concepts.

Conclusion: There are promising staff-related regulations for improving resident QoL in each Canadian jurisdiction we investigated. With the right cultural and structural supports, these promising texts offer important counters to the rigidity of LTC policy landscape and can be leveraged to broaden and enhance QoL effectively for residents in LTC.

C6.4

The impact of the first wave of COVID-19 on medication prescribing in Ontario long-term care homes: an interrupted-time series analysis

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Primary Theme: Home Care, Long Term Care and Aging

Background and Objectives: Coronavirus disease (COVID-19) has had devastating effects on the health and mental well-being of older adults and care providers in Long-Term Care (LTC) homes. These adverse effects may have resulted in barriers to appropriate pharmacotherapeutic care in the LTC setting. There is a need for robust population-based investigations of the impact of COVID-19, and related disruptions in care, in order to examine possible over-use, mis-use, and/or under-use of medications commonly dispensed to LTC residents.

Approach: We used linked health administrative data to conduct a population-based interrupted time-series analysis. We created 173 consecutive weekly cohorts (first week: March 5-11, 2017; last week: June 21-27, 2020) of LTC residents using physician and drug claims data, and computed the weekly proportion of residents dispensed antipsychotics, benzodiazepines, antidepressants (including trazodone), anticonvulsants, opioids, antibiotics, angiotensin receptor blockers (ARBs), and angiotensin-converting enzyme inhibitors (ACEIs). Autoregressive integrated moving average models with step and ramp intervention functions tested for immediate level changes and gradual slope changes in weekly medication use following the onset of the pandemic (week of March 1, 2020 onwards).

Results: Antidepressants were the most commonly dispensed medication (50.5% of LTC residents by the end of the study period), followed by antipsychotics (26.0%), trazodone (25.6%), opioids (20.0%), ACEIs (19.8%) anticonvulsants (19.6%), ARBs (9.2%), benzodiazepines (8.9%), and antibiotics (6.5%). Antidepressants, trazodone, and anticonvulsants demonstrated an increasing trend across the pre-pandemic weeks, while benzodiazepines exhibited a decreasing trend. Following the onset of the pandemic, there was a significant, increased slope change in the weekly proportion of residents dispensed antipsychotics (p=0.003, absolute difference in observed vs. predicted weekly proportion in the last week of pandemic period [DiffOvs.P]=0.65%), benzodiazepines (p<0.001, DiffOvs.P=0.30%), antidepressants (p=0.022, DiffOvs.P=0.81%), trazodone (p=0.038, DiffOvs.P=0.51%), and opioids (p<0.001, DiffOvs.P=0.54%). No significant level or slope changes following pandemic onset were observed for antibiotics, ARBs, and ACEIs.

Conclusion: We observed significant, but modest, increases in the use of select medications among Ontario nursing home residents. The absence of large-scale changes in the dispensation of these medications following the first wave of COVID-19 is encouraging; however, ongoing monitoring of medication changes and their impact on resident outcomes is needed.

"I don't know how we would have coped without it." Understanding the Importance of Virtual Hospital Visiting Programs during the COVID-19 Pandemic

Author Names: Katie Dainty, Bianca Seaton, Sean Malloy, Shana Haberman, Stephanie Robinson

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Primary Theme: COVID-19

Background and Objectives: As the COVID-19 pandemic reached Canada in full strength, the concept of allowing visiting to hospitalized patients became an impossibility in most organizations. During this time several Hospitals looked to launch virtual visiting opportunities. We took advantage of this opportunity to evaluate the lived experience of patients and families with such a program in order to understand how it affected them and their loved ones and the overall care experience.

Approach: The study employed qualitative methodology using semi-structured interviews and informed by an interpretive descriptive approach. It was conducted with the patients and families who participated in the Virtual Family Visiting program at North York General Hospital in Toronto, Canada. Purposive sampling techniques with maximum variation sampling were used to capture the widest possible range of perspectives and to understand how the phenomenon was experienced by participants under different circumstances.
Twenty-four (24) participants were interviewed virtually between August and November of 2020. Interviews were audio-recorded, transcribed verbatim and analyzed using standard thematic analysis techniques.

Results: Analysis is currently underway and will be completed by early March 2021. Early themes emerging include the feeling of being powerless on the outside; worry for the impact of social isolation on their loved one's mental health, ability to understand the situation and ability to self-advocate; and how the virtual visit program created a life line of communication to their loved ones and the care team. Our early analysis indicates the deeper impact a policy decision such as a no visitor policy, while necessary, can have on family members with loved ones in highly vulnerable situations.

Conclusion: Key findings from this study will inform our understanding of the true impact of health policy decisions made in uncertain times. Virtual visit programs may be necessary for some time as the pandemic evolves and understanding their influence on the care experience and key attributes for success is crucial.

D1.1

Spatial analysis of healthcare offer and request for over 65-aged people in Quebec

Author Names: Juliette Duc, Delphine Bosson-Rieutort, Sebastien Barbat, Nevena Veljanovic

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Primary Theme: Health System Performance

Background and Objectives: With years, the health-needs of an individual become numerous and more complex resulting with the requirement of an even more appropriate offer of health services. However, the offer of healthcare and the needs of the population depend on the regions of Quebec. These interregional variations impact the use of healthcare and the health of the population. The aim of this study was to identify the factors related to the geographic variations in access to healthcare.

Approach: In this preliminary analysis, we used data from "statcan.gc.ca", "donneesquebec.ca" and "msss.gouv.qc.ca" to describe the "offer" (as the facilities, their capacity and services), the "needs" of services and the population. As we did not have individual data on health services use, we chose to represent the "needs" by the elderly population presence. Thereby, we mapped the relationship between the characteristics' facilities in Quebec and the 65-aged population, according to indicators such as the deprivation index and the urban/rural area to identify the factors related to geographic variations in access to healthcare. Analyses were performed on QGIS and R software.

Results: As expected, our results showed that there is a gap between the "needs" and the services: older people need a large amount of diverse services which are not always provided by secluded areas. A significant correlation was found between the number of long-term care beds and number of over 65-aged population, but not their proportion. Montréal is the region with the bigger offer of long-term care and the higher beds capacity. Moreover, it also appeared that the deprivation index is related to the offer of health care. Further analyses are in progress.

Conclusion: This project takes part in a global project studying the healthcare trajectories of older people in Quebec using administrative health databases, those findings will help better understand the impact of the geographic factors for the interregional variations of healthcare trajectories as those information are not available in administrative health databases.

D1.2
Feasibility of routine quality of life assessment in long-term care homes

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Primary Theme: Health System Performance

Background and Objectives: Maximizing long-term care (LTC) and assisted living (AL) residents' quality of life (QoL) is the primary goal of care. However, unlike quality of care, QoL is not measured routinely. Most residents (90% in LTC and over 60% in AL) have cognitive impairment and care staff time is severely limited, leading to various complexities in measuring QoL. This study developed and assessed the feasibility of an approach to routinely measuring QoL in LTC and AL residents.

Approach: We used the DEMQOL-CH, a practical, reliable, valid tool, developed in the UK to be completed by care aides to assess QoL in residents with moderate to severe dementia. We recruited 45 care aides in 5 LTC homes and 5 AL homes in Alberta who we surveyed on the QoL of 263 residents via video calls. We assessed time to complete; care aide and manager perceived feasibility of completing the DEMQOL-CH; distribution, variance, internal consistency and inter-rater reliability of DEMQOL-CH scores; and we conducted cognitive interviews with 7 care aides to assess care aide comprehension of the tool.

Results: Time to complete was on average 4 minutes with little variation. Care aides and managers agreed or strongly agreed that using the DEMQOL-CH was highly feasible and that the DEMQOL-CH items were relevant to their daily practice. Care staff characteristics were not associated with DEMQOL-CH scores and scores varied substantially among assessed residents. The internal consisteny of the DEMQOL-CH score was 0.80. Item-level inter-rater reliability coefficients (weighted kappas) ranged from 0.05 to 0.71, with an overal DEMQOL-CH score inter-rater agreement (intra-cluster correlation coefficient) of 0.73. Cognitive interviews suggested good comprehension overall with some comprehension problems especially in care aides who speak English as a second language.

Conclusion: Asking care aides to complete the DEMQOL-CH is highly feasible, requires minor resources, and reliability is high. Care aides and managers find information assessed by this tool highly relevant and valuable. However, some items caused comprehension and reliability problems. Reasons and possible solutions will be subject to further investigations.

D1.3

Sustainability of INFORM (Improving Nursing Home Care Through Feedback On perfoRMance data): A complex team-based improvement intervention

Author Names: Matthias Hoben, Liane Ginsburg, Whitney Berta, James Dearing, Peter Norton, Malcolm Doupe, Janice Keefe, Carole Estabrooks

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Primary Theme: Health System Performance

Background and Objectives: This study examines the lasting benefits of INFORM, a complex, theory-based, three-arm, parallel cluster-randomized trial. In 2015–2016, we successfully implemented two theory-based feedback strategies (compared to a standard approach to feedback) to increase nursing home (NH) care aides' involvement in formal communications about resident care (the primary outcome). We report the extent to which INFORM's primary outcome was sustained 2.5 years following withdrawal of intervention supports. We also report on several determinants of sustainability.

Approach: Sustainability analyses included 51 Western Canadian NHs participating in TREC (Translating Research in Elder Care). In INFORM, we randomly allocated NHs to a simple and two assisted feedback interventions. We measured care aide involvement in formal interactions (FI; e.g., resident rounds, family conferences) and organizational context (leadership, culture, evaluation) at baseline, post-intervention, and long-term follow-up, using the Alberta Context Tool. Team members facilitating intervention workshops assessed intervention fidelity. We assessed sustainability (continued involvement of care aides in FI) using repeated measures, hierarchical mixed models, adjusted for care aide, care unit and facility variables from our validated TREC surveys.

Results: We analyzed data from 18 NHs (46 units, 529 care aides) in the control group, 19 NHs (60 units, 731 care aides) in the basic assisted feedback group (BAF), and 14 homes (41 units, 537 care aides) in the enhanced assisted feedback group (EAF). In EAF, FI scores increased from T1 (baseline) to T2 (end of intervention) (1.30–1.42, p= 0.010), remaining stable at T3 (long-term follow-up) (1.39 p= 0.065). FI scores in BAF increased from T1 to T2 (1.33–1.44, p= 0.003) and continued to increase at T3 (1.49, p <0.001). In the CG, FI did not change from T1 to T2 (1.25–1.24, p=0.909), but increased at T3 (1.38, p=0.003). Better culture, evaluation and fidelity enactment significantly increased FI at long-term follow-up.

Conclusion: Theory-informed feedback provides long lasting improvement in care aides' involvement in formal communications about resident care. Greater intervention intensity neither implies greater effectiveness nor sustainability. Modifiable context elements and fidelity enactment may facilitate sustained improvement, warranting further study – as does possible post-intervention spread of our intervention to control group.

D1.4

How does a natural occurring retirement community with supportive programming impact health utilization?

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Primary Theme: Home Care, Long Term Care and Aging

Background and Objectives: Naturally occurring retirement communities (NORCs) are unplanned communities with a high proportion of older residents and ideally positioned to support aging-in-place. NORCs with embedded social and supportive programming have been associated with positive self-reported health. However, there has been no research examining the impact of NORC based programs on health utilization. Objective: Examine the impact of a NORC-based program on health care utilization outcomes including hospitalizations, home care and long-term care admissions.

Approach: A retrospective population-based cohort as part of a larger evaluation study was conducted. All adults, 55 years and older, who resided in a NORC that offered supportive programming and a matched NORC without programming were included. The buildings were in the same neighbourhood in a mid-sized city in southeastern, Ontario, Canada. Data were obtained from administrative databases held at ICES in Ontario. Descriptive statistics were generated for health utilization outcomes and characteristics to compare individuals living in a NORC with and without programming. Logistic regression was conducted to examine health utilization outcomes for NORC program participants.

Results: Compared to participants in NORCs without programming, participants in a NORC with programming were older (median: 79 vs. 68) and female (73.8% vs. 64.4%) with higher diagnoses of dementia (11.5% vs. 5.3%). Participants living in the NORC with supportive programming were able to stay at home a median of 1 year longer (3.95 vs 2.95) before long term care admission. Participants (n=116) living in a NORC with supportive programming were 40% less likely (OR (95% CI) =0.60 (0.35-1.03)) to have an unplanned hospitalization, 45% less likely to use home care services (OR (95%CI): 0.55 (0.31-0.97)) and 37% less likely to experience falls related injuries (OR (95% CI)=0.63 (0.35-1.13) than older adults living in a matched NORC without

Conclusion: Participation in a NORC based program shows early promising results and was associated with decreased health utilization outcomes and a delay in long term care admission.. Alternative models to support older adults in the community are urgently needed and NORCS offer a compelling solution that leverage preexisting community support programs.

D1.5
Shifts in the prevalence and incidence of psychotropic medication use in Ontario long-term care homes

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Primary Theme: Home Care, Long Term Care and Aging

Background and Objectives: Various federal and provincial initiatives across Canada have championed antipsychotic reduction in long-term care (LTC) over the past decade. Although these efforts have been associated with significant reductions in antipsychotic use in LTC, there is also evidence of increasing antidepressant use (including trazodone), a possible substitute for antipsychotics. We examined recent trends in antipsychotic medications and possible substitute drugs (antidepressants, anticonvulsants, and benzodiazepines) among all residents living in Ontario LTC homes.

Approach: Using a serial cross-sectional study design, we identified all older adults (>65) living in Ontario LTC homes in each quarter between April 1, 2010 and March 31, 2019 using RAI-MDS 2.0 assessments and administrative data. In each quarter we identified whether residents were dispensed an antipsychotic, antidepressant, anticonvulsant, or benzodiazepine with days' supply overlapping their LTC assessment date. We classified medications as incident or prevalent based on a 180-day look-back period from when the overlapping medication was dispensed, with no prior use of the same class indicating incident use. The proportion of residents dispensed each medication was calculated over time.

Results: There were 71,635 residents living in LTC in the first quarter of 2010 and 74,491 in the final quarter of 2018. We observed substantial decreases in antipsychotic (31.0% to 24.2%) and benzodiazepine (18.1% to 8.9%) use over the study period. In 2010, 53.6% of residents received an antidepressant, with use increasing to 59.5% by 2019. Anticonvulsant use nearly doubled over the study period, increasing from 8.3% to 16.5% between 2010 and 2019. Incident use of anticonvulsants also steadily increased over time, with 0.22% and 0.34% of dispensations being classified as incident in 2010 and 2019, respectively.

Conclusion: Previously documented increases in antidepressant use have persisted and reached unprecedented levels in Ontario. Notably, anticonvulsants demonstrated the most dramatic increase in both prevalent and incident use over time. Future research is required to estimate whether antidepressants and anticonvulsants are being used as substitutes for antipsychotics at the resident-level.

D2.1

Does policy impact equitable access to services? - A critical discourse analysis of discharge policy in pediatric rehabilitation

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Primary Theme: Equity and Vulnerable Populations

Background and Objectives: Annually, 74,000 children with disabilities receive rehabilitation services from children's treatment centres (CTCs) in Ontario. Many CTCs manage missed appointments with discharge policies. The impact of discharge policies on families' access to rehabilitation services is unknown. Study objectives were: (1) to investigate trends in policy; (2) to critically examine how the language of policy reveal discourse(s) around missed appointments, potentially impacting access to services; and (3) to develop equitable policy recommendations to optimize attendance.

Approach: Using qualitative critical discourse analysis, text from discharge policies meeting the inclusion criteria was analyzed, considering how marginalized groups (e.g., low-income families, culturally diverse families) may be affected by the discharge policies at Ontario CTCs. An intersectional lens was used to explore potential social inequities and power imbalances within current discharge practices to facilitate organizational change. Descriptive data such as the methods used to contact family, methods used to support family attendance and procedures for management of missed visits were extracted from included documents.

Results: 74 policy documents were collected from 18 CTCs in Ontario. 38 documents met the inclusion criteria. Discourse of family-centred service, equity, and power imbalance were identified from critical analysis of the language in discharge policy documents. Equity and family-centred service was represented in the language of the policy documents however, it was not consistently utilized in the procedures to operationalize the discharge policies. The language of discharge policy documents placed the clinicians and organization in a position of power over families related to service access. Value was placed on the judgement of the clinician related to whether a family should continue in service or be discharged due to missed appointments and policy language placed the organization in control of attendance expectations.

Conclusion: Discharge policies related to missed appointments currently in place at Ontario CTCs risk disproportionately limiting access to pediatric rehabilitation services for families who already face barriers to attending appointments. Policy recommendations have been developed to support equitable service continuation and access to pediatric rehabilitation services for all families.

Attitudes and Practices of a Sample of Nova Scotian Physicians for the Implementation of HIV Pre-Exposure Prophylaxis

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Primary Theme: Equity and Vulnerable Populations

Background and Objectives: Pre-exposure prophylaxis (PrEP) is as an effective HIV prevention tool that requires ongoing support from physicians to be accessible. In 2018, Nova Scotia (NS) experienced a 100% increase in HIV diagnoses, which demonstrates an urgent need to investigate the barriers to effectively implementing PrEP. The purpose of this study was to explore the relationship between NS physicians' support of PrEP, knowledge of PrEP, and PrEP prescribing history using the information-motivation-behavioral (IMB) skills model.

Approach: Eighty physicians completed an online survey, which asked about their practice as well as their attitudes and knowledge of PrEP. Participants were also asked to identify barriers that they faced when prescribing PrEP, and which areas of PrEP prescription education is needed for them to feel more comfortable prescribing PrEP. Two exploratory factor analyses were conducted with items from the Support of PrEP scale and Knowledge of PrEP scale. A mediation analysis was conducted to assess if knowledge of PrEP mediated the relationship between support of PrEP and whether physicians have prescribed PrEP in the past.

Results: A majority of the participants (n=55, 68.75%) had not prescribed PrEP in the past. On average, physicians reported strong support for PrEP, and as support for PrEP increased so did knowledge of PrEP. Further, physicians who had prescribed PrEP demonstrated strong knowledge of PrEP and physicians who had not prescribed PrEP reported feeling neutral. The 95% bootstrap confidence interval indirect effect of support for PrEP on prescription history did not include zero (B = 1.59, 95% BsCI [0.83, 3.57]) demonstrating that the effect of support for PrEP is mediated by knowledge of PrEP. The most commonly identified barrier to prescribing PrEP was the lack of drug coverage among patients. Finally, education about coverage for prescription was the topic most commonly identified by physicians as necessary

Conclusion: The results of the mediation analysis support the IMB skills model regarding support for PrEP, Knowledge of PrEP, and having prescribed PrEP in the past. Our findings suggest that to improve PrEP uptake in NS, educational interventions for physicians and universal coverage of the drug would be necessary.

D2.3
Island Health Scholar in Residence: Promoting Health Equity in Public Health Systems and Services
Author Names: Bernie Pauly

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Primary Theme: Equity and Vulnerable Populations

Background and Objectives: In BC the declared overdose emergency alongside COVID is adding to the health impacts of pre-existing public health emergencies related to homelessness. The Island Health Scholar in Residence program was developed to enhance the meaningful engagement of people with lived/living expertise alongside community members and health authority leaders to promote health equity in health systems and reduce harms related to homelessness, poverty and drug use.

Approach: The Island Health Scholar in Residence program is a collaborative program of research that directly engages people with lived and living experience of substance use and/or homelessness to generate knowledge that is patient centred and informed by service user priorities This program of research is an example of patient oriented research that draws on key principles of community based research to actively engage with people with lived and living experience throughout the process of research from the generation of research questions to data collection, analysis and the development of actionable findings for health services, polices and practice.

Results: The Island Health Scholar Program of Research through numerous patient oriented and community based research projects is generating findings in key health systems areas. To date, findings have been generated related to culturally safe care for people who use drugs including educational resources for reducing stigma of primary care services; implementation and outcomes of managed alcohol programs and the development of operational guidance for managed alcohol and; effective models for delivery of risk mitigation guidance (safer supply) from the perspective of people who use drugs to reduce the harms of overdoses and COVID. Numerous knowledge translation strategies including a community of practice webinar and roundtables have been introduced to enhance research uptake and inform health systems changes.

Conclusion: The Island Health Scholar in Residence Program is recognized as an exemplar for enhancing the meaningful engagement of people who use drugs and/or those experiencing poverty or homelessness in the design and development of effective patient or user driven services through the co-production and rapid translation of knowledge.

D2.4
Development of Equity-Informed Decision Tools

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Primary Theme: Equity and Vulnerable Populations

Background and Objectives: Ensuring health equity is necessary for individuals to achieve full health and human potential. The Canadian Medical Association (CMA) has set as a 2040 strategic priority improving Canadians' equitable access to health and social services and integrating social and economic determinants of health into all health system planning and delivery. To support this, CMA is systematically adopting a tool-based equity-informed approach in the development and evaluation of all future policies, programs, products and funding initiatives.

Approach: In January 2020, a literature review, internal policy review, and scan of relevant policy and legislative environments was conducted for the period 1980-2019 and a Background to Policy drafted and circulated to internal stakeholders. Key informant interviews (internal and external stakeholders and partners) followed to support drafting of the Equity-informed Rapid Decision Tool and (long format) Decision Tool Worksheet. Both tools were reviewed by an external consultant and then piloted within internal programs. The revised Rapid Decision Tool was introduced into practice in December 2020. The Decision Tool Worksheet and Workbook are in further revision.

Results: The Health Equity policy platform produced: a) Background to Policy using results from literature and internal policy reviews, and environmental scans; b) Equity-informed Rapid Decision Tool and the longer format Decision Tool Worksheet, both designed to embed an equity-lens in the three stages of policy, program, product creation: development, implementation, and evaluation (each includes a Glossary of Terms and robust patient engagement criteria; and c) Decision Tool Workbook, a step by step user guide to both tools. Immediate impact: the operationalization of health equity into two of the six Strategic Opportunities identified in CMA's 20-year strategic plan, Impact 2040, with longer term impact expected from dissemination of the Decision Tools to medical training centres following consultation and review with external stakeholders and partners.

Conclusion: The health equity policy platform utilizes the expertise of physician members, external stakeholders, and embedded researchers to provide an evidence-based equity lens for evaluating policies, programs, products, or funding initiatives toward increasing knowledge and awareness of health equity and reducing disparities in the social and economic determinants of health.

D2.5

Using the CanMEDS-FM Indigenous Health Supplement to Provide Culturally Safe Care

Author Names: Heather Mullen, Emeline Janigan

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Primary Theme: Indigenous Health

Background and Objectives: The College of Family Physicians of Canada recognizes the role systemic racism plays in the health and social disparities experienced by Indigenous people in Canada, as well as the need for family physicians to learn about Indigenous health and social determinants of health in providing culturally safe care. In response to this need, the CFPC Indigenous Health Committee developed the Indigenous Health Supplement for the CanMEDS-FM competency framework.

Approach: The CanMEDS-FM Indigenous Health Supplement was developed using a rigorous consensus-based and iterative approach that is deeply grounded with Indigenous health research methods. The overall method was discussed, explored, and approved by the Indigenous Health Committee prior to starting and resulted in a six-step process for drafting each role in the document. This process included Indigenous talking circle protocols, narrative approach to contextualizing the roles, and explorations of Indigenous concepts and themes.

Results: The CanMEDS-FM Indigenous Health Supplement will help family physicians learn about how the needs and circumstances of Indigenous peoples affect their many roles including clinical practice, research and advocacy. The Supplement is a resource for undergraduate, postgraduate, and continuing medical education with potential to assist with program design, curriculum content, learning methods, and learner assessment. These competencies support the foundation for family physicians, medical trainees, and educators to better engage in care that authentically respects Indigenous peoples and their cultural historical, political, and social contexts. This ultimately leads to greater competence in providing culturally safe and improved quality of health care to Indigenous populations.

Conclusion: This session will outline how the CanMEDS-FM Indigenous Health Supplement was developed and its relevance in ensuring greater cultural safety in providing primary care to Indigenous populations. It will also discuss how the Supplement is used to promote both improved health care delivery and Indigenous health policy.

Up to Date Patterns for Colorectal Cancer Screening: Low Uptake in a Population with No Regular Primary Care Provider and Opportunities for Improvement

Author Names: Kamala Adhikari Dahal , Gary Teare

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Primary Theme: Cancer

Background and Objectives: In Alberta, the opportunity for colorectal cancer screening (CRCS) depends largely on access to a primary care provider (PCP), primarily family physicians. However, detailed quantification of CRCS adherence patterns of those who do not have a regular PCP is lacking. This study examined patterns of modality use for CRCS, and quantified the association between having a regular PCP and being up-to-date for CRCS in a community-based representative population in Alberta.

Approach: This was a cross-sectional study using the Canadian Community Health Survey data (2015-2016) of adults between 50 and 74 years of age (N=4,600). Being up-to-date for CRCS was defined as having completed a fecal immunochemical test (FIT) within the last 2 years or colonoscopy/sigmoidoscopy in the last 5 years before the survey. Multivariable logistic regression analysis was used to assess the association between having a regular PCP and being up-to-date for CRCS, adjusting for age, marital status, education, and smoking. The absolute probability of being up-to-date for CRCS among those with or without a regular PCP was estimated.

Results: 60.9% (95% CI=58.6, 63.2) of surveyed adults were up-to-date for CRCS, using either FIT (45.0%) or colonoscopy/sigmoidoscopy (28.0%). Among those who had colonoscopy/sigmoidoscopy in the last 5 years, 41.1% had also completed the FIT in the last 2 years. The adjusted odds ratio of being up-to-date for CRCS was 0.24 (95% CI=0.17, 0.35) for those who did not have a regular PCP compared to those who did. This pattern was observed in male and female sub-groups and the sub-groups with and without a medical consultation in the last 12 months. Absolute probability of being up-to-date for CRCS was lower by 34.4% among those without a regular PCP (33.4%, 95% CI=25.4, 41.5) than those who had (67.8%, 95% CI=65.4, 70.3).

Conclusion: Findings suggest a suboptimal uptake of CRCS overall, with disproportionate use of screening modalities, prevalent overuse of screening among those who were up-to-date, and high disparity in CRCS uptake. The use of evidence-based multicomponent intervention strategies, along with a customized-approach for those without a regular PCP, may address the issues.

Characterizing the financial burden of advanced cancer: interim analysis of financial effects data from people living with advanced colorectal cancer

Author Names: Patricia Biondo, Aynharan Sinnarajah, Shireen Kassam, Crystal Beaumont, Madalene Earp, Beverley Essue, Christopher Longo, Sharon Watanabe, Jessica Simon

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Primary Theme: Cancer

Background and Objectives: Few studies have comprehensively characterized the financial burden of advanced cancer. As part of a larger prospective cohort study characterizing the experiences of people living with advanced colorectal cancer, we collected financial effects data from a subset of participants.

Approach: Participants were recruited from cancer centres in two Canadian cities. Enrolled patients were invited to complete the Patient Self-Administered Financial Effects (PSAFE) questionnaire.

Results: Fifty-five of 90 enrolled patients completed the PSAFE, which took 30-60 minutes to complete. Interim analyses suggest the financial burden of advanced colorectal cancer is high: 76% of employed patients and 50% of employed caregivers had impacts on employment; 33% of patients made significant asset decisions (e.g., withdrew savings, downsized home). Respondents averaged two trips/month to their cancer centre, traveling anywhere from 6-500 km one-way, and incurred significant parking, fuel, and sometimes accommodation costs. Respondents were less likely to recall/report dollar figures for medical out-of-pocket costs (e.g., prescriptions, devices), but more likely to report impacts on employment, spending decisions, and travel to appointments. 75% of respondents had some form of employer or other extended health insurance, but 40% were not familiar with their coverage.

Conclusion: It is feasible to collect financial effects data from people living with advanced cancer using the PSAFE tool; completion rate of the tool was reasonable considering its comprehensiveness. The financial burden of advanced colorectal cancer is evidenced by significant impacts on employment, spending decisions, and travel.

Living with Advanced Colorectal Cancer: How Prepared are Informal Caregivers to Care for their Loved ones?

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Primary Theme: Cancer

Background and Objectives: The 'Living with Colorectal Cancer' prospective cohort study seeks to characterize the experiences of people living with advanced colorectal cancer and their caregivers, in order to inform care improvements. Here we describe informal caregivers' perceived preparedness for caregiving.

Approach: Eligible patients were identified by oncologists in Alberta's two tertiary cancer centers. Consenting patients were given the option to invite a caregiver to participate. Caregivers' preparedness for caregiving was assessed at enrollment and every 3 months thereafter using the Preparedness for Caregiving survey. This survey assesses levels of preparedness (using 5-point Likert scales and one open-ended question) for 8 caregiving domains (e.g. caring for the patient's physical and emotional needs, finding and setting up services, stress of caregiving, responding to emergencies).

Results: Sixty-eight caregivers in Calgary and Edmonton have been enrolled over 18 months, of which 71% are female, and 82% live with the patient. Caregiver preparedness decreased over time from months 1 to 13 of follow-up, across all categories. Caregivers were least prepared for the stress of caregiving and caring for the patient's emotional needs. They were most prepared for taking care of the patient's physical needs at enrollment. Open-ended comments on specific preparedness needs were numerous and extensive. A range of topics were reported, the top three being: caregiver health (physical, mental, self-care), emotional aspects (preparing children and family, feeling alone) and end of life (hospice, palliative care, transitioning).

Conclusion: Our data suggest that in the advanced cancer setting, caregiver perceived preparedness declines, with increasing stress and emotional distress over time. This may be related to patient illness progression. Caregiver experience, including sense of preparedness, is often under evaluated and this study suggests more attention is needed.

The importance of patient advisors in oncology during the COVID-19 pandemic.

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Primary Theme: Cancer

Background and Objectives: Emotional support is the dimension where patients are the least satisfied according to the Rossy network. The COVID-19 pandemic has increased this issue, particularly in oncology, with a decrease in the supply of services, delays in diagnosis and treatments.
To meet this need, institutions in Quebec have introduced patient advisors into breast cancer clinical teams. The objective is to show the feasibility and sensitive dimensions of their intervention, especially in the context of the pandemic.

Approach: Since 2018, patient advisors (PAs), who have had a cancer experience (mostly breast cancer or genetic predisposition to breast cancer), who have followed a validated process of training and coaching are integrated into clinical teams. They conduct consultations to complete the offer of services by bringing emotional, informational, and educational support.
With this innovation, PAs are involved throughout the care pathway and more particularly at key moments (announcement of diagnosis, start, change or end of treatment) according to patients' needs. Initially designed to be done in person, the crisis proved that interventions could also be done by phone or videoconference.

Results: Since the beginning of the pandemic, 211 patients have been accompanied by PAs during 331 meetings.
The main themes discussed with the PA related to the pandemic are :
experience of isolation (33%),
pre-hospitalization/hospitalization conditions (31%),
fear of catching covid-19 (31%).
Initial results indicate that 98.6% of patients report that they feel able to actively participate in decisions about their treatment. Also, 92.7% of the patients stated that if they don't understand something, it's easy to ask for help.
In addition, interviews with PAs and accompanied patients indicate that PAs facilitate communication between patients and caregivers. By being better informed, the patient can participate more actively in the treatment, in a partnership of care, and be better able to navigate the healthcare system.

Conclusion: With the pandemic, the project has benefited from a window of opportunity to consolidate the participation of patient advisors in clinical teams. This project has demonstrated that it is possible to introduce patient advisors to oncology clinical teams throughout the patient care trajectory in a pandemic context.

D3.5
Design of a surveillance system for late effects of treatment in childhood cancer survivors

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Primary Theme: Cancer

Background and Objectives: Survivors of childhood cancer are at lifelong risk of morbidity (e.g. new cancers, heart failure) and premature mortality because of their cancer treatment ("late effects"). Therefore, they require lifelong risk-tailored care to mitigate their risks. However, most adult survivors of childhood cancer do not complete recommended surveillance such as mammograms or echocardiograms. Working with survivors, family physicians, and health-system partners, we are designing and evaluating a provincial reminder and support system for high-priority tests.

Approach: Our multi-phase process, informed by principles of implementation science, behavioral science and design-thinking, is as follows: Step 1: a theory-informed qualitative study using the theoretical domains framework to explore the barriers and enablers to accessing surveillance tests; Step 2: a workshop with childhood cancer survivors, family physicians and health system stakeholders, using Step 1 findings and 'personas' (a series of fictional, but data-informed characters) to facilitate discussion regarding tailoring the intervention for different survivors. Step 3: intervention prototype development and iterative user-testing. Step 4: pragmatic randomized trial with embedded process evaluation to test the intervention.

Results: Step 1 and Step 2 are complete. The qualitative study of 20 survivors and 7 family physicians found a high desire for information on surveillance for late effects. Such an intervention must provide more than information – it should also reduce the burden of managing and coordinating care. Insights from the workshop included the importance of partnering with family physicians and providing emotional support for survivors that may be experiencing distress upon learning of their risk for late effects.

Conclusion: Limited awareness about surveillance recommendations must be addressed as the first step to the implementation of guidelines, recognizing that awareness is not sufficient to address the underlying determinants of surveillance. Our next step is to prototype intervention components and test through iterative user-testing.

D4.1
Key factors to scaling-up eConsult in four provinces

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Primary Theme: Health Policy, Healthcare Reform

Background and Objectives: EConsult services – asynchronous virtual consultations between primary care providers and specialists – improve access to specialized care. However, in Canada, effective innovations, like eConsult, often remain unscaled. We need to better understand how to scale-up innovations (i.e. address policy and program issues to roll out an innovation on a large scale). Current efforts to scale-up eConsult, underway across Canada, offer a unique learning opportunity. We aimed to identify key factors to successfully scale-up eConsult.

Approach: We conducted a multiple case study (n=4) of the process of scaling-up eConsult in Quebec, Ontario, Manitoba and Newfoundland & Labrador. We observed (n=58) provincial eConsult committee meetings and national eConsult forums (n=3) over 2 years (2018-2020). We reviewed internal documents (n=45). We conducted semi-structured interviews (n=38) with key stakeholders in each province (e.g., researchers, primary care providers, specialists, policymakers, decision-makers, patient partners). We conducted deductive process analysis using the four phases of Milat's scaling-up framework (2016) and inductive thematic analysis of emerging "key factors" to scaling-up eConsult, that were recurring across provinces.

Results: The key factors to scaling-up eConsult included: 1) framing the innovation to align with population needs and policy priorities (e.g., reduce wait times, controlling costs, improving remote access to care), 2) creating a buzz around the innovation through proactive communication, promotional strategies and events, 3) having both specialist and primary care provider champions to engage other providers, 4) ongoing innovation evaluation and continuous quality improvement (e.g. built-in user survey, user advisory committees), 5) building on lessons and experiences in other jurisdictions and in pilot phases to inform scale-up strategies, 6) maintaining a simple, user-friendly interface, 7) integrating the innovation into existing workflows as much as possible, 8) securing provincial remuneration for providers, and 9) engaging multiple stakeholders throughout the process (e.g. patient-partners, policymakers, providers, researchers).

Conclusion: While stakeholders implemented different strategies to support the provincial scale-up of eConsult adapted to context, these key factors appeared essential to achieving successful scale-up. Despite these factors, expanding the reach of a proven innovation remains challenging and lengthy because health systems lack clear processes to support innovation scale-up.

Increase in the uptake of virtual primary care during the pandemic: How Canadians are using virtual care technologies to interact with the healthcare system

Author Names: Waldo Beausejour , Simon Hagens, ellie yu

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Primary Theme: COVID-19

Background and Objectives: Canada's uptake of digital health technologies was slow until the recent COVID-19pandemic. Although Canadians have continually demonstrated a high interest in virtual care, utilization has hovered around 10% and 15% of total primary care visits before the pandemic. We sought to uncover how the adoption of virtual care has evolved as the health crisis unfolded and how Canadians have used digital health technologies to seek out care.

Approach: We utilized data generated from periodic cross-sectional surveys of about 1,500 Canadian adults between March and August 2020.These surveys were conducted online on a weekly basis. They collected data on the experiences of health care during the pandemic reported by Canadians, more specifically their uptake of virtual care. A cumulative sample of 31,889 people were achieved over a period of 21 weeks. The results were weighted to ensure representativeness of the Canadian population across provinces. These periodic data gatherings will resume in late January 2021, thereby new data on the uptake of virtual care will be available by March 2021.

Results: Virtual care visits increased from 10% in 2019 to 60% in April 2020, with telephone consultations representing the bulk of these visits. Virtual care through video and secured messaging reached 30% for visits related to COVID-19 and 16% for routine visits between March-April 2020. As of August, overall virtual care visits plateaued at 30%. Canadians reported reduction in exposure to COVID-19 and other infectious diseases (35%), financial and time savings (25%), and more convenient and fastest access to care (22%) as the primary benefits of virtual care during the pandemic. Most virtual visits occurring during the pandemic had led to a prescription renewal (34%) or a new prescription (22%). Furthermore, 45% of Canadians indicated that they will continue to use virtual care after the pandemic.

Conclusion: The rapid virtualization of health delivery has enabled Canadians to have better access to care during COVID-19. Though the propension to use virtual care beyond the pandemic is high, new strategies, including digital health literacy, should be implemented in order to sustain the growth in consumer adoption moving forward.

D4.3
Virtual Visits and Management of Primary Care in a Pandemic Environment

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Primary Theme: COVID-19

Background and Objectives: The delivery of virtual care (VC) by health care providers to patients increased dramatically as a result of the COVID-19 pandemic. In particular, primary care practices across Canada rapidly implemented of VC (telephone, video). Within this quickly evolving context, a descriptive account of changes in the delivery of primary care is important. This study describes and characterizes VC following the approval of remuneration related to COVID-19 pandemic restrictions in Manitoba, Canada.

Approach: A retrospective cohort study that assess electronic medical records of 237 primary care clinicians, representing 289,388 patients, participating in the Manitoba Primary Care Research Network (MaPCReN) between 01/01/17 and 06/30/20. Tariff codes from billing records between 03/01/20 and 06/30/20 determine the visit type (e.g. clinic visit, virtual visit). Patient (sex, age, comorbidities, visit frequency, medication rates) and provider (sex, age, clinic location, provider type, remuneration model, country of graduation, return visit rate) characteristics were analyzed according to visit type. Generalized estimate equation models were used to describe the factors significantly associated with VC.

Results: There were 201,995 encounters with a primary care provider between 03/01/20 and 06/30/20. On average, 37.8% of encounters were provided virtually. Follow-up visits were required for 21.2% of VC encounters; the majority (55.9%) had the same visit type. For follow-up encounters where the visit type changed, 42.2% of clinic visits were followed by VC, whereas 26.9% of VC was followed by a clinic visit. Primary care providers in urban clinics and salaried providers were significantly more likely than fee-for-service providers or those at rural clinics to bill for VC (p-value <.0001). Patients more likely to seek VC were females, those that had higher annual visit rates, more co-morbidities and more prescriptions compared to patients that only attended clinic visits or had no visit.

Conclusion: Primary care providers utilized VC for one-third of visits during the first 3 months of pandemic restrictions. Patients with chronic conditions utilized VC more consistently. VC appointments did not routinely require in-person follow-up and therefore appear to have been essential to accessing primary care.

D4.4

Methodological review of items for assessing the risk of bias in network meta-analyses provides groundwork for the development of a new risk of bias tool for network meta-analysis

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Primary Theme: Knowledge Translation & Exchange

Background and Objectives: Tools are available for most study designs to make quality assessment easier for a knowledge user. For example, ROBIS can be used to assess the risk of bias of systematic reviews (SRs). However, there is currently no risk of bias tool for reviews with network meta-analyses (NMA).
Objectives: To conduct a methodological review with the aim to develop a list of items relating to risk of bias in reviews with network meta-analyses.

Approach: We included tools, methods papers, and standards that present items related to bias, reporting, or methodological quality. We searched MEDLINE, Cochrane library, and unpublished literature. Data was extracted on items that are relevant to bias in conclusions of NMAs. A steering committee decided on the retention of items based on individual polling followed by consensus via discussion. We did not include items that were equally applicable to all systematic reviews (e.g. covered in ROBIS). Items that were similar but needing additional guidance for NMAs were discussed in the elaboration and explanation document.

Results: The search yielded 3599 citations, 3421 of which were excluded at the title/abstract phase. 181 articles were assessed at full text and of these, 59 were included. Of the 59 included articles, 14 were tools, checklists or standards, 13 were a guidance or conduct of report for NMAs, 26 were articles related to bias or methods, and six were papers assessing the methodological quality (or risk of bias) of reviews with NMA. Five reports were comprehensive methods reviews aggregation previous methods related to NMAs. A list of 99 items was extracted. The items were reviewed by the steering committee, 33 were retained and reworded into bias items and signalling questions. The items were categorised into domains and formatted into a draft tool.

Conclusion: A list of bias items informed our proposed RoB NMA tool to assess the degree to which the methods lead to risk of bias in the review conclusions. Advancing the practice of how to assess biases in conclusions of NMAs will have significant impact worldwide to every health field.

D5.1

Pan-Canadian Caregiver and Youth Experiences in Accessing Government Disability Programs

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Primary Theme: Health Policy, Healthcare Reform

Background and Objectives: Canadians with neurodevelopmental disabilities (NDD) face economic, educational, and social barriers, which limit their health equity and hinder their full participation in society. To address these barriers, governments provide disability support programs. Program uptake and factors impacting uptake are not well understood presently, particularly for youths with NDD and their families. The purpose of this project is to describe how youths with NDD and their families experience the process of accessing disability programs across Canada.

Approach: This study uses 30- to 60-minute, semi-structured, audio-recorded qualitative interviews with youth (18 to 30 years, inclusive) with NDD and parents/caregivers of children and youth (<31 years) with NDD across Canada. Maximum variation sampling was used to identify and select participants among individuals who had completed an online survey. Interviews were conducted in either English or French. During interviews, participants were invited to share their experiences seeking and accessing government programs, as well as describe barriers and facilitators they experienced during this process. Interviews were transcribed verbatim. NVivo software was used for data coding, validation, and thematic analysis.

Results: Youth with NDD (n=3) and parents/caregivers of youth with NDD (n=81) participated in interviews, in English (n=74) and French (n=10). We interviewed at least one participant in all provinces and two territories. Participants varied with respect to many socio-demographic characteristics, including income, NDD diagnosis, community size, and Indigenous self-identification, among others. Three main categories of determinants that impact this population's access to disability support programs emerged from thematic analysis: degree of guidance during the application process (especially from health and financial professionals), applicant and family characteristics (such as diagnosis, income, region of residence, and age), and government and program characteristics (such as eligibility criteria, application process, and government priorities). Our analysis also identified recommendations for improved program access stemming from suggestions provided by participants.

Conclusion: Our research reveals factors that influence the ability of youths with NDD and their families to find and access disability support programs. Participant experiences provide insight into how service delivery and design can be changed to improve access. Future work will involve translating participants' experiences into specific policy recommendations.

Return on investment and network impact: An evaluation of Diabetes Action Canada, a Strategy for Patient-Oriented Research (SPOR) Chronic Disease Network

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Primary Theme: Health Policy, Healthcare Reform

Background and Objectives: The Canadian Academy of Health Sciences (CAHS) preferred framework and indicators measures returns on investment (ROI) in health research across 5 domains: advancing knowledge; capacity building; informing decision making; health impact; and economic and social impact. As a part of a broader mixed-methods longitudinal network evaluation, which integrates the State of Network Evaluation with the CAHS framework, the objective of the following study is to examine the Results and Impact of the Diabetes Action Canada.

Approach: For the purposes of the evaluation, Diabetes Action Canada was considered as a Research Group. Network activities from April 1, 2016, to March 31, 2019, were examined and data related to the activities of the network were obtained from a review of relevant documentation including; Network annual reports, the Network website, knowledge translation reporting for each fiscal year, peer-reviewed publications, and bibliometric analyses. Citation analysis and benchmarking metrics were completed using SCOPUS –SciVal; bibliometric network analysis was completed in VOSviewer and Pajek. Capacity building and informing decision making were examined through annual network reporting.

Results: Advancing knowledge, members of Diabetes Action Canada published 59 peer-reviewed articles in the areas of medicine; biochemistry, genetics, and molecular biology; nursing, agricultural and biological sciences; and pharmacology, toxicology, and pharmaceutics. For papers with bibliometric data, 44% (25/57), were published in high-quality outlet journals and had been cited 528 times. Publications involved 238 co-authors, with international collaboration from 10 countries in 33.3%. Capacity building supported 16 individuals through a variety of funding totaling $872,701. The network grew from a group of 16 investigators to 96, supported by 15 research staff. No publications had been incorporated into clinical guidelines to inform health policy at the time of the analysis, however, members met with policymakers at the local, regional, provincial, national, and international levels.

Conclusion: Application of the CAHS framework requires a mixed-methods approach to evaluate ROI related to research funding. The evaluation of framework indicators is dependent on the age and maturity of the network. Examination of the health impact, broader economic and social impact may not be evident in a maturing research enterprise.

D5.3
Analyse des politiques québécoises de prévention des surdoses

Author Names: Antoine Bertrand-Deschênes

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Primary Theme: Health Policy, Healthcare Reform

Background and Objectives: La crise des opioïdes est un problème de santé publique au Canada et ailleurs dans le monde. Toutefois, la manifestation de la crise au Québec semble être restée à plusieurs niveaux un mystère pour les autorités, malgré l'élaboration d'une stratégie de prévention provinciale. Cette présentation vise à décortiquer le référentiel politique structurant le phénomène des surdoses au Québec afin d'en identifier les faiblesses et les angles morts à considérer dans la prévention.

Approach: Réalisée dans le cadre d'une recherche qualitative en cours, le cadre théorique du référentiel des politiques publiques a été utilisé pour décortiquer la stratégie de prévention des surdoses au Québec dans sa dimension cognitive (les diverses interprétations des causes des problèmes à résoudre), normative (les valeurs mises de l'avant dont il faudrait assurer le respect) et instrumentale (les principes devant orienter l'action). Des données empiriques issues d'autres recherches qualitatives et quantitatives sont également mobilisées pour discuter de manière critique du référentiel formant l'approche choisie au Québec en matière de prévention des surdoses.

Results: Malgré que la réduction des inégalités sociales de santé soit cruciale pour améliorer la santé de la population, on constate que l'approche québécoise focalise plutôt sur les déterminants individuels lorsqu'il est question de la prévention des surdoses. De plus, une vision très pointue des surdoses, principalement sous l'angle des substances en cause, tend à rendre invisibles plusieurs situations et vécus. En sus, la légitimité semble reconnue de manière inégale aux acteurs interpellés, entre experts scientifiques étant en position de définir la problématique et d'orienter les ressources et les groupes communautaires appelés à réduire les risques sociosanitaires de la crise. Enfin, l'emploi simultané de concepts et d'approches aux fondements pourtant différents risque d'exacerber la stigmatisation à l'endroit de certaines personnes, particulièrement celles défavorisées au plan socioéconomique.

Conclusion: L'approche québécoise autour des surdoses mobilise une compréhension pointue de la situation traduit en termes de réduction des risques sociosanitaires, laissant croire à un problème marginal. Pourtant, le phénomène des surdoses est beaucoup plus complexe et nécessite des actions en amont dans une perspective de santé et de mieux-être global.

D5.4

Tiered Models of Rehabilitation Services: Insights from Realist Research to Support Inclusion of Children and Youth with Disabilities

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Primary Theme: Health Policy, Healthcare Reform

Background and Objectives: Tiered models of rehabilitation services aim to support the United Nations' global mandate of inclusion and participation of children and youth with disabilities in education. Tiered models are most typically organized along a continuum of three tiers: universal, targeted, and individualized services. Our objective is to develop the first-known middle-range theory of tiered rehabilitation services in education settings to guide future research, inform policy, and improve occupational therapy, speech-language pathology, and physiotherapy practice.

Approach: To support theory development, we applied realist methodology. First, we conducted a realist review (n=52) to determine: What are the outcomes of successful tiered approaches to rehabilitation services for children and youth in education settings, in what circumstances do these services best occur, how and why? Second, we completed a retrospective realist evaluation of our tiered model for school-based occupational therapy, Partnering for Change (P4C), to ascertain: "How and why did P4C work, for whom, and in what contexts?" Data were collected from semi-structured interviews (n=34) and focus groups (n=4) conducted with stakeholders (e.g., health services managers, rehabilitation professionals, educators).

Results: The realist review revealed that tiered models of rehabilitation service delivery led to positive outcomes for students, families, professionals, and the system; however, to attain positive outcomes, tiered services must support interprofessional collaboration, capacity building, and provision of services that are authentic to the context. Rehabilitation professionals also must have adequate time, funding, and material support. The realist evaluation led to the development of a program theory about how and why P4C achieved its objectives at the child, occupational therapist, educator, parent, and system level, and what conditions are required to achieve these outcomes. Results advance understanding of the essential components of successful tiered models of rehabilitation services in education.

Conclusion: Next steps include aggregating findings to develop a middle-range explanatory theory of tiered models for rehabilitation services in schools as well as additional research to both further refine and empirically test our theory. Our theory of tiered services will be imperative to informing policy, and guiding implementation and practice.

D5.5

Is there too much COVID-19 research? Implementation and analysis of a COVID-19 research inventory for British Columbia

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Primary Theme: COVID-19

Background and Objectives: COVID-19 spurred a rapid response by researchers and research funders to generate evidence to inform clinical care, public health and policy. In this evolving environment, it is important to understand how research underway aligns with the informational needs of decision-makers. The BC Academic Health Science Network (AHSN) created a public inventory of COVID-related research with the objectives to track the type and quantity of research initiatives across the province, and to support research collaboration.

Approach: We created a RedCap database capturing project title, objectives, research team and organization, type of research, geographic region, and target study population. We identified projects primarily through systematic keyword searches of institutional Research Ethics Boards (REBs) submissions. We proactively sought out additional projects from universities, regional health authorities, the Ministry of Health (MoH) and other AHSN partners. We conducted a quality assessment of data of 10% of registered project to verify accuracy of project details. We use descriptive statistics to present the frequency of studies enrolled during the first 6 months and to summarize the content of the database.

Results: The inventory is a searchable database publicly available on AHSN's website: https://bcahsn.ca/covid-19-response/inventory/. As of January 1, 2021, the registry contained 485 COVID-19 research projects: 67.6% drawn from REBs, and 32.4% through our outreach campaign. Our initial quality check is ongoing but indicate a high degree of accuracy of the entered data. Among the 485 projects, 13% are biomedical, 17% clinical, 15% health policy and services, and 41% population health. The remaining 14% indicated more than one classification. 61% of studies are specific to BC and 39% are part of larger multi-provincial, national, or international projects. Ongoing analysis of the data, including geographic and population representation and a refined classification of projects according to priority areas will be complete in March.

Conclusion: Our inventory encapsulates the depth and scope of COVID-19 research being conducted in BC. Future work will map research projects to MoH priority areas and identify gaps. We will also investigate the extent to which the Inventory has been useful in reducing overlap and facilitating research collaboration.

D6.1
Design and Implementation of a Learning Health System Support Model

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Primary Theme: Health System Performance

Background and Objectives: The Alberta SPOR SUPPORT Unit (AbSPORU) is a research and knowledge translation intermediary mandated to strengthen Alberta's emergent learning health system. The integrated nature of Alberta's health system has offered AbSPORU numerous avenues to support implementation of evidence-based care. Coordinating these avenues with other provincial assets has the potential to accelerate learning health system research cycles and increase innovation scale, spread, and sustainment. AbSPORU's Implementation Science Collaborative initiative represents one model for this vital coordination.

Approach: The Implementation Science Collaborative is a mechanism to integrate health system, academic, and AbSPORU expertise to facilitate effective spread, scale and sustainment of health innovations. Specifically, the Collaborative brings together leaders from various health care communities (e.g. clinics, primary health, indigenous health etc.) to collect local practical knowledge of widespread implementation barriers. International implementation science leaders examine those practical barriers and develop implementation research designs and measures to embed into health innovation projects. AbSPORU promotes these research recommendations, identifies well-suited project teams, brokers embedded research partnerships, coordinates data capture and analytics, and catalogs lessons learned to inform future implementation province-wide.

Results: Significant stakeholder engagement, advisory recruitment, asset mapping, and process identification and coordination were undertaken to launch the Implementation Science Collaborative. AbSPORU hosted two large multi-stakeholder events (100+ attendees) to assess provincial readiness and to develop a value proposition for the Collaborative. We also interviewed academic and health system partners in similar initiatives as part of our barrier/facilitator assessment for the Collaborative. To learn where implementation expertise and experience exists across Alberta and to target our supports, we conducted deep dive asset mapping and a social network analysis of the province's implementation support and science communities. Finally, we co-designed a work model with multiple stakeholders to leverage existing processes and assets in the province to reduce burden on stakeholders rather than creating additional responsibilities.

Conclusion: Using a transdisciplinary approach, AbSPORU facilitated the design and operationalization of the Implementation Science Collaborative, in turn, creating a model for intermediaries to support provincial learning health systems. Our co-design process, the resulting Implementation Science Collaborative model, and a description of our initiative implementation to date will be presented.

D6.2

Selection of Patient Reported Experience Measures (PREMS) for public reporting in Canada: Key findings from CIHI's mixed methods approach

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Primary Theme: Health System Performance

Background and Objectives: Understanding patient experience is important in informing quality care in hospital settings. In Canada, public reporting of comparable patient experience measures is limited. Recognizing this gap, CIHI set out to identify 3-5 measures from an existing set of 23 from the Canadian Patient Experiences Survey – Inpatient Care (CPES-IC) for public reporting. A comprehensive process was used to ensure the measures reflected patient, clinician, facility, and health-system voices and drove improvement in patient-centered care.

Approach: Using a mixed methods approach, CIHI gathered feedback on which of the CPES-IC measures should be publicly reported from a range of stakeholders including jurisdictions, clinicians and patients. The process involved several mechanisms for gathering input: (1) establishing an Expert Advisory Group (EAG), (2) using a modified-Delphi survey where participants scored each of the measures based on relevance, impact on experience, actionability, interpretability, and overall priority, and (3) surveying the public by asking participants to identify three aspects of care they considered the most important and why. Following both surveys, the EAG discussed the results and made their recommendation.

Results: Forty-one individuals representing patients, clinicians, hospitals, provincial, and regional organizations responded to the Delphi survey. The public survey was completed by 117 Canadians. Results highlighted notable differences across groups– for example; patients and clinicians did not rank the same measures highly. Additionally, public survey participants chose Communication with Doctors (56.4%) and Communication with Nurses (47.0%) as being among their "top 3" most important measures to focus on in order to improve patient experiences. Key themes heard throughout the qualitative feedback included "respect and dignity", "trustworthy and supporting staff", and "conflicting information". Following the surveys, the EAG discussed the findings in combination with analytical results and measure variation, and recommended five CPES-IC measures for public reporting with plain language names to ensure understanding and use.

Conclusion: Based on feedback received throughout the selection process, five measures were identified for public reporting by CIHI. The identified measures touch on a mixture of themes and highlight what clinicians, hospitals, and regions can focus on in order to improve patient experience and ensure patients' preferences are met.

D6.3

Approaches to Understanding How Provincial Health Systems can Mobilize Registry Data for Quality Improvement: A Protocol

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Primary Theme: Health System Performance

Background and Objectives: The standardized use of health performance data significantly informs clinical care, quality improvement (QI), safety, and effectiveness across settings. Spinal cord injury (SCI) is a disruptive, chronic condition requiring complex care. Alberta lacks a coordinated, provincial approach to QI and data sharing for SCI care. The Rick Hansen Spinal Cord Injury Registry (RHSCIR) captures SCI longitudinal data across Canada.2 We aim to co-design an evidence-informed approach to using RHSCIR for provincial QI of SCI.

Approach: We will collaborate with provincial SCI stakeholders to develop a formal strategy to advance use of RHSCIR data for QI. We will complete three activities. (1) An environmental scan (including literature review and informational interviews) will reveal potential approaches to using registry data for QI for SCI and other complex conditions. (2) An exploratory analysis of Alberta RHSCIR data (e.g., descriptive and regression) will inform discussion on opportunities and priorities for systematic improvement. (3) A provincial steering committee (including persons with lived experience, clinicians) will be established to use (1) and (2) to co-design a QI strategy for SCI care.

Results: By spring 2021, the completed environmental scan will detail various approaches; stakeholders involved; stakeholder interactions; approaches to prioritization; data use; and, the personnel and resources required for implementation of a provincial SCI QI strategy. We will also have completed exploratory analyses of the RHSCIR from Edmonton and Calgary sites to determine priority areas for QI. Particular data of interest will include demographics, mechanism of injury, impairments, activity limitations, medical complications and participation restrictions. These learnings will inform the fall 2021 convening of the provincial steering committee, including persons with lived experience, community organizations, clinicians, researchers, and leadership. Informed by the environmental scan and RHSCIR analysis, the steering committee will develop a provincial, coordinated, data-informed strategy to tangibly approach RHSCIR use for QI purposes.

Conclusion: This QI initiative is intended to help coordinate, support and standardize SCI data in Alberta. We expect our learnings will greatly enhance the understanding of how provincial healthcare systems can systemically adopt, and mobilize, registry data for QI of care for complex, chronic conditions, not only SCI.

D6.4
Estimated Cost of COVID-19 Hospitalizations in Canada
Author Names: Stephanie Bonnell, Jason Black, Yujin Jiang

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Primary Theme: COVID-19

Background and Objectives: As COVID-19 cases started to appear in Canada, CIHI provided support and guidance on clinical and financial coding practices that allowed hospitals to collect COVID-19 data without any changes to their existing reporting systems. Despite this, there have been analytical challenges related to reporting on the costs of treating COVID-19 patients. This presentation will provide the estimated cost of COVID-19 hospitalizations in Canada and will examine differences between waves one and two of the pandemic.

Approach: A cohort of COVID-19 hospitalizations was compiled from CIHI's Discharge Abstract Database (DAD) between January 1, 2020 and March 31, 2021. Since detailed patient cost data are not yet available for COVID-19 patients, a methodology was used to create cost estimates for each COVID-19 hospitalization. By inflating CIHI's Cost of a Standard Hospital Stay (CSHS) indicator using Statistics Canada's Consumer Price Index (CPI) and then multiplying that by each hospitalization's Resource Intensity Weight, forecasted cost estimates were created for each COVID-19 hospitalization. This approach allows us to provide cost estimates for planning purposes until the patient cost data are available.

Results: This presentation applies the methodology outlined in CIHI's abstract on "Providing more recent hospital cost estimates using forecasted financial information" to a cohort of COVID-19 hospitalizations. Results will include:
• Statistics related to case volumes, length of stay and resource intensity of COVID-19 hospitalizations.
• Estimated hospital costs of COVID-19 hospitalizations.
• Comparison of ICU and non-ICU hospitalization cost estimates.
• Differences in statistics and cost estimates observed between waves one and two of the pandemic.
• Comparison of cost estimates between COVID-19 hospitalizations and other influenza-like illnesses.

Conclusion: Until patient cost data are available, a methodology was used to create cost estimates for COVID-19 hospitalizations which are needed for planning purposes. The patient cost data will provide a more accurate and detailed understanding of the costs of treating COVID-19 patients over waves one and two of the pandemic.

Impact of COVID-19 on Canada Health care Systems

Author Names: Jennifer Frood, Tracy Johnson, Andrea Foebel

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Primary Theme: COVID-19

Background and Objectives: In March 2020, Canadians prepared for a potential surge of COVID-19 patients expected to require hospital care. Specifically, governments across Canada 1) advised people to stay at home and minimize contact with others, 2) hospitals cancelled planned surgeries to conserve resources and 3) health care professionals restricted patient interactions to urgent and essential services. Our analysis covers how these measures impacted four distinct topics; emergency departments, inpatient hospital care, physicians and home care.

Approach: COVID-19 challenges health systems across Canada, not just for those with COVID-19 but for all those relying on the care system for their ongoing or emerging health concerns. CIHI has compiled health system data from March to June 2020, or Wave 1, of the Canadian COVID-19 pandemic. Relative to the same time period in the previous year 2 compelling stories have emerged; Canada's health care system underwent a rapid system transformation and people rapidly changed the way they sought health care.

Results: Physicians adapted quickly, providing 52% of care virtually, online or by phone, for patient visits, psychotherapy and consults with other physicians in April 2020. Hospitals took patient prioritization to new levels, making sure that urgent surgeries and the most serious emergency department patients received care, and triaging less-serious patients to other, more appropriate care settings.
Patients themselves accessed health care differently. Visits to emergency departments declined by almost 25,000 a day by April 2020 — that is about half the usual volume Canada's emergency departments would typically see. Fewer people sought care for common concerns like abdominal pain, colds and flu but also for significant concerns like cardiac events and trauma - it is possible some people did not seek care when they needed to.

Conclusion: The amount of information generated from March to June and the rapidly changing knowledge about COVID-19 will take time to understand. We will continuing to monitor the impact of COVID-19 on the health care system as well as other unintended impact to Canadians.