Quadruple Aim & Equity Catalyst Grant

Evidence Brief Booklet

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All researchers profiled in this publication have agreed to the publication dissemination of their Evidence Briefs compiled within.

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CIHR's Institute of Health Services and Policy Research (IHSPR) would like express gratitude towards program sponsors for supporting this research, including the CMA Foundation and CIHR's Institute of Aging (IA), Institute of Musculoskeletal Health and Arthritis (IMHA), Institute of Population and Public Health (IPPH), Institute of Neurosciences, Mental Health and Addiction (INMHA) and Strategy for Patient-Oriented Research (SPOR).

Executive Summary

The Program

Thanks to sponsorship and commitment from seven program funders, the Quadruple Aim and Equity Catalyst Grant funding opportunity was funded in 2022. This $5M pan-Canadian investment supported one-year knowledge creation and/or knowledge implementation projects. The **overarching goal** of the program was to support projects focused on macro/meso-level innovations in how health care systems and services are organized, delivered, governed, held accountable, financed, and/or funded and the impact of those innovations on one or more of the Quadruple Aim goals and health equity, (otherwise known as the Quintuple Aim[1]) All projects were of high priority to the research team's policy and/or decision maker(s) and designed to inform or advance decision-making and identify policy/implementation considerations for the Canadian context – all with the vision to advance the Quadruple Aim and health equity.

A total of 50 research teams were funded. Each team consisted of a principal researcher and a policy- and/or decision-maker (principal knowledge user)[2], resulting in engagement of over 500 researchers and knowledge users across Canada. Teams worked to respond to their knowledge users' evidence needs to inform decisions, policies or actions that advance achievement of the Quintuple Aim. The program's focus on complex system-level challenges, health equity, and partnerships with decision/policy makers (and other knowledge users, such as patients/public/providers as applicable) were design features intended to support and maximize the impact of the catalyst grants.

Building capacity through funding

$5M Pan-Canadian investment
7 Program funders
50 Funded catalyst grants

Engagement across Canada

504 Individuals named on the grants
75 Principal Investigators
159 Knowledge Users
270 Co-Applicants

Scope of research

5 Priority areas
11 Broad research themes
5 Canadian jurisdictions (NPI affiliation)

The Research Projects

The 50 funded catalyst projects aligned with five high-level research priorities outlined below. They researched meso/macro-level system challenges in jurisdictions across Canada (with lead researchers based in five Canadian provinces, Alberta, British Columbia, Nova Scotia, Ontario and Quebec). A third of

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[1] The Quintuple Aim framework aims to guide the optimization of health system performance through five overarching goals: improved health equity, enhancing patient and provider experience, improving population health, and better value for money (Nundy, S. 2022. A New Imperative to Advance Health Equity. doi:10.1001/jama.2021.25181)

[2] The policy-/decision-makers have direct experience, expertise and prioritized vested interest in the project's research area.

projects focused on knowledge synthesis (n=17) or evaluation (n= 17); with remaining projects focused on comparative policy analyses; implementation science or spread and scale (n= 6, 6 and 4, respectively).

Priority Areas	
22	Primary, home & community-based care
12	Integrated care
10	Health workforce
4	Upstream prevention
2	Long-term care

Type of project	
17	Knowledge synthesis grants (knowledge creation)
17	Evaluation grants (knowledge creation)
6	Comparative policy analysis grants (knowledge creation)
6	Implementation grants (knowledge implementation)
4	Spread and scale grants (knowledge implementation)

The projects focused on a broad range of health system and public health themes, including primary care (n= 14 projects), virtual care and digital science innovations (n= 9), mental health and/or substance use (n= 7), health workforce (n= 6), integrated care (n= 5), population and public health (n= 4) as well as a focus on prioritized populations (First Nations, Inuit and Metis, older adults, racialized groups), and more.

Evidence Briefs as Knowledge Mobilization Products

To maximize knowledge mobilization at the end-of-grant stage, teams were asked to submit a two-page Evidence Brief and to participate in a CIHR-hosted workshop in November 2023. This Booklet comprises the 48 Evidence Briefs submitted by the teams, that summarizes their key findings, impacts and implications for next steps. The goal of the Evidence Briefs were to 1) share key finding with knowledge users, 2) facilitate learnings within and across research teams and 3) draw a clear link to implications for policy and/or practice. In disseminating this Evidence Brief Booklet, CIHR-IHSPR and partners strive to contribute to the science and practice of knowledge mobilization, by sharing the program's innovations and evidence-informed decision-making that aim to advance the Quintuple aim goals in Canada.

Researchers were asked to co-develop the briefs with their team's policy-/decision-maker, with the aim to respond to their evidence needs – and to submit to CIHR at the end-of-grant stage. The brief template comprised of instructions, guiding prompts and sections inquiring about: the project's key message; the key research issue; methods/approach; research findings; and next steps - implications for policy and practice.

Contact Us

For more information about the Quadruple Aim and Equity Grants, please visit the funding opportunity, the funded projects or contact the CIHR-IHSPR team: Dr. Jessica Nadigel, Associate Scientific Director (jnadigel.ihspr@ices.on.ca) and Dr. Bahar Kasaai, Lead, Research Impact & Strategic Initiatives (bkasaai.ihspr@ices.on.ca).

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Evidence Briefs

EVIDENCE BRIEF
Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Is Cancer Screening Equitably Accessible in Ontario?

Lead researcher: Shehzad Ali, Western University
Lead knowledge user: Suzanne Brio , Senior Policy and Program Advisor, Ontario Ministry of Health
Team members: Sisira Sarma, Ava John-Baptiste, Zhe Li
Type of project: Evaluation (knowledge creation)
Research area studied: Integrating upstream prevention within health care delivery settings (SDoH)
Additional research area/pool: Not applicable
Keywords: cancer screening; health equity; indicators; performance monitoring; preventative services

KEY MESSAGES

- Between 2011 and 2021, the rate of cancer screening in Ontario increased from 54% to 62%. However, this remains below the average rate.
- There are socioeconomic disparities in cancer screening with rates being lower in those with lower deprivation than those with higher deprivation.
- There are socioeconomic inequities within and between Public Health Units (PHUs) and Local Health Integration Networks (LHINs).
- We have developed inequity metrics to allow decision-maker to monitor inequity in cancer screening over time.

What is the issue studied and why does this matter?

Preventative cancer screening programs have been implemented in Ontario. However, utilization of these screening programs is not equally distributed due to certain socioeconomic groups facing barriers in accessing healthcare services. Inequities in healthcare utilization can lead to disparities in health outcomes, affecting the overall population health. Policy and decision-makers require evidence to inform strategies that advance health equity, particularly focusing on patient experience and population health. Our project aimed to address these needs by considering social determinants of health, recognizing that factors such as income, education, and ethnicity can influence uptake of cancer screening programs.

What approach was taken?

The aim of this project was to quantify socioeconomic inequity in utilization of screening for colorectal, breast and cervical cancers in Ontario. We used population-based study design using administrative data, including Ontario Health Insurance Plan, Ontario Breast Screening Program, Ontario Cancer Registry and Registered Persons Database, to estimate screening rates in eligible adults. Socioeconomic status was based on neighborhood deprivation, measured by Ontario Marginalization Index (ONMARG) which includes residential instability, material deprivation, dependency, and ethnic concentration. Fractional regression analysis was used to estimate slope and relative indices of inequality at the level of Public Health Units.

What are the key research findings?

In Ontario, the rate of colorectal cancer screening increased from 54% in 2011-12 to 62% in 2020-21. Deprivation level of DAs was negatively associated with rate of screening. In 2010-11, DAs in the most deprived decile had a screening rate of 43% compared to 63% in the least deprived decile. In 2020-21, these rates increased to 53% in the most deprived decile and 71% in the least deprived decile. Within each PHU geography, colorectal screening had a negative gradient (i.e. SII and RII), i.e. more deprived DAs within each PHU had lower rates of screening than less deprived DAs. Significant variation in the gradient was observed across PHU. Similar results for found in the analysis of Local Health Integration Networks (LHINs), i.e. deprived DAs within each LHIN boundary had lower rates of colorectal cancer screening. Proportion of females within a DA was associated with higher screening rate for colorectal cancer. However, age was not found to be a statistically significant predictor. Analysis of breast and cervical and longitudinal trends is ongoing and will be reported in the conference.

To our knowledge, this is the first comprehensive analysis of inequity in cancer screening at the level of PHU and LHIN in Ontario. These inequity metrics, along with average rates, provide actionable intelligence at the level of decision-maker. While average screening rates are frequently reported, to our knowledge, there are no routine indicators to monitor inequities within and between decision-making units (e.g. PHUs). The metrics produced by our study can be used to monitor utilization of screening over time, as well as for comparative performance monitoring across decision-makers (e.g. PHUs). Next steps include development of equity performance dashboards and identifying barriers and facilitators to reduce inequities in deprived neighborhoods.

NEXT STEPS - Implications for policy and practice

This project holds significant implications for Canadian healthcare policy and practice. It quantifies cancer screening inequities, aiding policymaking aligned with the Quadruple Aim's goals. Tracking screening trends informs evidence-based decisions, empowering providers and enhancing patient experience.

Our research underscores proactive equity-monitoring's importance, reducing screening disparities for improved population health. Its adaptability supports healthcare system enhancement in line with the Quadruple Aim's adaptability goal.

Additionally, the project's methodology and tools offer a transferable framework for equity improvement across Canada. Policymakers and practitioners can adapt and implement similar strategies to address disparities and advance the Quadruple Aim.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: CONNECTING FAMILES: An internal pilot study for a randomized trial aimed at evaluating primary care poverty screening and financial support navigation for families of young children

Lead researcher: Imaan Bayoumi , Cornelia Borkhoff
Lead knowledge user: Imaan Bayoumi , Health care practitioner
Team members: Patricia Parkin, Michelle Mitchell, Maria Sherwood, Fariha Tabassum, Charlie Keown-Stoneman, Catherine Birken, Jonathan Maguire, Eva Purkey, Gary Bloch, Michele Cole, Shannon Weir, Alison Meserve, Sarah Carsely, Peter Wong, Meta van den Heuvel,
Type of project: Evaluation (knowledge creation)
Research area studied: Integrating upstream prevention within health care delivery settings (SDoH)
For more information, please contact Michelle Mitchell michelle.mitchell@sickkids.ca
Keywords*:* poverty, primary care, navigation, children, families

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- *Demonstrating feasibility of rigorously testing a poverty reduction intervention aimed at low income families of young children in primary care settings. We have demonstrated feasibility of enrolling families experiencing financial strain and retention rates exceed 95% to date.*

What is the issue studied and why does this matter?

- *Poverty is common (affecting about 20% of Canadian children) and has a profound negative impact on parent and child health. Many low income families may not be receiving all the social benefits for which they are eligible. There are calls for primary care providers to screen for poverty by asking families, "Do you ever have difficulty making ends meet at the end of the month?" and to intervene if material hardship is identified. But it is not known if financial support navigation for families of young children can improve health outcomes in parents and children.*
- *Our study will pilot test whether a Community Support Worker who helps families with young children navigate the social service system by reviewing social needs (like food, housing or energy insecurity) and income supports can reduce parenting stress by increasing family income, and improve child development. The Community Support Worker (CSW) will help parents complete income tax returns, apply for benefits and community supports for which they are eligible.*
- *Our study is underway in primary care practices in Kingston, Ontario. Results from this pilot study will be used to plan the full study which will help health care providers and policy makers understand whether Community Support Workers are an effective way to integrate the health and social service systems to improve parent and child health.*

What approach was taken?

We are conducting an internal pilot study for a randomized controlled trial. Intervention group participants have a structured review of their income supports with a trained CSW. The CSW works with families to meet their goals, and uses a structured approach to identify financial needs and benefits for which the family is eligible, and assists them in connecting to resources and benefits.

Participants in both groups receive a written summary of available resources

What are the key research findings?

Recruitment is underway and the pilot study is continuing. We are recruiting from 2 large Family Health Teams including a total of 39 family physicians. After sending study information to 940 families with children meeting age criteria (younger than 3 years), of which 87 met the poverty screening criteria. To date, 50 participants have consented to participate. Data have been collected for 46 participants at baseline, 34 participants at 6 month follow up and 9 participants at 12 month follow up. Three individuals initially consented but could not be reached for baseline data collection. Two participants were lost to follow up at 6 months and to date no participants have been lost to follow up at 12 months. Study retention exceeds our target of 80%.

NEXT STEPS - Implications for policy and practice

Our findings to date suggest that it is feasible and important to complete a full trial, as planned. As we complete the 6 month data collection, we will report randomization rate, retention and completion rate of the internal pilot, and use parameter estimates from the internal pilot to inform sample size for the full trial.

Upon completion, the full trial will have important implications for policy and practice on the role of a Community Support Worker in Family Health Teams for supporting low income families with young children. This poverty reduction intervention is a promising innovation which has potential to improve health equity for low income families including children and parents.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE [Evaluation of a new model of musculoskeletal health pathways]

Lead researcher: Marie Beauséjour
Lead knowledge user: Carine Sauvé, Healthcare administrator
Team members: Helen-Maria Vasiliadis, Mylaine Breton, Jean-François Clément, Debbie Feldman, François Desmeules, Éric Tchouaket Nguemeleu, Angel Ruiz, Marie-Lyne Nault, Jessica Spagnolo, Sewanou Hermann Honfo, Martin Sasseville, Cloé Rodrigue, Jean Lacroix.
Type of project: Evaluation (knowledge creation)
Research area studied: Integration of care
Additional research area/pool: CIHR - Institute for Musculoskeletal Health and Arthritis (IMHA)
For more information, please contact Marie Beauséjour: marie.beausejour@usherbrooke.ca
Keywords*:* access to care, musculoskeletal disorders, integration of care, interprofessional team

KEY MESSAGES

- **Our research advanced the Quadruple Aim and health equity by:**
- Outlining the health needs of a patient population that does not have access to timely services (populations);
- Proposing an evaluation protocol for a Quebec Ministry of Health and Social Services' pilot project (evidence for decision-makers);
- Evaluating changes in health, function, pain, quality of life and patient satisfaction associated with the implementation of a primary care rehabilitation service offer in the public system (patients, populations, researchers);
- Collecting data to identify the patient profiles for whom the new services are most beneficial (patients, populations, researchers, decision-makers).

What is the issue studied and why does this matter?

Musculoskeletal (MSK) disorders represent the most important cause of years lived with a disability worldwide. In Canada, they affect 11M people. MSK disorders induce a significant demand for care that our health care systems are struggling to meet. There are long wait times for outpatient specialty consultations in Canada, and prompt intervention by nonphysician clinicians is subject to financial and other social status barriers. To address these challenges, the Quebec Ministry of Health and Social Services (QMHSS) is implementing alternative MSK health services in a pilot project: **innovative public regional MSK health centers** (Cliniques MSQ). Intersectoral teams of professionals with an expertise in MSK health are performing complete clinical assessment of referred patients and are initiating conservative treatments. In conjunction with the QMHSS who needs evidence about the feasibility, relevance, and impact of the Cliniques MSQ, our research project seeks to address these questions:

- What are the effects of Cliniques MSQ on patient-reported outcomes and on the patient-reported experience with care?
- What are the effects of the implementation of the Cliniques MSQ on health services utilization and estimated costs of care pathways?
- What are the perceptions of referring physicians on the usefulness, relevance, and satisfaction with Cliniques MSQ?

What approach was taken?

Cliniques MSK pilot project was initiated by the QMHSS with the support of medical specialists, primary care physicians, physical and occupational therapists who contributed to the design of these new services in primary care rehabilitation.

The evaluation team designed a two-phase research protocol:

1. A prospective comparative study to evaluate the effects of implementing the Cliniques MSQ on health, function, services utilization, and costs (in comparison with standard care).
2. A longitudinal observational design to study changes in PROMs and PREMs in consecutively referred Cliniques MSQ users at 6-month and 12-month follow-up.

Within the evaluation team, participating QMHSS representatives, researchers, clinicians, managers, and patient partners contributed in the selection of the assessment tools (to serve both patient evaluation and research objectives) as well as of the modalities for data collection.

What are the key research findings?

Implementing rehabilitation services within the primary care setting, such as in the Cliniques MSQ pilot project, enables the integration of evidence-based practices and guidelines. The development of this new care model encourages the creation of standardized protocols for patient clinical evaluation and empowers service providers to tailor treatment plans according to an individual's specific needs and prognosis. Following assessment, the new clinic guides patients towards either self-management, physiotherapy treatments, or care delivered by the interprofessional team.

The evaluation team is proposing a research protocol that considers the four objectives of the QA&E framework. The primary outcomes under investigation are related to enhancing the health of the population. The study protocol includes a comprehensive description of the baseline care needs and the follow-up methods for assessing changes in function, pain, quality of life, and overall health. These assessments are conducted using validated Patient-Reported Outcome Measures (PROMs) and are compared to the standard of care (waiting to see a medical specialist) at 6 and 12 months.

In our study sample, a significant number of patients are facing delays in seeing a medical specialist that exceed the targeted waiting time. Patients waiting for specialist care consultations frequently encounter substantial and at times persistent disabilities that restrict their daily activities, thereby significantly affecting their quality of life. This situation often leads them to seek care from multiple uncoordinated providers.

The results of this study will be crucial for decision-makers to determine whether the healthcare system is delivering timely and appropriate care in accordance with patients' levels of need. The musculoskeletal (MSK) health community is keen to assess whether this new model of public (universal) integrated interprofessional services aligns with the objectives for MSK patients. We anticipate that this project will address the evidence requirements of decision-makers and provide valuable insights to guide decisions and actions concerning the organization and delivery of MSK services across a continuum of care, from the community to specialized care.

NEXT STEPS - Implications for policy and practice

This project will reinforce the collaboration links within the MSK health community as well as the linkage with the QMHSS, health professionals and managers to pursue an effectiveness-implementation hybrid trial following this study. Indeed, this Catalyst grant will lead to further research: the next step will be to directly compare Cliniques MSQ outcomes with those from the standard of care in a randomized controlled trial. In parallel, implementation analysis will be expanded to prepare the scaling up of the Cliniques MSQ in the whole province.

In order to further the understanding of the stakeholders' perceptions on Clinique MSQ, deliberative workshops (presentation of the study results and discussion about results interpretation) will be conducted with participants from each of these groups: primary care physicians, medical specialists, Cliniques MSQ staff, representatives of QHMSS, regional health authorities, and patient associations/partners.

There may be population health impacts for other patients/populations than those studied in the project since alternative management and avoiding some of the referrals to specialty can improve availability for care. Our findings will not only be relevant to health regions implementing the services, but also may help guide the evaluation of other meso-level innovations involving changes in the care delivery patterns that requires strong adoption by providers and health authorities. Although this study is conducted in Quebec, it could be useful for other contexts in Canada which are contemplating to optimize the health care pathways in MSK health.

Three (3) non-academic outputs resulting from this work

- Participation in a community of practice involving all pilot project's stakeholders
- Training of highly qualified staff and hiring of patient partners for supporting regional health care initiatives
- QMHSS submission of a pilot scale-up project is underway, and a provincial rollout plan is in preparation.

PROJECT TITLE: Choosing the right model of care together: Shared decision making to improve equitable implementation of virtual versus in-person care for youth with chronic pain

Lead researcher: Katie Birnie, PhD RPsych, University of Calgary
Lead knowledge user: Tracy Wasylak , Decision maker, Strategic Clinical Networks at Alberta Health Services
Team members (alphabetical): Prabjit Ajrawat, Zahra Alidina, Gillian Backlin, Fiona Campbell, Javed Gill, Julia Hanigsberg, Isabel Jordan, Vina Mohabir, Nivez Rasic, Katherine Wynne-Edwards, Krista Baerg, Diane Lorenzetti, Nicole Mackenzie, Mica Marbil, Melanie Noel, Samantha Noyek, Tim Oberlander, Sabine Soltani, Jennifer Stinson, Karine Toupin April, Fiona Webster

Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Integration of care
Additional research area/pool: CIHR - Institute for Musculoskeletal Health and Arthritis (IMHA)
For more information, please contact: kathryn.birnie@ucalgary.ca
Keywords: virtual care, youth, chronic pain, shared decision-making, health equity

KEY MESSAGES

- More evidence is needed to support youth with chronic pain and health professionals in deciding when and for whom virtual versus in-person care is most effective, especially for equity-seeking populations.
- Currently, decisions for in-person versus virtual care for youth with chronic pain are primarily made by families, for new patients, and based on patient values/preferences and/or type of treatment. These decisions are not based on evidence and are rarely evaluated.

What is the issue studied and why does this matter?

Pediatric chronic pain (i.e., pain lasting ≥3 months) affects 1 in 5 youth, and is associated with several deleterious outcomes, including pain, mental health concerns, substance use, and socioeconomic disparities into adulthood. The COVID-19 pandemic required a pivot to increased virtual care delivery; however, no current guidelines exist for virtual pediatric chronic pain care. Little research has examined whether virtual care is as effective as in-person treatment. Moreover, equity-seeking groups, who are disproportionately impacted by chronic pain, may face greater systemic barriers to benefit from virtual care (i.e., Black youth; youth with complex medical needs / neurodevelopmental disabilities, youth living in rural areas). Reducing disparities in access and delivery of pediatric chronic pain treatment is a Top 10 patient-identified priority. Youth with chronic pain and their families must have a voice in their own care. Shared decision-making is a collaborative approach between patients, their families, and health professionals that incorporates evidence, values, and preferences to guide treatment decisions.

What approach was taken?

Following the Expedited Ottawa Process for developing quality decision aids, we: (1) conducted a systematic review of RCTs examining the effectiveness of in-person vs virtually-delivered interventions for pediatric chronic pain; (2) surveyed 102 international pediatric chronic clinics about their current practices for selecting in-person vs virtual care for pediatric chronic pain management. We are now: (3) interviewing youth, parents, and health professional to establish the critical features and format of the decision aid for in-person vs virtual care; and (4) using that to create and establish acceptability of a prototype decision aid.

What are the key research findings?

Phase 1: Five databases were searched October 2022 to identify randomized controlled trials that compare single/multimodal interventions for pediatric chronic pain delivered in-person versus virtually. Of 3638 unique studies identified through database (i.e., CINAHL, EMBASE, MEDLINE, APA PsycINFO, and Web of Science) and other searching, only two were eligible for inclusion. Both RCTs compared psychological interventions delivered virtually versus in-person for youth with chronic pain, and showed comparable efficacy across modalities, of which 72-84% of participants were white.

Phase 2: Data from 68 respondents (n=35; 51.5% physicians) from 13 countries (n=24; 64.9% United States), revealed video conference (*n* = 28, 75.7%), email (*n* = 23, 62.2%), and telephone (*n* = 22, 59.5%) as most common virtual care interactions with patients and families. Overall, virtual care was <25% of chronic pain treatment. Decisions regarding virtual care were most often made when scheduling follow-up (*n* = 29, 78.4%) versus new appointments. Families were reported to play the largest role relative to youth, health professionals, and institutional policy for in-person versus virtual care decision-making. The factors most ranked within the top 3 for that treatment modality decision were new referrals, patient values/preferences, and type of treatment (i.e., physical therapy, psychology, etc.). Only four respondents endorsed treatment evidence as helpful for deciding on in-person versus virtual care. Most clinics (*n* = 30, 81.1%) did *not* evaluate their in-person versus virtual care treatment decisions.

Phases 3 & 4 are underway and will identify key features and a draft prototype of the decision aid.

NEXT STEPS - Implications for policy and practice

- Minimal research has compared the effectiveness of virtual versus in-person care for any treatment modality (i.e., pharmacological, psychological, physical, interdisciplinary) for pediatric chronic pain.
- Decisions about in-person vs virtual care for are currently made primarily by families (versus youth, health professionals, or institutional policy), by appointment type (new referrals preferred in person), patient values/preferences, and treatment modality over institutional policy.
- Evidence of treatment effectiveness is not a top factor in the decision for in-person versus virtual care for pediatric chronic pain, and this decision is rarely evaluated. Institutional and systems-level supports are needed to evaluate shared decision-making about care delivery and its impact on patient and health professionals, youth health outcomes, and health system value for money.
- Minimal evidence includes or addresses equity-seeking groups who are disproportionately impacted by pain and have greater issues accessing care (e.g., Black youth, youth with complex medical needs/neurodevelopmental disabilities).
- Next steps will seek input from equity-seeking groups to develop a decision aid prototype. This will support shared decision-making at multidisciplinary clinics serving youth with chronic pain about when in-person versus virtual care is best.

OUTPUTS & PRODUCTS

Output 1: Systematic review - Mackenzie et al. (under review)
Output 2: Survey findings – Marbil et al. (in preparation)
Output 3: Prototype Decision Aid – in development (expected early 2024 on www.partneringforpain.com)

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: Seniors Fall Prevention Prototype

Lead researcher: Craig Mitton
Lead knowledge user: Sandra Bjola , Decision maker, Healthcare administrator
Team members:
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Integrating upstream prevention within health care delivery settings (SDoH)
Additional research area/pool: Not applicable
For more information, please contact Craig Mitton, UBC, Craig.Mitton@ubc.ca
Keywords*:* priority setting, upstream investment, resource re-allocation

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Revealing the lack of published literature to guide decision makers in how to reallocate resources from high cost downstream health care services, to potentially lower cost, high impact prevention; and
- Offering health care policy makers and administrators, a tested methodology to make investments in evidenced based preventive programs, using local data to define populations at risk, and modelling techniques to project potential health care services avoided.
- Considering how to use equity as an important criteria alongside other key objectives when making resource allocation decisions in order to improve health gain overall.

What is the issue studied and why does this matter?

The issue we studied was how to design an accelerated, repeatable decision method in support of reallocating resources from high cost health care services such as acute and long term care, to primary or secondary prevention activities, with health equity being a central tenant in decision making. Assuming a resource constrained system, the case to reallocate resources from acute and long term care to prevention, must overcome factors keeping the system in crisis response.

In this project, we focused the Quadruple Aim goals, (2) Improving the health of populations and (3) reducing the per capital cost of health care. While patient and provider experience will be key considerations in the design and implementation of the intervention, this project focused on the selection of the preventive intervention for a population and how to assess the potential health care operations benefits through downstream service use avoided.

This decision pilot focused on people at risk of community falls to align with Ministry of Health and Island Health improvement priorities. At the time of writing, five population segments have been identified as being at risk of falls. Consideration of health equity are anticipated in the coming months, as an operational model is developed for each of the interventions and population segments, and final decisions are made on allocating limited resources using an explicit, evidence based, data informed methodology.

What approach was taken?

A community of practice (CoP) was formed across multiple organizations in BC and across Canada including health care providers, prevention practitioners, health care administrators, researchers, data analysts, and policy makers.

A realist review of evidence was conducted to identify known factors of success in the reallocation of resources. A proof of concept decision prototype was then initiated using community falls as the focus of prevention, following consideration of multiple options, against criteria proposed by the CoP.

The prototype was advanced within Island Health with the inclusion of injury prevention and clinical data modelling expertise to the CoP, who then assessed how best to implement evidence based interventions within a risk stratified population. Collaboration with Island Health Finance and Budgets then generated a theoretical approach to resource reallocation over several years.

What are the key research findings?

- No previous ‘off the shelf’ framework for re-allocating resources from downstream interventions to upstream activities was identified through an extensive literature review
- A multi-disciplinary community of practice was able to come together to provide insight on development of a values-based process for priority setting and resource allocation
- Drawing on existing structures within the health authority, clinical leaders and decision makers were able to identify key strategies within a falls prevention program and apply a framework for decision making around allocating scarce health care resources. Dedicated and expert resources were critical to enabling the design and implementation of the methodology.
- Key data inputs were developed through extensive analytic work to highlight the impact of upstream investment on downstream utilization, thereby directly informing decisions in the resource allocation process
- Barriers/ challenges to reallocation of resources may be overcome by taking more upfront time to ensure alignment of key interest holders to the objectives of reallocation (shared interest), , with strong evidence of the potential cost avoided and accountability mechanisms to mitigate the risk of reallocating resources from “downstream to upstream” services.
- This project has produced a repeatable, data informed process for reallocating resources from downstream interventions to upstream activities, and within this pioneered a set of locally driven data analytic processes to directly inform these decisions
- Decision makers and clinical leaders at the health authority/ health service delivery organization level should take note of this work that should be replicable in other Canadian settings where there is a commitment to investment in upstream activities.

NEXT STEPS - Implications for policy and practice

- Key implications of this research?
    - A novel framework for reallocation of resources from downstream interventions to upstream activities was developed and implemented as a case study in Island Health
- What are the next steps for policy/or practice?
    - Final decisions will be made on the upstream strategies under consideration including endorsement from the Senior Executive team, and detailed plan financial plan.
- How does this impact how Canadian Healthcare systems and services are organized, delivered, governed, held accountable, financed, and or funded
    - Having an explicit, data driven approach to reallocation will foster upstream investment, a truly challenging task; in essence, this work provides a key tool in the decision maker toolkit around setting priorities and allocating resources
- How does this impact the Quadruple aim goals?
    - Quadruple aim goals can be directly incorporated into decision criteria in an explicit priority setting process, so the tool (or decision framework) is a mechanism for applying these goals
- How does this impact health equity?
    - Similarly, equity is seen as a key objective and can be directly incorporated into the decision framework as a criteria up on which re-allocation strategies are considered
- How is this applicable/transferrable to others?
    - Every health service delivery organization in Canada has a limited budget and most organizations underspend on upstream health prevention/ promotion activities; the process developed through this work can be used in other organizations to support their resource reallocation decisions

SYNTHÈSE EN BREF

Subvention Catalyseur : Quatre objectifs et équité en santé (2022-2023)

TITRE DU PROJET : Évaluation de l'implantation des guichets d'accès première ligne pour les patients orphelins en Montérégie et ses impacts

Chercheur principal : Mylaine Breton, Université de Sherbrooke – campus Longueuil
Utilisateur des connaissances principal : Carine Sauvé, Administrateur des soins de santé
Membres de l'équipe : Maude Laberge, Marie Beauséjour, Isabelle Gaboury, Catherine Lamoureux-Lamarche, Aude Motulsky, Marie-Pascale Pomey, Annie Talbot, Josée Arsenault, Mélanie Lapointe, Michel Brodeur
Type de projet : Subventions d'évaluation (création des connaissances)
Domaine d'étude : Soins de première ligne, soins à domicile et soins communautaires
Autre domaine de recherche/classe : IRSC - Institut de la santé publique et des populations (ISPS)

PRINCIPAUX MESSAGES

Notre recherche a fait avancer les quatre objectifs et l'équité en santé comme suit :

- Satisfaction professionnels : accès plus rapide aux services de santé pour les patients orphelins et l'évaluation par les GAP (pertinence) permet une réponse rapide selon leurs besoins.
- Expérience patients : beaucoup d'irritants pour accéder au GAP et l'expérience des patients varie. Un questionnaire sera envoyé aux patients à l'automne 2023 pour apprécier leur expérience.
- Efficience : Investissement important dans les GAP (ressources humaines, rémunération médicale), 60% terminent en consultations médicales.
- Santé populations : Amélioration de l'accès aux services de première ligne pour les patients orphelins (tests de prévention, problèmes ponctuels, gestion des maladies chroniques).
- Équité : Crée trois clientèles différentes (enjeux équité), différence dans les profils des personnes qui reçoivent une consultation médicale entre les 3 GAP de la Montérégie.

Quelle est la question étudiée et pourquoi est-elle importante?

- La question principale de ce projet de recherche était d'évaluer l'implantation et les retombées (pour les patients, les équipes cliniques, l'organisation et le MSSS) des GAP sur le territoire de la Montérégie.
- Le projet de recherche visait principalement l'objectif concernant l'amélioration de la santé de la population, car les enjeux d'accès aux services de première ligne ont des répercussions sur la santé des populations.
- La question étudiée est donc importante, car aucune étude n'a évalué les bénéfices de cette innovation et comment elle pourrait être améliorée, même si celle-ci est maintenant implantée dans toutes les régions au Québec avec des variations importantes.
- Cette étude permet de favoriser l'équité en santé en identifiant des différences territoriales dans l'orientation des patients par le GAP vers différentes ressources (ex. rendez-vous médical, travailleur social, ressources dans la communauté), l'offre médicale des cliniques, les services disponibles/trajectoires développées, les innovations GAP mises en place pour favoriser l'accès aux services à la population)

Quelle a été l'approche adoptée?

- Méthode mixte avec 3 sources de données complémentaires (entrevues semi-dirigées, données clinico-administratives, questionnaire sur l'expérience des patients (à venir A2023))
- Parties prenantes : ce projet a été conduit en étroit partenariat avec la direction de l'accès de la Montérégie (C. Sauvé) qui a un mandat régional et les équipes de direction des GAP. Le questionnaire patient a été validé avec un organisme communautaire et des patients. Plus de 20 entrevues avec des acteurs impliqués dans l'implantation du GAP (gestionnaires, professionnels GAP, professionnels de la santé, patients) ont été effectuées jusqu'à maintenant.

Quelles sont les principales conclusions de la recherche?

- Les GAP ont été mis en place à l'échelle de la province sans l'appui de données probantes.
- L'implantation de ce modèle constitue une bonne idée à un coût très élevé dans un contexte particulier où les délais d'attente pour l'affiliation à un médecin sont de plusieurs années.
- Même si toutes les parties prenantes s'entendent pour dire que la mise en place des GAP est une bonne idée, leur implantation n'a pas été planifiée. Le fonctionnement des GAP est très variable et il y a un réel besoin de standardiser les processus et les fonctionnements.
- L'implantation des GAP a permis de créer une vraie offre médicale qui n'existait pas auparavant en première ligne pour les patients orphelins.
- Des travaux sont en cours dans les GAP pour développer des algorithmes et arbres de décision pour orienter les patients orphelins qui contactent le GAP.
- Plusieurs innovations ont été mises en place dans les GAP de la Montérégie pour répondre aux besoins du milieu : clinique mobile, trajectoires/formulaires pour les pharmacies communautaires, trajectoires développées pour certaines clientèles, GAP décentralisé.
- Effets pervers observés : L'implantation des GAP crée 3 catégories de patients (patients inscrits à un médecin, patients inscrits collectifs, patients orphelins inscrits), ce qui engendre des enjeux d'équité dans l'accès aux services de première ligne.
- Enjeux clés identifiés : trajectoires sous-développées, plusieurs trajectoires à développer (ex. musculo-squelettique, santé mentale), manque de personnel, offre médicale non régulée.
- Utilisateurs de connaissances concernés : gestionnaires, patients, professionnels de la santé, professionnels des GAP, décideurs politiques.

PROCHAINES ÉTAPES – Implications pour la politique et la pratique

- Implication pour la recherche :
  - Le questionnaire patient qui sera prochainement déployé sera, à notre connaissance, un des premiers à évaluer l'expérience des patients orphelins.
  - Une région s'est ajoutée au projet, car les gestionnaires de ce CIUSSS trouvaient important d'avoir des données probantes sur l'implantation de leur GAP.
  - Ce projet a mis de l'avant les enjeux d'accès aux données dans un contexte de recherche et les délais administratifs irréalistes pour un projet d'une année.
- Implications politiques et pour la pratique :
  - Repérer et identifier les innovations locales très variées pour les diffuser et les promouvoir, ceci pourrait inspirer d'autres régions à mettre en place des innovations similaires.
  - Partager les ingrédients clés pour assurer le succès de l'implantation :
    - Recommandations de ce qui fonctionne bien.
    - Facteurs à succès et les enjeux rencontrés pour éviter de réinventer la roue.
  - Recommandation pour le futur : standardisation des processus (ex. algorithme orientation) et de la formation.

- L'implantation des GAP agit présentement comme un ''pansement'' pour améliorer l'accès aux services de première ligne pour les patients orphelins, c'est-à-dire, beaucoup de ressources ont été investies pour offrir des services temporaires qui ne permettent pas une affiliation à un groupe/professionnel de la santé qui est la finalité désirée (continuité des soins).

Répercussion sur les quatre objectifs

- Satisfaction des patients et des professionnels : accès facilité et rapide aux services de première ligne selon leurs besoins. Plusieurs irritants pour accéder aux services.
- Santé des populations : Amélioration de l'accès à la première ligne pour les patients orphelins (tests de prévention, problèmes ponctuels, gestion des maladies chroniques).
- Efficience : Investissements importants pour des services temporaires qui ne permettent pas l'affiliation à un groupe/professionnel de la santé.

Répercussion sur l'équité en santé

- 3 catégories de patients ont été créées (patients inscrits à un médecin, patients orphelins inscrits en collectif, patients orphelins non-inscrits) avec un accès variable aux services de première ligne.

Applicabilité et transférabilité à d'autres sur le terrain, ou dans l'ensemble des administrations canadiennes

- L'étude a été conduite en Montérégie, mais certains résultats et recommandations pourraient être applicables/transférables à d'autres régions. Les résultats pourraient également informer une autre province qui veut implanter une innovation similaire.

RÉSULTATS ET PRODUITS (facultatif)

Résultat 1 : Protocole de recherche publié
Résultat 2 : Article soumis sur les caractéristiques associées au fait de recevoir un rendez-vous médical chez la population pédiatrique

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Can virtual psychological interventions for pain optimize primary care physical therapy?

Lead researcher: Junie Carrière, Université de Sherbrooke
Lead knowledge user: Guillaume Léonard , Health care practitioner, Joanie Rollin, Individual in a patient group
Team members: Marie-France Coutu, Marie-José Durand, Martine Bordeleau, Beth Darnall
Type of project: Evaluation (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: CMA Foundation (virtual care)
For more information, please contact Marie-Pier Royer, Marie-Pier.Royer@USherbrooke.ca
Keywords*:* Virtual care, pain; psychological intervention; primary care, physical therapy

KEY MESSAGES

- **Our research advanced the Quadruple Aim and health equity by:**
- Providing a brief and virtual psychological pain treatment that equips patients with pain management tools and expands access to care;
- Adapting Empowered Relief for French-Canadians and giving them rapid access to evidence-based psychological pain treatments;
- Meeting the needs of physical therapists who are limited in time and training, and require complementary treatments to address the psychological aspects of pain;
- Offering a low-cost virtual treatment that improves value for money by eliminating the need for in-person visits and associated costs (infrastructure, travel, etc.)

What is the issue studied and why does this matter?

Several barriers prevent broad access to psychological treatments for pain, which leave many people untreated and perpetuates health disparities. This project targeted the following key goals of the Quadruple Aim: 1) improving the patient experience of care by offering an innovative virtual pain treatment in primary care and eliminating many barriers to traditional pain care (multiple visits, burdensome travel, long waitlists); 2) improving the health of populations by preventing the development of chronic pain and increasing equity in access to treatment (lack of availability in remote areas, lack of trained clinicians, out-of-pocket costs, access to evidence-based care in French, losing patients to long waitlists); 3) improving the health care provider experience by meeting the needs of physical therapists with a complementary, low-burden, low-cost virtual intervention to optimize treatments; 4) improving value for money by eliminating the need for in-person visits and related infrastructure costs, and preventing prolonged recovery trajectories. One of the important goals of this project was to expand access to care in remote areas, therefore we prioritized recruitment outside of the metropolitan areas. To date, we have reached a very diverse sample from 11 areas outside of Montreal, many of which experience lack of access to care.

What approach was taken?

The French-Canadian adaptation of Empowered Relief is unique and transformative because it 1) required only one, 2-hour class; 2) was offered virtually 3) was adapted to French-Canadian French; 4) was delivered at low-cost; 5) worked alongside physical therapy treatment plans; and 6) was delivered by a trained physical therapist (does not require a psychologist). This innovative approach to psychological pain care allowed for rapid access to treatment, with the goal of providing psychological tools *before* pain became a problem. Our team consisted of researchers and knowledge users, including a physical therapist and a patient partner. All team members participated in meetings to identify barriers to implementation and content appropriateness.

What are the key research findings?

This project provides preliminary evidence that French-Canadian Empowered Relief is an acceptable and feasible complementary virtual treatment to primary care physical therapy. At the time of this report, our data collection is nearing 70% complete. Preliminary data reveal remarkably high acceptability rates in the French-Canadian Empowered Relief classes, which provides support for the continuation of the virtual format to enhance patients' engagement in early psychological pain care. Feasibility data also identified the main challenges during pilot testing, which will serve as learning points for the future widespread implementation of Empowered Relief or a blueprint for similar healthcare initiatives. The identified challenges relate mainly to recruitment difficulties and minor technological difficulties. Although we cannot yet evaluate the efficacy of Empowered Relief, our preliminary analyses reveal significant reductions in pain intensity, physical and mental health outcomes at 4-week follow-up.

The key knowledge users impacted by the findings are clinicians (physical therapists) and patients. Our findings highlight the need for increasing clinician's education on the importance of addressing the psychological aspects of pain and providing complementary treatments *early* in the rehabilitation process to help make physical treatments work better. Most of the patients who participated in Empowered Relief appreciated the intervention and reported improvements in several pain-related outcomes at 4-week follow-up. In this sense, the findings highlight how virtual Empowered Relief can work alongside physical therapy to rapidly equip patients with tools to better manage their pain. Future research may develop an on-demand version of Empowered Relief to further expand accessibility to more people for whom live classes are infeasible.

NEXT STEPS - Implications for policy and practice

The findings from this pilot study have the potential to transform how psychological pain care is delivered alongside primary care physical therapy. Brief, virtual and accessible psychological pain treatments may be increasingly important in a post-pandemic context where fewer resources exist, treatment wait times are extended and patients may experience compounded stress and pain. The results of this study suggest that virtual psychological treatments, such as Empowered Relief, are an acceptable and feasible option for healthcare systems to circumvent many of the barriers to related to traditional psychological pain care. The findings of this study have numerous implications for policy and practice:

- Healthcare organizations may need to develop and invest in virtual interventions such as Empowered Relief, to ensure equitable access to psychological pain care, especially for remote populations.
- Educational programs should focus on the importance of using virtual psychological pain care early in the treatment process to optimize treatment outcomes, for example, in primary care physical therapy.
- Regulatory bodies may consider integrating virtual psychological pain care, such as Empowered Relief, as part of standard care to optimize rehabilitation and reduce healthcare costs.
- Policy makers and researchers may use the findings of this study as a blueprint for future adaptations of virtual interventions to new contexts, cultures, and languages to address the diverse needs of the population.
- Healthcare organizations and insurance bodies should identify barriers and facilitators to integrating virtual psychological pain care with traditional services to provide a continuum of care, as well as reimbursement policies for virtual services.

This project has sparked two noteworthy collaborations: 1) Adapting French-Canadian Empowered Relief for veterans, and 2) Implementing French-Canadian Empowered Relief as standard care for pre-operative orthopedic patients.

OUTPUTS & PRODUCTS (optional)

Output 1: Collaboration sparked with Chronic Pain Center of Excellence for Canadian Veterans
Output 2: Collaboration sparked with orthopedic surgical team at Université de Sherbrooke
Output 3: Infographic being developed with Mayava (Mylène Choquette) for knowledge translation directed towards clinicians as knowledge users

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Impact of Paramedics Providing Care at Home program on equity of access to care: How does access to, and impact of, Paramedics Providing Palliative Care at Home vary across geographic, demographic and socio-economic sub-groups?

Lead researcher: Dr. Alix Carter, Nova Scotia Health Authority/Dalhousie University
Lead knowledge user: Dr. Andrew Travers , Decision maker, Healthcare administrator
Team members: Dr. Judah Goldstein, Michelle Harrison, Marianne Arab, Dr. Pantelis Andreou, Dr. George Kephart, Megan Carey, Jennie Helmer, Feddy Rybczyn, Dr. Shelley Crick, Dr. Andrew Travers
Type of project: Scale & spread (knowledge implementation)
Research area studied: Integration of care
Additional research area/pool: Not applicable
For more information, please contact Dr Alix Carter, alix.carter@novascotia.ca
Keywords*:* palliative care, paramedics, mobile integrated health, health services.

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Identifying reasons why people with equitable access to paramedics and palliative care do not have equitable outcomes in terms of remaining home and by identifying specific recommendations at the paramedic service, provincial government, palliative care program level as well as a broader call for action to health system leaders.
- This work impacts decision makers and ultimately patients through a deeper understanding of the impact of socioeconomics have on staying home with paramedic palliative support. This is of importance to scale and spread of paramedic palliative care model of care, and to broader conversations around equitable palliative care.

What is the issue studied and why does this matter?

- ***What is the issue?*** The issue is that despite equitable access to paramedic palliative support, not everyone has an equitable outcome of being able to stay home, and sociodemographic factors appear to play a role.
- ***Which key goals of the Quadruple Aim did you target?*** This program of research has shown better patient, caregiver, and provider/paramedic experience, as well as health system benefit. The current project focuses on equity.
- ***How did the work address health equity?*** This work looked at sociodemographic factors such as rurality, income, isolation/size of household, age, and their potential to impact the desired outcome of remaining home with paramedic palliative support. The outcome of this work was twofold: 1) To equip paramedics to refer or offer resources to equalize benefit to socio-demographically vulnerable populations, and 2) To focus investment by health system to address other identified barriers outside the control/scope of the paramedic service, informed by the findings.

What approach was taken?

A mixed methods approach was employed including quantitative data and a mailed patient/family survey in three Canadian provinces: Nova Scotia, British Columbia and Newfoundland & Labrador. Paramedic service data were linked to hospital data to determine frequency, patterns, and duration of the ED and inpatient admissions. Census data such as median family income, level of education, size of household was overlaid to explore the impact of socio-demographics on equitable access to palliative care at home. Themes and recommendations were developed by the team and through consultation with knowledge users, patient partners, and a national community of practice.

What are the key research findings?

- Remaining home for end of life is not equal for all people with the same access to paramedic palliative care. Access to caregivers is a concern especially if confined to bed. Rurality and finances are important barriers. Services are at capacity, access to primary care is lower, closure of emergency departments or delayed paramedics creates worry.
- Key knowledge users: Paramedic services, Department/Ministry of Health program directors, Palliative Care program leadership.

NEXT STEPS - Implications for policy and practice

- **Paramedic services** have a unique window into the home situation. Paramedics need to be enabled as a source of information to patients/families and also back to the health system.
- **Provincial government (department/ministry) directors** across health and community services need to create a connection point so that resources can be pooled into a complete package for the patient/family.
- **Palliative Care programs** have an opportunity to increase patient navigator impact, for example awareness of resources (e.g., income support, respite, accessing meals).
- **Health System leaders** need to address hospital crowding which has downstream impacts on access to emergency care. Primary care remains a significant issue.
- These recommendations focus on integration of services and optimal use of resources and scope of practice to increase equity in palliative care.
- These recommendations are broadly applicable across Canadian jurisdictions. They are drawn from 3 Canadian provinces, 2 of which are part of a broader national spread and scale collaboration and are informed by a national community of practice.

OUTPUTS & PRODUCTS

Output 1: This work has fed in to a national community of practice for Paramedics and Palliative Care which meets online every 2 months. These policy recommendations are reaching a national audience. -
Output 2: These findings have been discussed with the senior leadership of EHS Nova Scotia and are directly impacting practice in NS.
Output 3: A summary of these findings has been distributed to HealthCare Excellence Canada, the Canadian Partnership Against Cancer, study team members across the country for broad dissemination. -

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: Can Critical Health Humanities Inform Quadruple Aim Goals and Improve Health Equity in Canada?
Lead researcher: Sarah de Leeuw with Darian Goldin Stahl
Lead knowledge user: National Collaborating Centre for Indigenous Health (NCCIH); Association of Faculties of Medicine of Canada (AFMC); The Centre for Quality Improvement and Patient Safety (CQuIPS); Canadian Medical Association (CMA) Team members: Drs. Margo Greenwood (co-lead); Ayelet Kuper; Katrina Plamondon; Shane Neilson; Viviane Josewski

Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: The health care workforce
Additional research area/pool: Not applicable
For more information, please contact Lisa Striegler or Dr. Darian Goldin Stahl, https://healtharts.ca/
Keywords: Medical education; anti-colonialism; critical health humanities

KEY MESSAGES

- Our research advanced the Quadruple Aim and health equity by: collecting, documenting, and analyzing global evidence (in both French and English) about the potential of critical health humanities to destabilize medical students' ingrained biases, advance their critical self-reflective practice, grow their moral and ethical proficiencies, and build their empathy…which will make them more fluent in Quadruple Aim goals and improving health equity in Canada.
- Our research brought together teams of health, humanities, and medical learners and researchers to systematically scope and review 462 published studies, from 56+ countries, about criticality and anti-coloniality in medical and health humanities.
- Our research, in development for publication, is available on a public website and has been presented to more than 100 directly invested stakeholders.

What is the issue studied and why does this matter?

- ***What is the issue?***
    - Despite the American Association of Medical Colleges (AAMC) announcing in 2021 a national commitment to health humanities, no evidence exists in Canada about the potential of critical health humanities to advance health equity. Our research is the first in Canada to provide a detailed synthesis and analysis of critical health humanities potential to advance health equity. This new knowledge will provide a foundation to begin working on new kinds of medical education that advance the Quadruple Aim.
- ***Which key goal(s) of the Quadruple Aim did you target?***
    - The Quadruple Aim goals fundamentally involve healthcare professionals thinking and practicing differently, which means them feeling differently. Critical health humanities are vital in humanizing patient care, improving clinicians' and healthcare providers' wellbeing, and addressing social determinants of health to improve health equity and population health outcomes. We provide new evidence about how to use critical health humanities especially in medical education with the aim of improving both patient and provider experience and increasing marginalized populations' health.

What approach was taken?

Catalyzing H.E.A.L. Medicine embraces anticolonial, social justice, interdisciplinary, methodological approaches to system-transformation activist-research. Anticolonial methodologies recognize socio-cultural structures (e.g. the biomedical healthcare system) are influenced by enduring forces of colonialism; these are inseparable from racism, sexism, ableism, classism, heteronormativity, and geographic (urban/south) privileging: Anticolonial research commits to radical, creative dismantling of hierarchies that materially and discursively advantage the ways of knowing and being of a privileged few.

What are the key research findings?

The primary research findings emerge from the set of 14 published studies that we qualitatively coded to be both critical and anti-colonial. Taken together, these publications in particular point to best practices and biggest barriers for implementing critical health humanities pedagogies in medical education and professionalization. We find best practices to be 1) collaborative and interdisciplinary leadership, which may include co-teaching and co-writing between experts in their fields; 2) community guidance at every level of curricular development, including speakers with lived experiences invited into the classroom and service learning; 3) pluralistic epistemologies that are welcoming to Indigenous ways of knowing, artistic methodologies, and systems-based approaches to understanding health inequity; and 4) foster a productive tension and hold space for the discomfort that arises from critical reflexivity and transformative thinking. Knowledge users, i.e., curricular policy development and individual health humanities instructors can use these findings to guide their future pedagogies.

In addition to measuring for the spectrums of criticality and decoloniality, we also coded for dozens of other data points to show change over time, gaps in the evidence, and trends in health humanities pedagogies from 1970 to present day. Notably, the data shows how prevalent linguistic-based arts modalities like Narrative Medicine, poetry, literature, and theatre are in health humanities pedagogies, while the visual, musical, crafting, and otherwise non-verbal arts remain a distant second. A trend we found in the data pertains to the shifting goals for health humanities pedagogies. Therapeutic aims addressing wellbeing and burnout were the most cited goals in contemporary pedagogies, whereas fostering critical thinking dominated the justifications for integrating health humanities prior to 2010. These are just 2 of the 18 data categories gathered. Knowledge users will find this data crucial for justifying further research and updating their current curricula to meet the critical and anti-colonial goals for health humanities education.

NEXT STEPS - Implications for policy and practice

Critical health humanities have a role to play in medical education, especially in ongoing efforts to decolonizing and humanize medicine. If integrated into medical education – at the undergrad, post-grad, and professionalizing levels, critical health humanities can assist learners and practicing clinicians in FEELING differently about peoples, communities, and populations who have been marginalized by normative structures of power. Our research evidences the dearth of critical and anti-colonial health humanities pedagogies currently mobilized in the medical classroom, and justify a serious investment in its development, implementation, and dissemination. Of the 462 publications found using key search words pertaining to coloniality, criticality, and arts and humanities, only 14 were found to cite coloniality as a root cause of inequity and bias in medical education and training and then take anti-oppressive action through transformative pedagogies. While Canada had the second highest percentage of publications to address these topics, it is but a fraction of what is necessary to instigate a sea change in medical education curricula. Considering the health inequities exposed as a result of Covid-19, particularly for Indigenous and other marginalize communities, such research ought to be a top priority for our medical institutions. Our challenge to achieving health equity is not solely a scientific one, but a humanistic and systems-based approach. As such, jurisdictions across Canada and beyond can take up the findings of this global study and see for themselves the gaps in the data that deserve closer scrutiny and, in the meantime, begin to implement the best practices already tested and found to be effective.

OUTPUTS & PRODUCTS (optional)

Output 1: Project website - https:/www.criticalhealthhumanities.com/

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE The impact of a comprehensive system, including an SCD case-manager on rates of cascade screening in families of heritable sudden cardiac death victims

Lead researcher: Dr. Paul Dorian and Dr. Lisa Puchalski Ritchie, Unity Health Toronto
Lead knowledge user: Dr. Dirk Huyer, Policy maker, Office of the Chief Coroner of Ontario
Team members: Dr. Katherine Allan, Dr. Krystina Lewis, Dr. Katie Dainty, Dr. Joel Kirsh, Dr. Kris Cunningham, Ms. Liz Siydock, Ms. Tricia Stanton, Dr. Arnon Adler, Dr. Steve Lin, Dr. June Carroll, Dr. Gerald Lebovic, Dr. Sheldon Cheskes, Ms. Julie Rutberg.
Type of project: Focused implementation (knowledge implementation)
Research area studied: Integration of care
Additional research area/pool: CIHR - Institute for Population & Public Health (IPPH)
For more information, please contact Dr. Katherine Allan at katherine.allan@unityhealth.to
Keywords: sudden cardiac death (SCD), cascade screening, SCD case manager, integration of care, health equity.

KEY MESSAGES

- This research will help us to better understand how many individuals are affected by potentially heritable cardiac diseases in Ontario and the barriers or facilitators that they face in accessing specialized care.
- By implementing a regional, sudden cardiac death case-manager with expertise in heritable cardiac diseases and genetics, this will facilitate cascade screening and improve equity of care.
- Implementing standards of care around how first-degree relatives are contacted and streamlining referrals and coordinating communication between first-degree relatives, investigating coroners, family physicians and specialists will improve the overall healthcare provider experience.

What is the issue studied and why does this matter?

- Currently, the exact number of sudden cardiac deaths (SCDs) in Ontario due to heritable cardiac diseases are unknown. This means we have a poor understanding of how many first-degree relatives are at risk. Based on previous research, we know that many first-degree relatives do not receive cascade screening, for reasons that we do not fully understand.
- Our goal is to improve cascade screening uptake by first-degree relatives of SCD victims who died from a heritable cardiac disease, by implementing and evaluating a multicomponent implementation strategy designed to address barriers to uptake by simplifying and supporting the referral process.
- We targeted two Quadruple Aims: improving the patient experience of care and health of populations, as well as improving the healthcare provider experience.
- A regional SCD case-manager will ensure that all at-risk first-degree relatives, regardless of geography or ethnicity will have access to cascade screening and appropriate preventative therapies. Additionally, a regional SCD case-manager will support both investigating coroners and family physicians, to facilitate patients' access to cascade screening.

What approach was taken?

We are employing a mixed methods pilot study that includes (1) a pre/post implementation project and (2) a process evaluation utilizing surveys and qualitative interviews with first-degree relatives, investigating coroners, and family physicians, alongside a document review of implementation logs.

Participants include 1) first-degree relatives of individuals who died from SCD due to heritable cardiac disease; 2) coroners who have investigated at least one SCD case within the past year; 3) family physicians with or without experience treating families of SCD victims and/or having a SCD victim within their practice.

What are the key research findings?

COVID-19 severely impacted research operations at Unity Health Toronto and caused numerous delays with both contracts and research ethics. We did not receive research ethics approval for the project until October 5th, 2022 and we just launched the online survey for family members in January 2023. To date, we have collected 21 survey responses from first-degree relatives and have completed 8 interviews with first-degree relatives. We are just about to begin recruitment of family physicians and coroners. We hope to have results to present in February 2024.

NEXT STEPS - Implications for policy and practice

We do not yet have enough results to properly address all of the policy and practice implications at this time, however, we hypothesize that with better understanding of challenges encountered and interventions to support first-degree relatives, more will pursue cascade screening, which will improve both their experience of care and the overall health of this population. Secondly, implementing standards of care around how first-degree relatives are contacted and streamlining referrals and coordinating communication between first-degree relatives, investigating coroners, family physicians and specialists will improve the healthcare provider experience. Lastly, prevention of future SCD events will reduce the potential care burden on the healthcare system, thus improving value for money.

Next steps include using the study findings to inform future work to improve and extend the reach of the intervention evaluated in the present study, and to develop best practices and tools to support providers toward improved uptake of cascade screening. We will accomplish this by engaging with Chief Coroners and Chief Medical Examiners from across Canada, as well as national inherited arrhythmia organizations (Hearts in Rhythm Organization, the Canadian SADS Foundation), to explore opportunities to improve uptake of our results. Finally, we will disseminate the findings of this innovative work to the wider academic community through publications in peer-reviewed journals and conference presentations.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: Standardizing Approaches to Transitions in Care in Early Psychosis Intervention

Lead researcher: Janet Durbin,
Lead knowledge user: Brian Cooper
Team members: Nicole Kozloff, Avra Selick, Sandy Brooks, Phil Tibbo, Don Addington, Jill Shakespeare, Gordon Langill, Sophie Soklaridis, Aristotle Voineskos, Colleen De Vos, Michelle Cloutier, Nedra Peter
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: National Standards for Mental Health Services
Keywords: early psychosis intervention, transition planning, tools, standardization

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Our study developed an evidence-based protocol and standardized client assessment to inform discharge planning from Early Psychosis Intervention Services.
- The protocol provides clarity and guidance to providers (both EPI and receiving services) about roles and expectations in planning and implementing the transition from EPI.
- The protocol emphasizes importance of engaging clients and families in discharge planning and supporting them in the transition.
- Uptake of the protocol has potential to bring more consistency to practice and more successful outcomes for clients after transition from EPI.
- Uptake of the protocol can also inform learning about effective discharge practice and client outcomes after discharge.

What is the issue studied and why does this matter?

- **What is the issue?** Early Psychosis Intervention (EPI) is intended to be a time limited intervention. However across and within jurisdictions discharge practices are variable. EPI program standards in Ontario and other provinces identify the importance of supporting graduation from EPI but lack detailed guidance on how to do it.
- **Which key goal(s) of the Quadruple Aim did you target?** The study developed an evidence-based transition protocol and a standardized client assessment to inform discharge planning. These should benefit providers, clients and families by outlining steps for planning discharge, clarifying provider roles and describing ways to engage clients and families. The protocol provides a structure for further research to assess and improve practice.
- **How did the work address health equity?** Feedback from diverse stakeholders and a CAMH based Health Equity team informed the work. Considering client intersectional identities in planning post discharge care is emphasized in the protocol.

What approach was taken?

Our co-development approach started with an environmental scan to create draft protocol and assessment measure. These were refined through survey and focus group feedback on clarity, relevance and feasibility from clinicians, clients and families. At all stages our diverse study advisory group provided input. Participation was pan-Canadian.

What are the key research findings?

Based on an environmental scan of transition policies and guidelines and input from diverse stakeholders, 8 core components of discharge planning were identified for programs to implement. Among these were: setting expectations at the beginning that the program is a transitional service; conducting a structured assessment of client progress and needs to inform discharge planning; including clients and families in shared decision-making; assigning a designated lead to support the client through the transition, offering a warm hand-off and over-lapping care as relevant; and working to build the capacity of the larger system to service EPI clients after discharge. Regarding the structured client assessment, domains that were identified as relevant to assess included: treatment progress, illness self-management skills, health stability and risk, and community functioning (e.g., daily activities, social support). Providers, clients and families can all benefit from having concrete guidance and expectations related to transition planning and strategies to implement.

NEXT STEPS - Implications for policy and practice

Outputs from this knowledge creation study include a transition protocol that outlines the core components to follow in transition planning and a standardized client assessment to inform the plan. An important next step is to share these products with EPI planners and providers in provinces across Canada. This is timely as a pan Canadian project is underway to build national standards for EPI. Additionally, in Ontario, the Mental Health and Addictions Centre of Excellence has made building more consistent transition practice across EPI programs a priority. Another next step is to secure funding to implement and test the protocol in EPI programs. The protocol is intended to improve client, family and provider experience, and to lead to better client outcomes after discharge, but these expectations need to be assessed. Such a project could be conducted within or across provinces. Providing all EPI clients with a similar high quality level of support for transition while attending to diverse needs can contribute to better equity and relevance in delivery of EPI services.

OUTPUTS & PRODUCTS

Output 1: Protocol for transition from Early Psychosis Intervention services (draft) - Link is not included as field consultation to finalize will occur late fall 2023
Output 2: Client strengths and needs assessment (draft) – Link is not included as field consultation to finalize will occur late fall 2023

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: An Examination of Key Aspects to Operating and Delivering Remote Opioid Overdose Monitoring Supports

Lead researcher: S. Monty Ghosh
Lead knowledge user: Lisa Morris Miller
Team members: Will Rioux, Nathan Rider, Alice Seo, Dylan Vista
Type of project: Quality Improvement
Research area studied: Harm Reduction,
Substance Use
Additional research area/pool: Public Health
For more information, please contact S. Monty Ghosh
Keywords Harm Reduction, Virtual Health, Substance Use

KEY MESSAGES

- **Our research advanced the Quadruple Aim and health equity by:**
- **Determining the scope of virtual harm reduction for harm reduction providers and those who use** substances.
- Determine key features and aspects of virtual harm reduction
- *Determine how many overdoses were potentially averted from these interventions.*
- *Determine the perspectives of these services from both clients and providers*
- *Determine cost benefit of the service.*

What is the issue studied and why does this matter?

Virtual overdose response services (VORS) are novel technology that is aimed at reducing the risk of an overdose event due to solitary use. At this time 50-80% of all substance use deaths occur from people using at home alone. As such our project was examining ways this technology can be implemented with the substance using population by examining the perspectives around adoption, utilization, safety, amongst others. We were also curious about the efficacy of the program and lastly the cost-benefit of the program. These were important to understand as we wanted to understand factors in the utilization of the service, how best to raise awareness of these resources in community, and how best to suit their needs including key features what would be appreciated by stakeholders.

Our data revealed that certain groups disproportionately utilized the service including gender minorities, rural groups, and those without access to physical supervised consumption sites. We subsequently attempted to examine through both qualitative and quantitative means, the perspectives of these populations on why they may utilize these services. We examined their perspectives on equity and how these services can improve that equity.

What approach was taken?

To determine factors involved in perceptions of utilization, adoption, safety an implementation science approach was taken using “Proctor’s Framework”. This framework incorporates the Quadruple aim’s aspects of patient perceptions, provider perceptions, cost effectiveness, and examines some aspects of outcomes and efficacy. The framework also uses mixed methods including qualitative interviews which were then used to inform a more quantitative approach using surveys. We also were collecting data to retrospectively evaluate service usage and outcomes. All aspects of the study were co-designed with people who use substances and with individuals who operate the various services.

What are the key research findings?

Over the last year and a half we have conducted numerous qualitative studies, and engaged in a national survey, quantitative outcome evaluation, and cost-benefit analysis. We have the following results using aspects of the quadruple aim.

Patient perspectives: Clients who utilized these services identified the following themes: (1) feelings of optimism around VORS to save lives; (2) privacy/confidentiality was highly valued due to stigma and fear of arrest; (3) concerns with reliable cell phones negatively impacting VORS uptake; (4) concerns around emergency response times, specifically in rural/remote communities; (5) desire for trusting relationships with VORS operators; (6) importance of mental health supports and referrals to psychosocial services; and (7) possible limited uptake due to low public awareness of VORS.

Provider Perspectives: Providers in both health care and harm reduction settings found the following: (1) While VORS are acceptable harm reduction adjuncts, SCS are still the "Gold Standard" for ensuring individuals are supported during a drug poisoning event. (2) Awareness of VORS could be integrated into care pathways from acute care, ED, primary care, and existing harm reduction services. (3) VORS could positively impact the healthcare system. (4) Key aspects that would be important for VORS to include would be access to other harm reduction resources, treatment supports, and mental health supports.

Outcome evaluations: Of the 6528 completed calls on the line, 3994 (61.2%) were for supervised drug consumption, 1703 (26.1%) were for mental health support, 354 (5.42%) were for harm reduction education or resources, and 477 (7.31%) were for other purposes. Overall, there were 77 (1.18%) overdose events requiring a physical/ in-person intervention.

Cost Benefit: Using a Monte Carlo estimate, the benefit-to-cost ratio of the NORS program was 8.59 (1.53-15.28) per dollar spent, depending on estimated mortality rates following unwitnessed overdose and program operation costs.

NEXT STEPS - Implications for policy and practice

The policy and practice implications thus far show support around using virtual harm reduction services amongst both service users, providers and additional support from community members. The efficacy of the program showed 77 overdose events and zero deaths. Additionally, the cost benefit of the program 8.59 per dollar spent.

Ideally this new information will help provider policy makers, especially public health groups and health authorities increase awareness through public service announcements, and innovative strategies such as advertising of these services on naloxone kits. It will additionally inform key aspects and standards for implementing and operating these various virtual harm reduction services.

Our evaluation found that numerous underserved groups are using the service including gender minorities and people who cannot access physical supervised consumption sites. The service can improve health equity for some, but also posed limitations as stakeholders identified that people who do not have access to cell phones, or have reliable cell phone reception could not access these services.

Funding towards these services are very tenuous, and ideally the results of our studies will encourage health authorities, and health providing groups to fund these services. In order to combat the rising rates of overdoses, further funding toward awareness of these services is needed as well.

OUTPUTS & PRODUCTS (optional)

Output 1: 0

Output 2:

Output 3: Click or tap here to enter text. - Click or tap here to enter text.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

SYNERGY TOOL IMPLEMENTATION AND EVALUATION IN LONG-TERM CARE

Lead researcher: Dr. Farinaz Havaei
Lead knowledge user: Dr. David Keselman , Healthcare administrator, Decision maker (CEO, Louis Brier Home and Hospital)
Team members: Dr. Maura Macphee, Dr. Amy Salmon, Dr. Joanie Sims-Gould, Dr. Sheila Boamah, Dr. Wei Zhang, Dr. Adam Easterbrook, Lisa Dawson Lara Croll, Isobel Mackenzie, Saleema Dhalla, Karen Biggs, Szuchi Lee
Type of project: Evaluation (knowledge creation)
Research area studied: Long-term care
Additional research area/pool: Not applicable
For more information, please contact farinaz.havaei@ubc.ca
Keywords*:* long-term care, nursing, workload management

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Adapting, validating, implementing, and evaluating an evidence-based and resident-centred model of care, called the Synergy Model, in the long-term care (LTC) sector. Specifically, our study aimed to:
    - Enhance workload management for LTC staff and leaders,
    - Improve the patient experience of LTC residents
    - Reduce costs for LTC homes

What is the issue studied and why does this matter?

- Research has consistently demonstrated that long-term care (LTC) delivery has been significantly compromised due to heavy workload for LTC care providers, which has only been exacerbated since the onset of the COVID-19 pandemic. Staffing decisions in LTC are informed by arbitrary standards and the availability of resources (human and non-human) rather than the needs of LTC residents. The Synergy Tool, a resident-centred and evidence-based model of care, has been successfully used in multiple care settings to reduce workload for care providers based on an objective understanding of resident needs, but has not yet been utilized in LTC settings.
- This project directly addressed 3 of the Quadruple Aims; namely, enhancing patient experience, reducing costs, and improving the work life of healthcare providers.
- LTC residents, informal caregivers, and care providers are adversely affected by social inequities, such as age, gender, race, and disability. The LTC workforce is largely comprised of racialized and immigrant women who report experiences of workplace racism, discrimination, and violence and who tend to be caring for LTC residents who are also mostly women living with one or more impairment. Likewise, unpaid family care work often rests on the shoulders of women.

What approach was taken?

Two publicly-funded long-term care homes in Vancouver, BC participated in our study. During Phase I, a 1.5 day workshop was held with select LTC care providers and leaders/managers, to adapt and validate the Synergy Tool for long-term care settings. The Synergy Tool was implemented in select implementation units in the two care homes for 6 months, and outcomes were evaluated through a mixed-methods approach. Specifically, a range of key stakeholders were engaged in focus groups (including LTC staff, leadership, and residents' families), and administrative and survey data were used to evaluate resident and care provider outcomes.

What are the key research findings?

Administrative data

- Overtime rates declined during the early weeks of implementation but returned to pre-baseline levels within the implementation timeframe. This is likely driven by a sharp increase in overtime rates in one of the units
- Rates of resident falls decreased during the implementation

Staff surveys (note: no statistically significant differences were found, likely due to small sample size and inadequate power; the following findings are based on descriptive statistics).

- Mental health scores (anxiety, depression, and burnout) were best for staff involved in Synergy scoring compared to those not involved in scoring or those in non-implementation units at Time 2
- Perceptions of effective workload management and workplace safety ratings were higher, and number of tasks left undone were lower at Time 2 were for staff within implementation units and not involved with Synergy scoring compared to staff involved in scoring in implementation units and those in non-implementation units
    - This may be due to the Synergy Tool leading to better unit-level outcomes while creating more work for staff tasked with providing Synergy scores
- Quality of care was rated highest for those in the implementation units (both involved and not involved in scoring), compared to staff in non-implementation units

Focus groups

- Staff and residents' family members noted positive outcomes in care provision as a result of the Synergy Tool implementation. Specifically, better staff teamwork, heightened awareness of resident needs, more proactive care planning, and better communication with families were highlighted as positives of the initiative
- Staff noted that the time to use the Tool as a negative of the initiative. Further, leaders noted that they were unable to meet the staffing guidelines that resulted from the Tool due to resource constraints

Data analysis is ongoing and will include an economic evaluation.

NEXT STEPS - Implications for policy and practice

- The results of our study indicate that the Synergy Tool in LTC settings may have positive effects on staff a unit-level, and lead to positive outcomes for residents (such as reduced falls). Staff tasked with providing Synergy scores may need additional support to take on this role. We hypothesize that our results would have been different if the scoring was completed by all care providers, instead of completed by a select few individuals that were responsible for providing all Synergy scores within their respective teams.
- Furthermore, to properly support an intervention such as this, human and financial resources need to be provided to healthcare organization leaders in order to fully enact interventions as intended. As an example, while the Synergy Tool provided staff and leadership with information about how to best deploy staff, this was not possible due to immense staffing challenges and restraints already present in this sector.
- We would put forth that additional funds should be made available for researchers and knowledge user partners to supplement the cost of full implementation of health interventions to allow for a robust evaluation of best practice initiatives, particularly in sectors that are already facing notable staffing challenges to promote greater health equity.

OUTPUTS & PRODUCTS (optional)

1. **Virtual presentation – CHEOS Work in Progress Seminar: https://www.youtube.com/watch?v=D1wfDpPXxs0&ab_channel=CHEOSNews**

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Real-Time Virtual Support: Advancing health equity in British Columbia through a partnership-based learning health system model

Lead researcher: Dr. Kendall Ho, Dr. Nelly Oelke
Lead knowledge user: Ms. Shana Ooms
Team members: Ms. K. Bepple, Prof. S. Bryan,Dr. J. Christenson, Mr. S. Graham, Dr. L. Hedden, Ms. M. Hunt, Dr. D. Lavallee, Mr. J. Mah, Dr. R. Markham, Dr. A. Meyer, Dr. H. Novak Lauscher, Dr. J. Pawlovich, Dr. A. Ruddiman, Ms. S. Sundhu, Ms. K. Williams
Type of project: Focused implementation (knowledge implementation)
Research area studied: Integration of care
Additional research area/pool: CIHR - Institute for Population & Public Health (IPPH)
For more information, please contact Joan Assali, joan.assali@ubc.ca
Keywords: virtual care, learning health system, real-time virtual support, deliberative dialogue, rural, remote, Indigenous health

KEY MESSAGES

Patients, family caregivers, policymakers, health administrators, healthcare professionals, and linked sectors actively engaged in deliberative dialogue. Insights and discussions informed and shaped the toolkit's design evaluation framework and provided context. Findings underscore the importance of community engagement, Indigenous knowledge integration, and addressing historical stigma for culturally safe virtual care. The tool kit aims to foster social accountability and integrate RRI perspectives in evaluation. Aligning with the Quadruple Aim, it will provide an accountability framework to guide culturally appropriate virtual care initiatives and gauge government responsiveness to community input.

What is the issue studied and why does this matter? This study aims to improve healthcare access and outcomes in rural remote, and Indigenous communities (RRI). Prioritizing equitable care via culturally safe virtual services. We are developing a Virtual Urgent Care LHS tool kit, anchored on enhancing patient experience and provider experiences emphasizing population health to address the distinct health disparities faced by RRI communities. Our approach to addressing health equity is multifaceted and is informed by research, a literature review and knowledge mobilization from network analysis and deliberative dialogue. We place great emphasis on community knowledge, relationship-building, and ongoing engagement, recognizing that healthcare solutions cannot adopt a one-size-fits-all approach. We engaged 40 participants, most of whom were from RRI communities, in a deliberative dialogue, synchronously as a group and asynchronously after the initial session. The deliberative dialogue focused on experiences with the health care received, historical injustices, systemic barriers. and the desired features of culturally appropriate care. Through this work we aim to address health equity by empowering communities, emphasizing the strength of community knowledge, relationship building, and ongoing engagement, and ensure healthcare is both accessible and effective, irrespective of geographic location or cultural background.

What approach was taken? We utilized a phased approach: **Phase 1** incorporated a scoping literature review to guide stakeholder involvement**. Phase 2** featured a modified network analysis using the PARTNER tool, supplemented by interviews, to delve into partnership dynamics, which will be considered for publication around health system relationships**. Phase 3** convened stakeholders from branches of the Partnership Pentagram Plus (PP+) model (clinical, policymakers, health administrators, academia, citizens, linked sectors) for a deliberative dialogue addressing equity, access and partnership co-creating tool kit components. Insights were reflected in the tool kit to be used to guide evaluation of culturally appropriate virtual care through the LHS.

What are the key research findings?

The **scoping review** highlighted: the importance of integrating cultural safety and addressing racism and colonialism, relationship building and community collaboration. As well as how to account for patient involvement, specifically to: include collaborative care model; ensure RRI engagement includes a governance structure based on shared accountability, equal partnership, and credible leadership; and reference frameworks to inform tool kit development such as the Indigenous Wellness Framework, Two-Eyed Seeing and strengths-based approaches.

The **modified network analysis** in Phase 2 examined the RTVS-LHS relationships and partnerships. Key network features included: strong leadership, effective strategic and operation management, evidence-based work, and a positive and trusting culture. Areas of improvement included: sufficient funding and human resources, inclusive membership of patients, supportive policy environment and engagement with the health system at different levels.

The **deliberative dialogue** yielded two sets of recommendations in Phase 3. The first discussion focused on equity-oriented access and improving healthcare in RRI communities. Recommendations included improving community engagement and participation, shifting to anti-colonial virtual healthcare services, continually evaluating, and improving services, and increasing accessibility and inclusivity. The second discussion focused on how partnerships can improve access to health services in RRI communities and how community members can be fully engaged to participate in these partnerships. Recommendations included creating partnerships within the communities, for the communities ("By us, for us"), emphasizing the importance of community-driven and bi-directional communication, as well as bringing the healthcare provider to community celebrations to build trust and knowledge.

Knowledge users included 40 deliberative dialogue participants representing the PP+ model: 13 health administrators; 3 policy makers; 5 health providers/professionals; 4 academics, educators, and learners; 4 linked sectors members; 8 First Nations citizens, 1 rural citizen, and 2 with multiple roles as health providers/professionals and academia. Tool kit development will prioritize community engagement to ensure culturally safe healthcare solutions.

NEXT STEPS - Implications for policy and practice

This research contributes to transformative strategies for reshaping the Canadian healthcare domain, underscoring the pressing need for culturally safe virtual care, especially in Rural Remote and Indigenous communities. The study contributes to decolonizing healthcare by pro-actively learning from communities about how to shape culturally appropriate virtual care and evaluate progress in this area. The tool kit is designed to work within rapid learning cycles of an LHS, promoting fluid and pro-active healthcare, congruent with the enduring pursuit of quality improvement. This aligns with the Quadruple Aim's objectives: enhanced health, improved care, and heightened provider contentment. The research emphasizes cultural safeguarding and the incorporation of Indigenous frameworks, learnings and structures, advocating for health parity and a comprehensive, patient-centric care, thereby addressing discrepancies, and ensuring tailored healthcare services for varied cultural demographics. The co-development of the tool kit relied upon community involvement to inform effective, culturally attuned virtual care programs that meet the needs of equity-deserving populations. New initiatives in this area should emphasize cultural protection, active community engagement, and apply a collaborative LHS model.

Dedicated funding for ongoing monitoring and evaluation, cultural safety training, and RRI community engagement must be prioritized. The next step is to share, use, and assess the tool kit in the context of the BC RTVS evaluation framework and LHS. As we continue to gather evidence of its utility, we will share and discuss the tool kit with other groups who are implementing virtual care, LHS, or other related initiatives in other jurisdictions and fields of practice. Comprehensive assessment and sharing of learnings across and among tool kit "end-users", assessing how widely it is used and its effectiveness in fostering culturally safe virtual care will contribute to the continuous learning and enhancement of healthcare services in this context, and potentially inform similar efforts in other healthcare systems.

What is the feasibility of VaxCheck, a novel pharmacy-based vaccination assessment service?

Lead researcher: Sherilyn Houle, School of Pharmacy, University of Waterloo
Lead knowledge user: Molly Yang , Health care practitioner, Health care practitioner
Team members: Nancy Waite, Lisa Dolovich
Type of project: Evaluation (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: Not applicable
For more information, please contact Sherilyn Houle, sherilyn.houle@uwaterloo.ca
Keywords*:* Pharmacy, vaccination, immunization

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Developing, feasibility testing, and refining a novel community pharmacy-based public health service (VaxCheck) aimed at identifying individuals with unmet vaccination needs and facilitating receipt of recommended vaccines, with the ultimate aim of improving population health as a result of improved vaccination rates
- Engaging practicing pharmacists, other knowledge users, and patients to identify and address barriers and facilitators related to the provision of such a service from multiple perspectives
- Evaluating accessibility and satisfaction of patients receiving a VaxCheck assessment, and the professional satisfaction and perceived ability of practicing pharmacists to integrate this new service into their existing workload
- Offering the service to any Ontarian over the age of 18 years, including those without a regular primary care provider or facing other barriers that impact their ability to access other health services

What is the issue studied and why does this matter?

Vaccination rates among Canadian adults remain suboptimal, with many individuals unaware of their vaccination status against diseases such as herpes zoster, pneumococcal disease, tetanus, and pertussis. Pharmacies have become a preferred location for vaccine administration among the public, with pharmacists also possessing the knowledge and skill to engage in vaccination conversations and identify unmet vaccination needs. While pharmacists regularly perform structured medication reviews to identify and resolve drug therapy problems, no similar programs exist to assess and identify vaccination needs. To address this challenge, our team developed and tested a procedure and toolkit for such a service – called VaxCheck – to determine if such a program could be feasibly and effectively implemented in community pharmacies. This includes assessing the impact of challenges related to obtaining a person's vaccination history in the absence of a vaccine registry, integration of the service into existing workflow/workload, and acceptability by the public.

This work focused on Quadruple Aim goals related to improved population health outcomes (due to potentially improved vaccination rates), improved care and patient experience, and improved provider satisfaction. Each of these perspectives are necessary to support the implementation, uptake, and cost-effectiveness of a new healthcare service.

As pharmacies are often highly accessible geographically (including many rural and remote communities), and pharmacists accessible across expanded operating hours and without an appointment, pharmacy-based services have been found to support health equity by offering access to populations with barriers to accessing other primary care services, including those without regular primary care providers.

What approach was taken?

A continuous quality improvement (CQI) approach was adopted, as this was the first known program implemented of its type in community pharmacies. Specifically, community pharmacies participating in the study were asked to identify a Change Champion to lead program implementation at their pharmacy and communicate regularly with the research team about barriers and facilitators encountered and proposed modifications to the service and its associated toolkit. Pharmacies completed a series of three rapid Plan-Do-Study-Act (PDSA) cycles with refinements adopted following each cycle to meet each pharmacy's unique needs. Patient feedback was also collected through a brief post-service survey and the opportunity to participate in a more comprehensive interview to describe their experiences. A stakeholder advisory group comprising representatives from pharmacy regulatory and advocacy associations, government and third-party payers, other health professions in primary care, public health programs, and patient groups was established and engaged in an integrated knowledge translation approach including meetings at the start and end of the program.

What are the key research findings?

- Pharmacists are able to identify and engage individuals with various risk factors for vaccine-preventable diseases, including those of older age, with chronic medical conditions including immunocompromised status, and with lifestyle-related or occupational risk factors
- 123 Ontarians received a VaxCheck from November 2022 – May 2023 (average age 60 years, range 18-88 years, 58% female), with all having at least one unmet indication for vaccination
- Most commonly recommended vaccines were those providing protection against pneumococcal disease, herpes zoster (shingles), COVID-19, tetanus/diphtheria, and influenza. Uptake rates were higher for vaccines available without a prescription and which could be administered on-site by the pharmacist, suggesting that expansion in scope of practice and access to publicly-funded vaccine by community pharmacies could support efforts to improve population vaccination rates
- Patient satisfaction with the service was high, with 84% of participants agreeing or strongly agreeing that they would recommend the service to others. Accessibility was noted as a strength of the service, while difficulty accessing complete and accurate vaccination histories in the absence of a centralized registry was noted as a significant barrier
- Study findings are of interest to practicing pharmacists with a desire to support efforts to improve population health through vaccination, regulators and decision-makers who determine the ability

of pharmacists to administer vaccines and access publicly-funded vaccine supply, and patient groups with an interest in ensuring accessibility of public health and primary care services related to vaccination, healthy aging, and supporting populations with disease-specific risk factors for vaccine-preventable disease

- Future research will consider the impact of digitization of the VaxCheck process, economic evaluations related to the cost-effectiveness of the program, and expansion of the program to other provinces and other health professions

NEXT STEPS - Implications for policy and practice

- Community pharmacies are accessible and trustworthy settings for vaccine administration and assessment. Proactive engagement with the public to identify unmet vaccination needs is feasible and acceptable by both pharmacists and the public.
- Health system barriers such as the lack of a centralized vaccine registry and limitations in pharmacist scope of practice related to their ability to prescribe and administer vaccines and access publicly funded vaccine supply should be addressed. Such efforts would likely increase vaccine uptake following a VaxCheck by increasing confidence in recommendations and convenience in access, as the lowest uptake rates for recommended vaccines in this study were for those that required a prescription or were only available at no charge through medical clinics or public health units and not through pharmacies.
- Future research will examine the cost-effectiveness of the service from a public payer perspective as well as the feasibility of expanding the service to other provinces/territories and other primary care providers.

RAPPORT PROVISOIRE POUR LES IRSC

Titre : DENT MA MAISON : Intégrer les soins et les services bucco-dentaires au panier de services de première ligne à domicile des aîné.e.s en perte d'autonomie

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Membres de l'équipe : C. Bedos, M-E. Poitras, N. Nader Makansi, R. Shrivastava

Type de projet : Projet multicentrique, participatif, impliquant deux établissements du réseau de la santé, soit les programmes du soutien à domicile (SAD) du programme de Soutien à l'autonomie des personnes âgées (SAPA) des Centres Intégrés Universitaires de la Santé et des services sociaux du Centre-Ouest-de-l' île-de-Montréal et du Centre-Sud-de-l' île-de-Montréal (CCOMTL et CCSMTL),

Domaine d'étude : Santé dentaire publique

Autre domaine de recherche/classe : Dentisterie gériatrique, Organisation des services et soins de santé, modèles de prestations des services et soins de santé.

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Mots clés : Accès aux soins et services de santé bucco-dentaire, personnes âgées, perte d'autonomie, vieillissement, intégration des services et des soins de santé bucco-dentaire au service de première ligne, modèles de prestations de services

PRINCIPAUX MESSAGES 120 mots max

Notre recherche a fait avancer certaines dimensions des quatre objectifs du système en santé et l'équité en santé comme suit :

- Amélioration de l'équité en santé en rejoignant des personnes marginalisées
- Amélioration de l'expérience aux soins des aîné.e.s et proches aidant.e.s
- Contribution à l'amélioration du rapport qualité-prix des services de santé buccodentaire à domicile
- Contribution à l'amélioration de l'expérience des professionnel.le.s de la santé buccodentaire et des services de soutien à domicile

Quelle est la question étudiée et pourquoi est-elle importante ? 240 mots max

Les objectifs de ce projet consistent à :

1) décrire le portrait des besoins d'ordre buccodentaire des aînés et évaluer le gain produit par la mise en œuvre de DENT MA MAISON en termes d'amélioration de la santé buccodentaire perçue par les aînés/proches aidants et les intervenant.e.s ; 2) évaluer l'acceptabilité du modèle DENT MA MAISON aux niveaux micro, meso et macro; et 3) identifier les barrières et les facteurs facilitant la mise en œuvre du modèle DENT MA MAISON.

Ces questions étaient importantes pour plusieurs raisons, notamment :

- Le vieillissement de la population avec le fardeau des maladies chroniques, y compris les maladies buccodentaires posent des défis majeurs pour les systèmes de santé ;
- De plus en plus d'aîné.e.s aspirent au vieillissement en santé et de recevoir les services dans leurs milieux de vie et le confort de leurs milieux de vie ;

- Le Québec est l'une des provinces avec une forte proportion des aîné.e.s et leur santé buccodentaire est déplorable, ce qui est encore plus préoccupant pour les aîné.e.s en perte d'autonomie vivant à domicile
- La santé buccodentaire est exclue de l'offre des services de soutien à domicile ; Les proches aidant.e.s se font de plus en plus rares. Il y a une pénurie de professionnel.le.s de la santé buccodentaire qualifié.e.s.

Quelle a été l'approche adoptée ? 120 mots max

- Recherche collaborative, inclusive, avec diverses parties prenantes clés
- Projet de démonstration, qualitatif et étude de cas multiple holistique
- Soins offerts gratuitement aux aîné.e.s des programmes ciblés
- Contribution soutenue de la patient-partenaire
- Triangulation des sources de collecte de données

Quelles sont les principales conclusions de la recherche? 360 mots max

- Le modèle DENT MA MAISON représente un modèle d'intégration de type liaison, qui est faisable, exige une responsabilité multidisciplinaire
- Durant 22 mois, 100 visites ont été réalisées auprès de 64 personnes âgées de 65 ans et plus, de prédominance féminine, totalisant 577 actes d'une durée moyenne de 71,5 minutes par visite, 74 % des services offerts étaient d'ordre préventif, seulement 1/3 des besoins prothétiques ont été comblés, près de 23 intervenant.e.s pivots.
- L'acceptabilité du modèle est garantie : 75 % des aîné.e.s ont eu un niveau de satisfaction de 10
- Le leadership et l'engagement des gestionnaires ont favorablement influencé la mise en œuvre du modèle DENT MA MAISON.
- Lé résultats de ce projet pilote fournissent des informations essentielles qui justifient la poursuite du développement de ce service en réalisant un essai clinique randomisé et qui sont précieuses pour éclairer les décisionnaires politiques.

PROCHAINES ÉTAPES – Implications pour la politique et la pratique 360 mots max

Au niveau de la population : considérer le profil gériatrique dans la philosophie des soins et services de santé buccodentaire intégrés au service de soutien à domicile

Au niveau de l'organisation des services : réviser le modèle actuel afin qu'il soit holistique, davantage centré sur les besoins des populations marginalisées et qu'il vise l'équité en santé, avec une structure en place pour la santé buccodentaire des proches-aidant.e.s, et viser une intégration de type coordination ou une intégration complète ; éventuellement s'associer avec les modèles de prestations de services de santé buccodentaires existants ; explorer la pertinence des services de télédentisterie

Au niveau des ressources humaines : avoir un professionnel de la santé buccodentaire au sein des équipes SAD

Au niveau du développement des compétences : Formation des équipes cliniques non dentaires et dentaires

Au niveau du partenariat : consolidation des partenariats avec les acteurs clés, donc le milieu clinique, le milieu universitaire et les décisionnaires

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Telemedicine in the care of people living with dementia and their care partners

Lead researcher: Vladimir Khanassov, Department of Family Medicine, McGill University
Lead knowledge user: Maxine Dunas Pilon , Policy maker
Team members: Geneviève Arsenault-Lapierre Isabelle Vedel
Type of project: Evaluation (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: CMA Foundation (virtual care)
For more information, please contact Vladimir Khanassov ; vladimir.khanassov@mcgill.ca
Keywords*:* Telemedicine, Dementia, care partners, family physicians, COVID 19

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Describing the factors associated with the use of telemedicine by people living with dementia (PLWD), their care partners, and family physicians.
- Identifying the barriers and facilitators of telemedicine use by PLWD, their care partners, and family physicians.
- Proposing that optimal telemedicine provision requires patient-caregiver-physician shared decision-making, interoperability in healthcare, supporting triads before and during execution, and appropriate compensation.
- Recognizing the importance of telemedicine facilitates access to primary care and minimizes the disruptions that may occur with in-person visits.

What is the issue studied and why does this matter? There is an urgent need to improve the use of telemedicine in primary care for PLWD, particularly in rural communities. The COVID-19 pandemic greatly burdened the healthcare system and could limit access even more to healthcare in remote geographical areas. Telemedicine is one of the ways the system has adapted to the COVID-19 pandemic. Before the pandemic telemedicine in primary care was associated with improvement of quality of life and functional status of older adults and overall patient satisfaction due to convenience, comfort, and relationship with the doctor. Telemedicine has the potential to improve access to health care for PLWD. While it is an effective tool for providing care, PLWD face barriers due to the nature of the disease. In this regard, the key goals of the Quadruple Aim that we targeted were improving patient and provider experiences with telemedicine, by developing practice and evidence recommendations on how to make a better and sustainable use of telemedicine for PLWD in primary care. The work addressed equity by assessing the difference in uptake of telemedicine for PLWD in the rural and urban regions of Canada as well as exploring the sociodemographic factors associated with TM use.

What approach was taken? A convergent mixed-method approach was employed where the sub-studies inform one another. In the first phase, we conducted a cross-sectional study using a survey developed and distributed nationwide by the Alzheimer Society of Canada and the College of Family Physicians. The survey was conducted with PLWD, their care partners, and family physicians. Second, using the administrative data of Quebec, we are conducting a retrospective cohort study using Quebec's health administrative database. The novelty was that we adopted a participatory research approach where patients, caregivers, and family physicians participated and contributed throughout the study to create long-lasting system changes.

What are the key research findings? According to family physicians, patients, and care partners, telemedicine is mostly performed via telephone. Telemedicine uptake was about 60% among both PLWD and care partners. The associations between patients and care partner characteristics with telemedicine use were inconclusive. We found that the years of practice of family physicians are negatively associated with providing virtual care, meaning that family physicians with more than 20 years of practice are less likely to provide virtual care. No other physician characteristic was associated with the provision of telemedicine.

From the physician's perspective, the barriers and facilitators that influence telemedicine use can be classified into four stages: Decision, preparation, execution, and compensation The facilitators at the decision stage were the preference for virtual care, considering virtual care as alternative care, and reception from PLWD/caregivers. The barriers at this stage were preference for in-person care, uncertainty about post-pandemic regulations, and demand from PLWD/caregivers. At the preparation stage, the main facilitator is logistic support from office staff, and the barrier is consent and confidentiality issues. At the execution stage, the facilitators were family/caregiver presence, availability and quality of technology, technical support from office staff, existing telemedicine networks, peer support on how to use virtual platforms, and the barriers were Patients' sensory problems, poor quality of technology, lack of technological skills. Finally, at the compensation stage, the facilitator was the appropriate remuneration, and the barrier was inadequate remuneration. Findings for the effect of telemedicine on health outcomes are pending due to data access.

The key knowledge users of these findings are primary care practitioners and policymakers who can adapt telemedicine to the needs of PLWD. Further studies are needed to evaluate the effectiveness of telemedicine in older adults and the general population and should include the perspective of other healthcare professionals in primary care, PLWD, and care partners via in-depth qualitative studies.

NEXT STEPS - Implications for policy and practice: Telemedicine has become an important tool in care delivery, especially during and after the pandemic. This research highlights the importance of building a framework that supports education and training on telemedicine and technology for primary care physicians. It also highlights the need to share decision-making for the use of telemedicine with PLWD, care partners, and their family physicians, the importance of technical and administrative support for the organization and execution of telemedicine, and to appropriately compensate physicians' time for the telemedicine they provide. Considering the perspectives of patients, care partners, and family physicians allowed us to have a comprehensive view of telemedicine's barriers and facilitators and determine the factors associated with its use. Regarding the impact on the Quadruple Aim goals, this project leads to a sustainable and appropriate use of telemedicine for PLWD. The proposed recommendations have the potential to help family physicians to provide the quality of care that older, more vulnerable, populations deserve regardless of the method of delivery, and create a better understanding of family physician's experience with the use of telemedicine. In turn, this project contributed to the improvement of urgent primary care especially in remote regions, continuity of care, timely management of chronic conditions and their exacerbation, better use of scarce healthcare resources and potentially decrease healthcare costs. This research can be transferable not only to PLWD but to older adults and the general population. Comparisons could be made across other jurisdictions in Canada to compare the use of telemedicine in older adults and other vulnerable populations and to draw lessons from the experiences to encourage the use of telemedicine nationwide. Further research is needed to explore the cost-effectiveness of this care delivery method.

OUTPUTS & PRODUCTS

Output 1: https://assets.researchsquare.com/files/rs-2263259/v1/61ae45d6-fbe2-479d-9126-f090db608ec1.pdf?c=1669919280

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: Measuring Schizophrenia Care

Lead researcher: Kirkham, Julia , University of Calgary
Lead knowledge user: Kurdyak, Paul , Policy maker, Other
Team members: Taylor, Valerie; Addington, Donald; Barry, Rebecca, Bolton, James; Crockford, David; Seitz, Dallas.
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Integrating upstream prevention within health care delivery settings (SDoH)
Additional research area/pool: CIHR - Institute for Population & Public Health (IPPH)
For more information, please contact : julia.kirkham@ucalcary.ca
Keywords*:* Schizophrenia, healthcare quality, equity, population health, learning health system.

KEY MESSAGES

- Many persistent and alarming outcomes disparities for persons affected by schizophrenia are driven by poor quality of care (QoC), on a background of a fragmented system and widespread stigma.
- This project identified all existing healthcare quality measures for schizophrenia, a critical first step towards system-level QoC measurement and improvement in this population.

Our research advanced the Quadruple Aim and health equity by:

- Generating new knowledge to advance QoC measurement in schizophrenia that will eventually contribute to identifying and improving healthcare disparities to achieve the long overdue better outcomes for persons affected by schizophrenia.

What is the issue studied and why does this matter?

- Treatment options in schizophrenia are better than ever; yet outcomes for persons affected by schizophrenia have not improved. Many outcomes for persons affected by schizophrenia are driven by poor physical and mental health quality of care (QoC), on a background of a fragmented healthcare system and widespread stigma.
- Research on healthcare delivery models and population health approaches needed to achieve better QoC and reduce healthcare disparities has been identified as an urgent priority in schizophrenia. Identifying of key quality indicators (QIs) for schizophrenia is a critical first step towards system-level measurement and improvement of QoC in this population.
- This project positions persons affected by schizophrenia as an equity deserving population. The knowledge generated in this project will enable an evaluation of schizophrenia QoC that will inform healthcare delivery in schizophrenia to improve healthcare disparities at the population level, aligning with the goals of the Quadruple Aim.

What approach was taken?

A six-step scoping review using the framework established by Arksey and O'Malley was conducted in consultation with key stakeholders including healthcare providers and decision makers, experts in schizophrenia clinical care, and collaborating advocacy organizations. Stakeholders were engaged through online meetings and presentations and provided input into search strategy, data charting, and interpreting results, and identifying next steps to use the knowledge generated in the project to measure schizophrenia QoC.

What are the key research findings?

- From over 13,000 articles/sources screened, 119 included full text articles were included. 388 unique quality indicators (QIs) developed for or used to measure QoC for schizophrenia were identified. Most measures were process-QIs (69%) within safety (30%) and effectiveness (31%) quality domains. QIs focused largely on mental healthcare and pharmacotherapy.
- Underrepresented areas where future QI development is required include women's health, substance use, and patient experience/satisfaction.
- Although there is a vast number of QIs that exist for evaluating schizophrenia QoC, there no standardized process for QI development, validation, or evaluation. In the context of so many available measures for schizophrenia QoC , there is now a need to ensure measures are evidence-based and address the goal of QoC measurement: to maximize health benefits to patients.
- These results will be used to facilitate the measurement of schizophrenia QoC using administrative health care data in Alberta. The knowledge users most likely to be impacted by these findings are thus those most likely to be affected by or invested in future measurement and reporting of schizophrenia QoC: persons affected by schizophrenia and care partners, healthcare providers and facilities, and healthcare policy/decision makers.

NEXT STEPS - Implications for policy and practice

This project is the first to identify and synthesize all available measures for schizophrenia QoC, including those developed specifically for schizophrenia and those from other areas that are relevant to comprehensive healthcare for schizophrenia. This represents an important first step in establishing continuous, population-based measurement of schizophrenia QoC that is essential to developing one of the first learning health systems for improving schizophrenia QoC.

In next steps, we will *select* and *prioritize* QIs from among those identified in this project for measuring schizophrenia QoC in Alberta at a population-level in a follow-up. We will then *apply* the QIs to measure real-world QoC for persons affected by schizophrenia in Alberta using primarily administrative healthcare data. The information will eventually be *mobilized* to increase healthcare data transparency and accountability to stakeholders, and to engage health system decision makers to catalyze improvement. It will advance equity for persons affected by schizophrenia in Alberta by identifying disparities and other areas of low QoC for targeted improvement.

QoC measurement can stimulate improvement by identifying the processes that drive outcomes and directing system changes to optimize care. But, large-scale quality measurement has been slow to expand to mental health conditions and community settings. The above approach – leveraging administrative healthcare data for routine QoC measurement – is innovative and can be applied in other provinces and conditions. This project's findings will thus contribute to advancing QoC measurement and improvement more broadly within mental health.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: Who is Aging at Home and What do They Need?

Lead researcher: Kerry Kuluski, Institute for Better Health, Trillium Health Partners
Lead knowledge user: Liane Fernandes, Canadian Red Cross
Team members: Laura Rosella, Walter Wodchis, Marissa Bird, Elizabeth Mansfield, Robert Reid, Judith Versloot, Kimberley Floyd, Gail Donner, Raymond Applebaum, John McKenna, Sahilaa Thevarajah, Aveneet Bhela, Michelle Marcinow, Lauren Cadel, Arija Birze, Junie Baek, Tashani Parker, Jimmy Hu, Jane Sandercock
Type of project: Evaluation (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: Not applicable
For more information, please contact Tashani Parker, Tashani.Parker@thp.ca
Keywords*:* homecare, long-term care, aging, patient experience, caregiver experience

KEY MESSAGES

Many people in the community, including those on the wait-list for long-term care, prefer to age at home and delay or avoid long-term care admission. We developed personas using quantitative and experiential data (via focus groups with community members from diverse backgrounds) as well as community care packages to provide a better picture of the needs and characteristics of our local study population who are aging in the community. This information provides the decision makers/knowledge users on our grant with a better picture of their local population, local assets and resource gaps that need to be filled to support aging at home.

Our research advanced the Quadruple Aim and health equity by:

- Partnering with local organizations who provide supports for diverse older adults including those who experience structural marginalization. These partnerships enabled us to recruit a diverse sample and design community care packages that reflect the needs of the community.

What is the issue studied and why does this matter?

In our study we engaged with diverse older adults, caregivers and care providers to learn what was required to age at home. The information gathered will help local decision makers better understand the needs of their population. We targeted the following components of the quadruple aim: patient, caregiver and provider experience, and value (by identifying service needs in the community along with local assets).

What approach was taken?

Our study employed a concurrent mixed methods design. We stratified the population waiting for long-term care into groups based on common characteristics. We then conducted focus groups with older adults, caregivers and providers who receive (or deliver) care in the community to present the data and build personas incorporating aspects of their lived experience, social and cultural needs. We then explored services required to age at home for each persona. The study *incorporated the best available data for a more comprehensive view of the characteristics and needs of older adults.* The personas were an effective co-design tool (as a focal point for discussion).

What are the key research findings?

We highlight 5 key findings to date: First, an unexpected but important finding was the **peer support and bonding** that occurred between participants as they reflected on shared lived experiences and raised awareness of local assets. Second, a local asset that was in short supply was **supportive housing** for older adults. Having housing with care services embedded that were culturally appropriate, was strongly desired. Third, **greater flexibility in homecare services** was desired. For example, having support with different tasks tailored to individual needs such as cleaning, cooking, groceries, planning appointments and personal care (bathing, feeding) was needed. Fourth, **more support for caregivers** to help them balance caring for their family member/friend and managing their own life was needed. Some caregivers were providing 3-4+ hours per day of care and feeling stressed in their role. In some cases, children return to their native country for job opportunities due to a lack of local opportunities leaving their aging parents with less support. Fifth, supports to address the **social determinants of health** and **mental health were strongly desired**. We will share these findings with local community leaders and decision makers in our study region including members of the Mississauga Ontario Health Team (a network of local service providers who are building a more integrated health system) to support resource planning for older adults. Future research can explore the feasibility of implementing the recommended community-based resources/care packages in practice. The innovative project methods can also be applied in other settings (including rural, northern communities). In doing so, similarities and differences in local assets, resource gaps and implementation considerations can be made.

NEXT STEPS - Implications for policy and practice

This research applied innovative methods to better understand a local populations' characteristics and needs which can be replicated in other settings in the future. Specifically, the development of personas (and pulling in experiential data) helped to fill critical data gaps that were not available through quantitative datasets routinely used in the healthcare system.

Upon completion of data collection (which is still underway) we will outline all of the local service assets outlined by our participants along with service gaps and present it back to our knowledge users and local decision makers. We will also share the personas with local community service organizations and decision makers as a tool to guide health system planning.

The next step of this research program is to discern the implementation opportunities and barriers to move the designed care packages (services to support older adults to stay at home) into practice. The project has implications for how services are organized (flexibility needed in type and volume of care) and delivered (more options required to provide patients and caregiver autonomy with how care providers are selected including supplementing family for their time).

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

How might policies address growing disparities in access to primary care in Canada?

Lead researcher: Ruth Lavergne, Dalhousie University
Lead knowledge user: Erin Christian , Decision maker, Policy maker
Team members: Sara Allin, Mohammad Hajidazeh, Lindsay Hedden, Alan Katz, George Kephart, Myles Leslie, Emily G. Marshall, David Rudoler, Sarah Spencer, Aidan Bodner, Tai Hollingbery
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: Not applicable
For more information, please contact: ruth.lavergne@dal.ca
Keywords*:* primary care, access to care, equity, policy analysis

KEY MESSAGES

- Disparities in access to primary care have persisted or grown wider over the past 15 years, in all Canadian jurisdictions.
- The absence of measurable goals and meaningful community consultation, as well as tenuous connections between policy responses and identified inequities, may help explain the failure of reforms to improve equity in primary care across Canada.
- **Our research advanced the Quadruple Aim and health equity by** highlighting that approaches to primary care transformation that do not include clear and robust policy responses to address inequities may continue to entrench them.

What is the issue studied and why does this matter?

- **What is the issue?** Despite ongoing primary care reform, there was no comprehensive information about how equity in access to primary care has changed across Canada or about how any changes in equity connect to policy responses.
- **Which key goal(s) of the Quadruple Aim did you target?** Strong primary care is central to delivering good outcomes, value for money, and positive experiences for patients and clinicians, and can also contribute to more equitable experiences and outcomes.
- **How did the work address health equity?** Ideally, primary care can respond effectively to the needs of people experiencing economic and social marginalization and support more equitable health outcomes. As the first and main point of access to health care in Canada, more equitable access to primary care has the potential to improve equity throughout the system.

What approach was taken?

1) We analyzed data from the Canadian Community Health Survey to determine how equity in access to primary care has changed over time across Canada between 2007 and 2018.
2) We reviewed primary care policy documents from 2018 to 2022, tracking if and how equity was discussed and incorporated in policy responses.

What are the key research findings?

- We observe disparities in access to primary care by income, educational attainment, dwelling ownership, immigration, racialization, and sex/gender. Disparities are persistent over time or increasing in the case of income and racialization.
- While the majority of policy documents discussing primary care between 2018 and 2022 acknowledged inequities, only 7% articulated a detailed policy response to address them.
- Findings highlight that primary care reforms that do not explicitly integrate equity as an objective are unlikely to improve equity in access to primary care.
- The Canadian Community Health Survey data used in this analysis are particularly limited in their ability to inform primary care among Indigenous Peoples in Canada. While there are innovative primary care reforms led by Indigenous communities and organizations that warrant study, our analysis cannot capture impacts of innovations on health equity within communities and nations. Different approaches are needed to explore these.

NEXT STEPS - Implications for policy and practice

- Primary care is receiving renewed attention, as multiple jurisdictions are struggling to make sure people can access needed care. This analysis suggests that approaches to primary care transformation that do not explicitly consider equity may continue to entrench inequities.
- The absence of measurable goals, meaningful community consultation, and clear connections between the policy response and inequities mentioned may help explain persistent inequities in primary care across Canada.
- Health leaders are encouraged to design primary care transformation efforts with equity as a priority area of focus, considering the following **key implications** of this research:
    - Include equity as an integral objective in primary care reform.
    - Support models of team-based care with equity mandates and accountability to communities, such as community health centres.
    - Ensure patterns of funding and resource allocation are tailored to needs and responsive as needs change.
    - Ensure equity mandates are reflected in accountability and performance frameworks.
- Careful monitoring of the equity impacts of ongoing policy reforms is needed.

OUTPUTS & PRODUCTS

Healthcare Management Forum blog: Advancing equity in primary care. Ruth Lavergne and Erin Christian. https://healthcaremanagementforum.wordpress.com/2023/08/08/ruth-lavergne-wants-you-to-think-about-advancing-equity-in-primary-care/

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Clinical Integration of Digital Patient-Reported Outcome Measures in Primary Health Care for Chronic Disease Management:Protocol for a Systematic Review

Lead researcher: Annie, LeBlanc Université Laval
Lead knowledge user: Antoine, Groulx , Decision maker, Other
Team members: Maxime Sasseville, PhD; Wilfried Supper , PhD; Jean-Baptiste Gartner, MSc; Géraldine Layani, MD, MSc; Samira Amil, MD, MSc; Peter Sheffield, MSc, MSW; Marie-Pierre Gagnon, PhD; Catherine Hudon, MD, PhD; Sylvie Lambert, PhD; Eugène Attisso, MSc; Victoria Bureau Lagarde, BA; Mylaine Breton, PhD; Marie-Eve Poitras, RN, PhD; Pierre Pluye, MD, PhD; Pierre-Henri Roux-Levy, MD, PhD; James Plaisimond, MA; Frédéric Bergeron, MSI; Rachelle Ashcroft, PhD; Sabrina Wong, RN, PhD; Antoine Groulx, MD, MSc; Nicolas Beaudet, PhD; Jean-Sébastien Paquette, MD, MSc; Natasha D'Anjou; Sylviane Langlois;

Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: CIHR - Institute for Population & Public Health (IPPH)
For more information, please contact Maxime Sasseville, maxime.sasseville@fsi.ulaval.ca
Keywords*:* systematic review; patient-reported outcome measure; primary healthcare; health care; implementation science

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- *Determining the impact of electronic patient-reported outcomes (ePROM) in primary health care for chronic disease management.*
- *Comparing and contrasting characteristics of effective ePROMs' implementation strategies*
- *Describing which ePROMs are implemented in primary health care in chronic disease management.*
- *Describing challenges, barriers, and facilitators to successful implementation of ePROMs in primary health care.*

What is the issue studied and why does this matter?

- ***What is the issue?*** *The development of integrated digital solutions to care pathways is essential for PROMs to have a clinical impact. It has been reaffirmed in the 2021-2026 Canadian Institutes for Health Research's strategic plan that researchers must accelerate digital transformation of health care systems for efficient health measurement and data analysis. However, ePROMs are still not adapted to the clinical context of primary health care, which is an indication of the complexity of integrating these tools in this context.*
- ***Which key goal(s) of the Quadruple Aim did you target?*** *Efficient ePROM implementation has a direct impact on the quintuple aim of improving patient experience, improving health, improving health professionals experience, improving care value, and advancing health equity.*

What approach was taken?

- *A mixed method Systematic review of the literature*
- *The following questions will be addressed: (1) what are the outcomes of ePROMs in primary health care in chronic disease management? (2) What are the effective strategies to implement ePROMs in primary health care? (3) What are the challenges, barriers, and facilitators to successful implementation of ePROMs in primary health care?*
- *We used the RE-AIM (reach, effectiveness, adoption, implementation, maintenance) framework as a data analysis framework.*

What are the key research findings?

- *Our search strategy enabled us to reach 12525 studies. Removing duplicates, we had a total of 8467 studies. In the first selection based on titles and abstracts, we excluded 7666 studies. In the second selection, based on reading the full texts, we excluded 567 studies. In all, 24 studies were retained, 10 qualitative studies, 2 mixed studies and 12 quantitative studies.*
- *The chronic diseases covered by the studies in our review include, but are not limited to, asthma, cardiac problems, multimorbidity, mental health problems, diabetes and multiple and complex cases of chronic disease. Most studies were carried out in the United States and Canada.*
- *The mixed and qualitative studies identified several types of barriers and facilitators to the implementation and effective use of ePROMs: mismatch with the needs of patients and caregivers, impact on caregivers' workload, communication channels, digital literacy, care relationship, and the technical difficulties.*
- *Analysis of the quantitative studies will enable us to determine whether the perceptions reported by patients and caregivers are corroborated by more general findings. At this stage, we note that the results presented by quantitative studies diverge about the effectiveness of ePROMs in improving the treatment of chronic diseases.*

NEXT STEPS - Implications for policy and practice

- *We expect that the results of this review will be relevant for decision makers, health professionals and patients, as knowledge users will be integrated throughout the project.*
- *We will use research networks to reach theses audiences, such as Strategy for Patient-Oriented Research Unit (SPOR), Réseau-1 Québec and the SPOR Evidence Alliance.*
- *We will also develop specific messages to reach target audiences with organizations, newsletters or webinars.*
- *We have a research team that reaches three provinces (Québec, Ontario, British Columbia) and we will work on knowledge products and dissemination strategies tailored to the different jurisdictions.*
- *Results from this study will help support implementation efforts to accelerate innovations and digital transformation of primary healthcare and is highly relevant for clinical management of chronic diseases, healthcare services and policies.*

ENGAGEment des aîné.es recevant des soins à domicile et de leurs proches dans les décisions en partenariat avec les équipes cliniques

Chercheur principal : France Légaré, Université Laval
Utilisateur des connaissances principal : Guy Thibodeau, Décideur, Centre intégré universitaire de santé et de services sociaux de la Capitale-Nationale
Membres de l'équipe : Emmanuelle Aubin, Marie Cimon, Nouha Ben Gaied, Julie Gilbert, Nancy Chénard, Isabelle Violet, Mélanie Gingras, Julie Emond, Julie Bickerstaff, Michèle Morin, Virginie Blanchette, Patrick Archambault, Anik Giguère, Amédé Gogovor, Ali Ben Charif
Type de projet : Application spécifique (mobilisation des connaissances)
Domaine d'étude : Soins de première ligne, soins à domicile et soins communautaires
Autre domaine de recherche/classe : Sans objet
Pour plus d'informations, veuillez contacter : Sabrina Guay-Bélanger
Mots clés *:* décision partagée, soutien à domicile, outil d'aide à la décision, aîné.es, interprofessionnel

PRINCIPAUX MESSAGES

- **Notre recherche a fait avancer les quatre objectifs et l'équité en santé comme suit :**
- La prise de décision partagée (PDP) améliore les expériences de soins et les issues de santé des aîné.es, car elle leur permet de prendre des décisions éclairées en fonction de ce qui est important pour elles et eux, favorisant leur autonomisation et leur bien-être.
- La PDP améliore l'efficience des systèmes de santé puisqu'elle contribue à réduire les effets délétères des options dont l'efficacité n'est pas démontrée, évitant le gaspillage en santé ainsi que les effets délétères possibles. Enfin, elle améliore de l'expérience des équipes cliniques.
- Nous savons que les aîné.es dans le contexte du soutien à domicile (SAD) sont les personnes les moins exposées à la PDP. Par conséquent, notre projet réduit ces iniquités.
- La PDP est justifiée d'un point de vue éthique, autant sur le plan téléologique que déontologique.

Quelle est la question étudiée et pourquoi est-elle importante?

Depuis 2007, nous travaillons avec les utilisateur.trices des connaissances et ce projet a été développé en réponse aux besoins exprimés. Nous avons réalisé une enquête en ligne pancanadienne qui a démontré que les aîné.es recevant du SAD étaient les moins engagé.es dans les décisions en santé. Aussi, notre équipe a réalisé trois sondages pancanadiens auprès d'aîné.es recevant du SAD, proches aidant.es et professionnel.les de la santé. Ces enquêtes ont démontré que les aîné.es font face à plusieurs décisions difficiles qui relèvent de trois domaines : le milieu de vie, les options de traitement et les soins de fin de vie. Ces constats ont permis de développer ce projet afin de répondre aux besoins exprimés pour soutenir la PDP chez les aîné.es qui reçoivent du SAD. Ce projet a pour objectif de prioriser des outils d'aide à la décision spécifiques au SAD. Les outils prioritaires seront ensuite adaptés au contexte québécois et intégré dans une formation interprofessionnelle.

Ce projet vise à améliorer l'engagement des ainé.es qui reçoivent du SAD dans les décisions en santé. Ceci contribuera à améliorer leurs expériences de soins et leurs issues de santé, et favorisera leur autonomisation. Il contribuera à l'équité en favorisant l'engagement de cette population dans les décisions en santé, puisqu'il a été démontré qu'elle était celle qui était le moins exposée à la PDP. Enfin, il contribuera au bien-être des équipes cliniques et à l'amélioration de l'efficience du système de santé.

Quelle a été l'approche adoptée?

Nous avons complété une revue systématique qui a identifié 33 outils d'aide à la décision spécifiques au SAD. Avec un comité de pilotage (aîné.es, proches, professionnel.les de la santé, et décideur.ses avec expertise en soutien à domicile), nous avons procédé à un vote et retenu 10 outils en fonction de l'importance de la décision visée. Nous avons réalisé une enquête en ligne (eDelphi) auprès de 42 participant.es (aîné.es, proches aidant.es, professionnel.les, gestionnaires, expert.es en outils) dans la province de Québec afin de prioriser au maximum 3 des 10 outils précédemment sélectionnés. Nous utiliserons ensuite des méthodes centrées sur l'utilisateur.trice afin d'adapter les outils jugés prioritaires au contexte québécois et développer une formation interprofessionnelle en partenariat avec le comité de pilotage.

Quelles sont les principales conclusions de la recherche?

Depuis le début du projet, toutes les parties prenantes se sont engagées et demeurent enthousiastes à y contribuer. Les 10 outils qui ont été sélectionnés par le comité de pilotage concernent les décisions suivantes : milieu de vie (maintenir l'indépendance dans les activités quotidiennes; arrêter ou non la conduite automobile), gestion des conditions de santé (malnutrition; options pour nourrir les personnes atteintes de démence; options de soins pour la dépression), soins de fin de vie (arrêter ou non les traitement qui maintiennent en vie), soutien aux proches aidant.es (substitut pour prendre les décisions pour une personne en perte d'autonomie; options pour soutenir les proches aidant.es) et soutien aux aîné.es avec troubles de mémoire (maintenir les capacités mentales; options pour assurer la qualité de vie et le confort). Nous avons complété le 1^er^ tour de l'enquête dans lequel nous demandions aux participant.es de prioriser les outils selon des critères relatifs au point de décision (fréquence, difficulté, valeurs et préférences) et à l'outil (mise à jour des évidences scientifiques). 42 participant.es ont complété le questionnaire : aîné.es (14,3%), proches aidant.es (28.5%), professionnel.les (31.0%), gestionnaires (16,7%), membres d'organismes communautaires (4,8%) et expert.es en outils (4,8%). La majorité sont des femmes (85,7 %), âgées de 35 à 54 ans (50,0 %), résidant en ville (53,7 %) et ont des études universitaires (42,9 %). Les deux critères les plus souvent identifiés comme étant important par les participant.es sont la difficulté de la décision et les valeurs et préférences. Après le 1^er^ tour, 6 outils ont été sélectionnés et inclus pour le 2^e^ tour. Les participants devront prioriser ces outils selon les mêmes critères que pour le 1^er^ tour. Enfin, le protocole de la recherche a été publié : https://pubmed.ncbi.nlm.nih.gov/37889512/.

Ce projet fournira des outils pertinents et adaptés aux aîné.es qui font face à des décisions difficiles et à leurs équipes de soins au Québec. Les résultats pourront être utilisés par un ensemble diversifié de parties prenantes : aîné.es recevant du SAD, proches aidant.es, professionnel.les de la santé, gestionnaires, représentant.es d'organismes communautaires et décideur.ses des politiques publiques.

PROCHAINES ÉTAPES – Implications pour la politique et la pratique

Les prochaines étapes seront d’analyser les résultats du 2^e tour de l’enquête en ligne auprès d’aîné.es, proches aidant.es, professionnel.les de la santé, gestionnaires et expert.es en outils afin de sélectionner jusqu’à 3 outils qui seront adaptés au contexte du Québec. Cette adaptation se fera en utilisant des méthodes centrées sur l’utilisateur.trices notamment en révisant les évidences scientifiques et les options disponibles pour les points de décision identifiés. Finalement, ces outils seront intégrés dans une formation interprofessionnelle de la PDP.

Une fois ces étapes terminées, les outils et la formation seront dans un premier temps rendus disponibles aux équipes de soutien à domicile de deux organisations de santé avec lesquelles nous avons un partenariat dans le cadre de ce projet. Ce projet permettra de soutenir les aîné.es recevant du soutien à domicile et leurs proches pour prendre des décisions éclairées en ce qui concerne leur santé, contribuant ainsi à améliorer leurs expériences de soins et leurs issues de santé. Il pourra aussi doter les professionnel.les de la santé et les organisations de santé d’outils pour mieux répondre aux différents besoins des usager.es qui reçoivent du SAD, et ainsi améliorer la prestation de soins et services dans ce contexte.

Ensuite, il est envisagé que nous puissions proposer une seconde étape de mise à l’échelle des outils au sein de l’ensemble du système de santé québécois afin de rejoindre les aîné.es de toutes les régions. Les responsables des politiques publiques (Ministère), de même que les équipes cliniques qui offrent du SAD, sont engagé.es et déterminé.es à soutenir l’autonomisation des aîné.es en contexte de SAD. Cette recherche est une preuve de concept qui permettra de démontrer qu’il y a un appétit qui demeure pour développer des outils afin d’engager les usager.es dans les décisions en santé et ainsi favoriser leur autonomisation. Ce projet aura également permis de fédérer les forces vives afin de développer d’autres outils qui seront nécessaires dans le contexte de SAD. Enfin, la méthodologie utilisée dans ce projet pourra servir de preuve de concept pour réaliser des démarches similaires auprès de populations différentes.

RÉSULTATS ET PRODUITS (facultatif)

Résultat 1 : Développement de nouvelles collaborations et partenariats avec des organisations qui offrent du SAD aux aîné.es et proches aidant.es.
Résultat 2 : Liste des outils d’aide à la décision jugés prioritaires, dont trois outils adaptés pour le Québec
Résultat 3 : Renforcement des capacités (formation de la relève et des professionnel.les)

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

RE-IMAGINING REGULATORY FRAMEWORKS FOR THE MENTAL HEALTH AND SUBSTANCE USE HEALTH WORKFORCE IN CANADA

Lead researcher: Kathleen Leslie, Athabasca University
Lead knowledge user: Mary Bartram , Policy maker, Mental Health Commission of Canada
Team members: Ivy Bourgeault, Jelena Atanackovic, Gord Garner
Type of project: Comparative Policy Analysis (knowledge creation)
Research area studied: The health care workforce
Additional research area/pool: National Standards for Mental Health Services
For more information, please contact Kathleen Leslie, kleslie@athabascau.ca
Keywords: mental health, substance use health, health workforce, regulation, equity

KEY MESSAGES

- Regulation is a key lever for quality and equitable access but may need to be reimagined for the full range of the MHSUH workforce, with learnings from the pandemic.
- Modern regulatory approaches, recognizing global shifts in mobility, new models of care, and lighter touch options for certain provider groups, are needed to ensure equitable access to MHSUH services and providers and support critical workforce planning.
- Our project is meant to advance the Quadruple Aim and health equity by improving equitable access to MHSUH services and providers across Canada. This is of critical importance given the acute global shortages of MHSUH providers and unprecedented gaps in access to MHSUH services that have been exacerbated during the COVID-19 pandemic.

What is the issue studied and why does this matter?

- ***What is the issue?*** The impacts of the COVID-19 pandemic and toxic supply crisis on the mental health and substance use health (MHSUH) of the population are serious and long-lasting. The MHSUH workforce is the backbone of the critical response to emerging MHSUH needs but has been woefully overlooked in research and policy. Gaps in data and regulation are undermining equitable access to services and capacity to undertake workforce planning. The MHSUH workforce urgently requires attention from policy makers to meet the emerging needs arising from the COVID-19 pandemic and toxic supply crisis.
- ***Which key goal(s) of the Quadruple Aim did you target?*** We primarily targeted the aim of improving the provider experience.
- ***How did the work address health equity?*** The fragmented regulatory landscape for MHSUH providers across Canada has negative implications for equitable access to MHSUH services and workforce mobilization. This work identified opportunities to harmonize and re-imagine the regulatory landscape to promote equitable access to MHSUH services and providers.

What approach was taken?

In Phase 1, we conducted a scoping review of academic and grey literature to understand the state of the evidence on regulation of MHSUH providers, identify promising regulatory reform practices, and make recommendations for future research in the field. In Phase 2, we conducted 14 semi-structured key informant interviews to enrich our understanding of the impact of regulation on equitable access to MHSUH services and providers in Canada. Phase 3 involved synthesizing the data from the first two phases. Our work throughout the project was guided by an advisory committee of MHSUH workforce organizations and those with lived and living expertise.

What are the key research findings?

In Phase 1, we included 49 academic papers and 184 grey literature documents in our scoping review. We identified four key findings from our synthesis of the literature:

- A lack of quality assurance and regulatory standardization is perceived as a barrier to equitable MHSUH access;
- Strengthening training for specific MHSUH providers could improve equity in service provision;
- Improving visibility and integration for unregulated providers could support the MHSUH workforce; and
- Regulatory flexibility supported access to MHSUH providers and services during the pandemic.

In Phase 2, we identified themes and subthemes from our analysis of the qualitative interview data. These were as follows:

- *Regulatory mechanisms needed to improve safer care for all*. Subthemes included a need for cross-jurisdictional harmonization, understanding how certain inequities in public protection are based on policy legacies and stigma, and the impact of regulatory gaps on access and funding.
- *Right touch options for quality assurance.* Subthemes included recognizing alternatives to statutory registration schemes depending on risk, the potential value of competency-based approaches, and regulatory options for providers whose expertise is based on lived experience.
- *Regulatory frameworks to support system integration.* This theme focused on supporting integration of MHSUH providers into care teams through quality assurance and regulatory mechanisms.

We identified key similarities but also differences between the mental health and substance use health workforces related to criminalization of substances, distrust of the state, and stigma. Context and policy legacies matter, with gaps and inequities in funding for MHSUH services in Canada showing up in gaps and inequities in regulation.

We are building on this work in our third MHSUH workforce research project, a 2023-2024 Catalyst grant developing policy options to inform a relevant, fit-for-purpose pan-Canadian MHSUH workforce strategy.

NEXT STEPS - Implications for policy and practice

Our findings underscore the need to strengthen our understanding of issues related to MHSUH workforce regulatory models, including whether certain regulatory frameworks create unnecessary barriers to practice, how to harmonize frameworks while allowing for needed nuance and flexibility, and how to provide quality assurance for providers who rely on expertise gained through lived experience. Modern regulatory approaches, recognizing global shifts in mobility, new models of care, and lighter touch options for certain provider groups, are needed to ensure equitable access to MHSUH services and providers, as well as enable needed critical workforce planning. This is of critical importance given the acute global shortages of MHSUH providers and unprecedented gaps in access to MHSUH services that have been exacerbated during the COVID-19 pandemic.

Key implications for practice include:

- Unregulated MHSUH providers could be better integrated into existing MHSUH services and sectors for effective team-based models of care.
- Cultural competence in the workforce should be prioritized while providing adequate quality assurance mechanisms for providers who rely on lived experience.

Four priorities for policy action are as follows:

- Build flexibility into legislation and policy for regulations that allow cross-jurisdiction virtual MHSUH services and mobility.
- Support self-governed frameworks for quality assurance among unregulated providers (e.g., peer support, addiction counselling, psychosocial rehabilitation workers).
- Recognize value of lived experience in policy, remuneration, and integrated teams.
- Expedite regulation of psychotherapists and counselling therapists across the country (BC, SK, AB, MB, NL).

We also identified several areas to focus future research. Evaluating the outcomes of regulatory frameworks is an important area of research that should be expanded and include elements around impacts on equitable access to providers. Comparative research should examine and contrast regulatory structures related to MHSUH workforces in different countries to highlight the contexts with the most promising regulatory approaches.

Co-construire une évaluation d'implantation d'une clinique de proximité en traitement des dépendances à Longueuil, Montérégie

Chercheur principal : Andrée-Anne Paré-Plante et Christine Loignon, Département de médecine de famille et de médecine d'urgence, Université de Sherbrooke
Utilisateur des connaissances principal : David-Martin Milot, Praticien, Département des sciences de la santé communautaire, Université de Sherbrooke
Membres de l'équipe : Shane Knight, Karine Bertrand, Lara Maillet, François Racine-Hemmings, Caroline Leblanc, Laurence Fortin

Type de projet : Subventions d'évaluation (création des connaissances)
Domaine d'étude : Soins de première ligne, soins à domicile et soins communautaires
Autre domaine de recherche/classe : Sans objet

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Mots clés*:* Soins de santé primaires, Dépendance, Opioïdes, Populations marginalisées

PRINCIPAUX MESSAGES

Notre recherche a fait avancer les quatre objectifs et l'équité en santé comme suit :

- Identification des besoins en santé des personnes marginalisées et en situation d'itinérance avec une dépendance aux opioïdes dans une communauté qui était dépourvue en soins primaires intégrés en dépendance.
- Intégration dans la recherche d'une équipe clinique et de partenaires communautaires dont c'est la première expérience. Ces partenaires impliqués auprès des personnes les plus défavorisées ont eu une expérience positive et souhaitent s'impliquer à nouveau en recherche.
- Construction et participation à la recherche de futurs professionnels de la santé. Ces apprenants ont vécu des expériences leur permettant de développer les attitudes nécessaires pour diminuer les barrières d'accès aux soins des personnes les plus vulnérables.
- Diffusion des résultats auprès de la communauté locale et des décideurs du réseau de la santé. Cette diffusion permet de pérenniser et bonifier l'offre de soins pour les personnes les plus marginalisées de notre région.

Quelle est la question étudiée et pourquoi est-elle importante?

- L'objectif principal de cette recherche était de co-construire l'offre de services de la clinique de proximité en favorisant le dialogue entre les partenaires locaux impliqués dans l'offre de services de cette clinique, par et pour les personnes marginalisées avec un trouble d'usage des opioïdes (TUO). La participation des personnes marginalisées vivant avec un TUO ou les personnes utilisant des drogues injectables (PUDI) demeure rare dans les projets d'évaluation des soins de santé. Le projet visait à leur donner une voix significative dans le développement d'une nouvelle clinique de traitement de dépendance aux opioïdes qui a débuté ses services à Longueuil en Montérégie à l'automne 2022. Ainsi, les soins offerts sont adaptés à leurs besoins et les barrières d'accès sont diminuées.

Quelle a été l'approche adoptée?

Une évaluation participative utilisant une approche qualitative reposant sur plusieurs méthodes (rencontres avec un comité de pairs, photovoix avec des personnes en situation d'itinérance et avec une dépendance aux opioïdes, observations sur le terrain, entrevues individuelles semi-structurées avec professionnels appuyé d'un journal de bord des observations des activités et des entrevues informelles avec les acteurs sur le terrain) a été menée dès le début du projet afin de soutenir l'évaluation participative développementale des services de la clinique.

Quelles sont les principales conclusions de la recherche?

- Cette recherche produira des résultats qui informeront les décideurs avec des données probantes jugées cohérentes pour les usagers et pour la communauté, tant sur la qualité des soins et des services que sur leur pertinence et efficience (amélioration du rapport qualité-prix) et leur capacité à améliorer la santé de la population locale atteinte d'une dépendance aux opioïdes et en situation de précarité (amélioration de la santé des populations). Ainsi, le processus menant au développement d'une clinique de proximité en traitement des dépendances aux opioïdes hors des grands centres urbains canadiens, tout comme son évaluation et son adaptation subséquente, permettent d'améliorer l'équité en santé pour tous. Les atouts du projet présenté sont que l'intervention est co-construite, qu'elle est monitorée et que le processus d'évaluation est débuté dans la même démarche.

PROCHAINES ÉTAPES – Implications pour la politique et la pratique

Le développement d'une clinique de proximité en soins primaires intégrés avec les soins en dépendance pour les personnes les plus marginales permet de répondre à un besoin criant dans le contexte du Canada qui traverse une crise des opioïdes et des surdoses sans précédent. Ce projet de recherche a permis d'appuyer ce développement sur une démarche scientifique participative rigoureuse en co-construisant le modèle de soins avec les usagers PUDI et en situation d'itinérance vivant avec un TUO.

Avec les partenariats développés, la prochaine étape sera d'améliorer la fluidité des soins, des services préventifs déployés et des services communautaires dans la région afin de prévenir les surdoses d'une façon plus globale et systématique. Un tel modèle intégré en soins primaires, communautaires et de santé publique pourrait être déployé à grande échelle dans plusieurs contextes canadiens.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Navigation for youth mental health and addictions: A realist review and synthesis of approaches and practices (The NavMAP standards project)

Lead researcher: Roula Markoulakis, Sunnybrook Research Institute
Lead knowledge user: Sugy Kodeeswaran , Decision maker, Decision maker
Team members: Michelle Di Febo, James Fleming, Adina Hauser, Liisa Kuuter, Cathy Walsh, David Willis, Dr. Anthony Levitt, Dr. Amy Cheung, Kristin Cleverley, Sander Hitzig, Kristina Kokorelias
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Integration of care
Additional research area/pool: National Standards for Mental Health Services
For more information, please contact Simran.arora@sunnybrook.ca
Keywords*:* navigation, mental health, youth, families, standards

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by developing standards that:

- *Provide a set of guidelines for youth mental health and addictions (MHA) navigation services, with a focus on equity, diversity, inclusion, and accessibility in care.*
- *Support improved service integration and continuity of care for youth and families, thereby improving patient experience and outcomes*
- *Promote evidence-based decision making to support the scale and spread of youth MHA navigation programs, ensuring improved provider experience and system sustainability.*

What is the issue studied and why does this matter?

Youth with mental health and/or addictions (MHA) concerns in Canada encounter many barriers when accessing appropriate MHA care. Less than 20% of this population receive appropriates MHA treatment. The MHA system is fragmented and leaves many individuals unsupported. Appropriate system supports are needed to help youth and their families find and access MHA care that will address their unique needs. Youth MHA navigation programs are patient-centered services that help youth and their families address barriers to accessing care. Several youth MHA navigation programs have emerged in Canada with varying models of care. A comprehensive review of evidence in this field was needed to create an in-depth understanding of these programs. Existing evidence was consolidated into a set of standards which can inform service development and delivery. Comprehensive evidence is also needed to promote continuous care and catalyze the scale and spread of these navigation programs across Canada, especially to address the needs of vulnerable groups experiencing greater impacts due to the barriers in the MHA system. Providing youth MHA navigation services with consolidated standards will help enhance quality and catalyze the scale and spread of these programs to ensure timely and equitable access to MHA care.

What approach was taken?

This project utilizes the Realist Review and Synthesis methodology to develop standards. This project was conducted over several phases. We consulted different stakeholders (including the research team, service providers, decision makers, and individuals with lived experience) to define the scope of the project and develop a search strategy. We reviewed academic and grey literature and conducted an environmental scan of existing youth MHA navigation programs. We interviewed dozens of navigation programs across the country. We are synthesizing the information and generating the draft standards. By the time of the workshop, we will have conducted another community consultation for feedback, after which the standards will be finalized and disseminated.

What are the key research findings?

The NavMAP Standards have 10 sections – 1) Navigation Team Composition and Credentials – includes professionals involved on the navigation team, trainings offered to front-line staff, and the credentials of navigators.; 2) Service delivery – includes elements of navigation process, modality of support, privacy/confidentiality processes, and frameworks used.; 3) Service access – includes outreach into the target population, access issues addressed in the mental health system, and types of technology used. 4) Needs of Target Population – includes processes used to collect client information and local needs/barriers/gaps.; 5) EDI health equity – includes efforts made to promote equity, diversity, and inclusion, languages offered to youth/families, and efforts made to support accessibility needs.; 6) Lived experience engagement and outreach – includes efforts made to promote youth/family-centeredness, peer support provided, advisory councils present, and efforts made to spread awareness about MHA.; 7) Community collaboration – includes efforts made to build and sustain relationships with service providers and community services.; 8) System resource options – includes the types of system navigated by navigators, databases used, and service information monitored.; 9) Sustainability – includes funding sources and efforts made to sustain the program.; 10) Outcomes – includes efforts made to evaluate the program, outcomes monitored and evaluated, and efforts made to report evaluation findings.

NEXT STEPS - Implications for policy and practice

We have interviewed navigation programs across Canada and are in the process of analyzing and synthesizing the information. We gathered information from a variety of navigation programs including ones that support Indigenous populations and university students, to gain a comprehensive understanding of navigation practices and models. This information was used to generate the NavMAP standards. We will highlight strengths of navigation programs as well as areas in which further work needs to be conducted. After developing the standards, we will gather feedback from multiple stakeholders and publish the standards. We will publish original manuscripts, present the work at conferences, and host webinars to present findings. We will also develop a toolkit which will convey the findings in plain language for youth, families, service providers, and decision makers.

Since navigation supports have emerged as a valuable support in the MHA system, this comprehensive set of standards will promote evidence-based decision making and set expectations for current and future MHA navigation services. A cohesive, innovative approach is needed in the MHA system to help youth and their families access and navigate appropriate supports. Navigation programs are an innovation in MHA care that support youth and families in accessing timely care and ensure undisrupted transitions from the child MHA system to the adult MHA system. By enhancing understanding of MHA navigation through these standards, decision-makers and service providers will be provided with a framework to develop and sustain youth MHA navigation programs across Canada.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE Person-Centred Plans in Community Care Organizations

Lead researcher: Maria Mathews Department of Family Medicine, Western University
Lead knowledge user: Brian Dunne, Healthcare administrator, PHSS- Medical & Complex Care in Community
Team members: Donnie Anthony, Ruth Armstrong, Megann Dong, Samina Idrees, Roxanne Isard, Donna Ladouceur, Yona Lunsky, Leslie Meredith, Bridget Ryan, Dana Ryan, Shannon Sibbald, Gillian Young
Type of project: Evaluation (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: Not applicable
For more information, please contact: Leslie Meredith leslie.meredith@schulich.uwo.ca
Keywords*: patient centred plan, community care, intellectual and developmental delays, disability*

KEY MESSAGES

- Our research advanced the Quadruple Aim and health equity by illustrating that person-centred care plans (PCPs) can improve the well-being and engagement in the care of persons-supported by community care organizations. PCPs can also serve to improve provider experiences which can lead to improved worker retention.

What is the issue studied and why does this matter?

- ***What is the issue?***
  In recent decades, governments across North America have enacted policies requiring community-care agencies to adopt an individualized or person-centred approach to service delivery. Person-centred care refers to a model of care in which programs and services are developed in collaboration with persons-supported and tailored to their unique needs and goals (in community-care, the term 'person-supported' is preferred over 'patient'). However, there is a lack of consensus on how to operationalize person-centred care plans (PCPs) in practice.

- ***Which key goal(s) of the Quadruple Aim did you target?***
  We targeted the 'person-supported experience' aim; our findings suggest that PCPs also address the 'provider experiences' aim.

- ***How did the work address health equity?***
  The community care sector serves a heterogeneous population that includes individuals with physical and developmental disabilities and complex medical conditions. Individuals in this population are among the most vulnerable due to their complex care needs and the substantial challenges they face accessing timely and appropriate care. They have poorer health outcomes than the general population.

What approach was taken?

What research methods or approach did you employ?

We partnered with PHSS Medical and Complex Care in Community (PHSS), a community-care organization identified as a leader in the use of PCPs. We conducted a scoping review on PCPs in community care to describe:

- PCPs
- the supports and barriers to implementing PCPs, and
- the impacts of PCPs.

We also interviewed 19 persons-supported by PHSS, 11 PHSS staff, and 12 administrators from comparable community-care organizations in South-Western Ontario to learn:

- how PCPs were developed and implemented
- the benefits and challenges of PCPs for persons-supported, staff, and organizations, and
- the facilitators and barriers to implementing PCPs.

What are the key research findings?

What are your main research findings and/or key outcomes?

Despite the strong advocacy around person-centred care, there is limited literature describing the implementation and evaluation of PCPs in this population. There is a general lack of consensus on the nature, purpose, creation, and implementation of PCPs.

Although mandated, PCPs are differentially applied by community-care organizations in Ontario– the purpose, breadth and depth of the PCPs vary across organizations. The PCP process in community-care organizations in Ontario is largely informed by organizational context, namely the characteristics of the population served and the nature of the services offered (medical or social care-oriented, short or long-term time frame). The PCP process involves initial and continued consultation with persons-supported to tailor plans to their specific needs and goals.

At PHSS, PCPs contribute positively to the well-being and quality of life of the person supported, along with (or through), engagement with families and the broader community. PCPs positively contribute to organizational culture by defining and operationalizing values, aligning person-supported and staff goals. PCPs also reinforce accountability to persons-supported, to staff (including management), and to Ministries providing funding. PHSS use the PCPs to schedule and match staff to persons-supported, an approach to staffing that in turn promotes staff empowerment and retention.

Key challenges to creating and implementing PCPs include the ability of the person-supported to communicate their goals and needs, changing health status and care needs, insufficient funding to provide appropriate staffing and infrastructure supports (e.g., transportation), and staff turnover.

NEXT STEPS - Implications for policy and practice

What are the key implications of this research?

PCPs are an important tool for addressing health inequities among persons-supported by the community care organizations. PCPs have the potential to improve the health and quality of life of persons-supported.

PCPs also serve as a promising tool to improve community-care staff wellbeing and retention.

What are the next steps for policy and/or practice, if any?

Addressing key challenges to PCP implementation is critical to realizing the benefits of PCPs. These challenges include addressing staff shortages and providing the funding and infrastructure critical to meeting the care needs of persons-supported by community-care organizations.

As person-centred approaches are increasingly mandated by governments, there is a need for more evidence and guidance on the implementation and outcomes of PCPs to identify and support best and wise practices across the sector.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

NP/Physician collaborative models of care: advancing our understanding

Lead researcher: Dr. Katherine McGilton, KITE Research Institute, Toronto Rehabilitation Institute, UHN
Lead knowledge user: Gail Dobell , Decision maker, Other Ontario Health
Team members: Dr. Souraya Sidani, Dr. Sid Feldman, Dr. Carrie McAiney, Dr. Sharon Kaasalainen, Dr. Ruth Martin-Misener, Dr. Jennifer Bethell

Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: The health care workforce
Additional research area/pool: Not applicable
For more information, please contact kathy.mcgilton@uhn.ca
Keywords*:* workforce, long-term care, older adults, models of care, health care providers

Our research advanced the Quadruple Aim and health equity by:

- *Synthesizing knowledge on NP/physician collaborative care models in the LTC sector to provide decision-makers with high-quality, timely evidence*
- *Identifying structures, processes, and outcomes of collaborative models of care*
- *Identifying structural enablers and barriers to enabling collaborative practices at the macro, meso, and micro levels*
- *Identifying facilitators and challenges to developing collaborative relationships*

What is the issue studied and why does this matter?

Finding and engaging primary care providers for regular delivery of chronic care, and timely access to acute and episodic illness care for long-term care home (LTCH) residents has been challenging. In response, an increasing number of residents receive care from physicians collaborating with nurse practitioners (NPs), who are graduate-prepared registered nurses that are able to independently diagnose, prescribe medications, and perform medical procedures. Despite the increase in collaborative care between NPs and physicians, stakeholders have identified key knowledge gaps, including 1) which types of NP/physician collaborative models of care work in the LTC setting, 2) what resources and capacities are needed to ensure effective collaboration, and 3) a framework to guide evaluation of the NP/MD models of care in relation to impact on LTCH residents, staff, and the healthcare system. Our study aimed to synthesize the current available knowledge, allowing for the creation of an optimal workforce experience for NPs and physicians that ensures equitable access to care for LTCH residents and contributes to positive outcomes.

What approach was taken?

The study consisted of two sequential phases and was guided by an integrated approach to research in which stakeholders were actively engaged throughout all stages of the project. Phase 1 consisted of a scoping review of the scientific and grey literature to 1) describe the structures, processes, and outcomes of collaborative models of care between NPs and physicians in LTC and 2) identify enablers and barriers to implementing collaborative practices. Phase 2 was guided by qualitative methods and consisted of semi-structured interviews with NPs and physicians with experience working in collaborative practices in LTC.

What are the key research findings?

In the scoping review, NPs and physicians were identified as collaborating within five main care models: 1) managed care programs, 2) models in which the NP is employed by the LTCHs, 3) NP-led acute care outreach teams; 4) NPs hired by groups of physicians; 5) NP consultants. The main structural factors of collaborative NP/physician care models include role descriptions, remuneration policies, and workload. Resident, staff, and health system outcomes associated with five different care models were identified, however how these outcomes related to effective collaboration remains unclear. Few studies explicitly described the processes or the 'how to' enable and facilitate collaboration between the two healthcare providers, revealing a gap in the literature. Primary enablers to implementing collaborative practices include the absence of legislative restrictions around NP scope of practice, support from LTCH leaders (e.g. administrators and directors of nursing), and the presence of interprofessional teamwork.

Preliminary findings of the semi-structured interviews reveal the facilitators and challenges to building collaborative relationships and the structural supports at the LTCH level necessary for these relationships to flourish.

Collaboration between NPs and physicians is a complicated process requiring commitment from healthcare professionals, LTCH leaders and staff, and policymakers.

NEXT STEPS - Implications for policy and practice

Funding models must acknowledge both NPs and physicians working within the LTC environment, and their contributions to resident care to enable both professions to practice in accordance with their core competencies. Dedicated funding is necessary for all LTCHs in Ontario to ensure equitable access to timely primary, episodic and palliative care, particularly for LTCHs in rural communities. The integration of, and access to, nurse practitioners is a viable and clear solution to address the shortage of timely medical care that LTCH residents face. Funding models must ensure that the LTC sector is able to provide compensation to NPs that is comparable to other healthcare sectors to reduce wage disparity and facilitate the recruitment and retention of NPs.

Legislative restrictions preventing NPs from practicing to their full scope of practice pose a barrier to efficient collaborative care and equitable access to health care. Policymakers need to act on these restrictions by removing legislative barriers and reconciling provincial differences in the operationalization of the NP role.

LTCH leaders and staff play an important role in supporting collaborative practice between NPs and physicians and should be provided with resources to enable the flourishing of a work environment that is conducive to collaboration between all team members. Role clarity, clear definition of responsibilities, and recognition and understanding of these responsibilities are essential for the successful implementation of collaborative NP/physician care models moving forward.

It is important to ensure that NPs and physicians are exposed to interprofessional teams and work in collaborative models during their educational years to support collaborative practices upon graduation. Additionally, access to geriatric education and mentorship in LTCH placements would support practitioners as NP roles are implemented.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Developing and Testing Educational Materials and Simulation Training Scenarios to support Indigenous directed Anti-Racism Efforts in Emergency Departments [Short title: Anti-Racism Simulation]

Lead researchers: Patrick McLane, Lea Bill, Ghazwan Altabbaa, Pamela Roach
Lead knowledge user: Val Austen Wiebe
Team members: Bonnie Healy, Brian Holroyd, Rita Henderson, Richard Oster, Katherine Rittenbach, Ashton James, Reagan Bartel, Sherri Kashuba, Eddy Lang, Eunice Louis, Kris Janvier, Lorraine Muskwa, Tara Fuselli, Joanna Gladue, Anna Maria Mundell, Ken Scott, Kienan Williams

Type of project: Evaluation (knowledge creation)
Research area studied: The health care workforce
Additional research area/pool: CIHR - Institute for Population & Public Health (IPPH)
For more information, please contact Patrick McLane, mclane@ualberta.ca

Keywords: simulation, equity-oriented care, education

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Advancing collaborative relationships among First Nations organizations, the Métis Nation of Alberta, health system organizations, clinicians, and academic team members.
- Co-developing simulation scenarios based on research evidence for emergency health care providers to practice delivering equity-oriented care and countering cognitive biases.
- Developing theoretical foundations for training emergency care providers to deliver anti-racist and equity-oriented care.
- Enhancing the capacity of non-Indigenous researchers and decision-makers to work with Indigenous organizations to advance health equity.

What is the issue studied and why does this matter?

- Emergency departments (ED) are an important health service accessed disproportionately by Indigenous populations compared to non-Indigenous populations. Research demonstrates negative experiences (e.g., racism, stereotyping) for Indigenous patients in EDs.
- This project supports ED clinicians, as they have expressed a need for anti-racism tools and resources tailored to emergency care.
- Simulation training will help to improve care for Indigenous patients through providing ED clinicians with strategies for countering racist stereotypes and factors that lead to reliance on these stereotypes, thereby theoretically decreasing treatment errors and inequitable care for Indigenous patients.
- Improvements to care are intended to result in improvements to health and health system operations, through decreases in misdiagnoses and delayed diagnoses.
- Through partnership with Indigenous organizations, academics and practice leaders, we are enhancing the capacity of non-Indigenous researchers and decision-makers to work with Indigenous organizations to advance health equity.

What approach was taken?

- We partnered with the Alberta First Nations Information Governance Centre (AFNIGC), First Nations organizations, the Métis Nation of Alberta (MNA), researchers at the University of Alberta and University of Calgary, and Alberta Health Services (AHS) programs.
- Team members co-developed education objectives, and met to review cognitive biases, stereotypes and strategies to mitigate bias.
- We drafted six scenario outlines based on real patient experiences, and selected four for testing.
- We developed a robust plan for testing our scenarios with provider learners.
- We supported a summer student to complete a scoping review on anti-racism education in EDs.

What are the key research findings?

Current published ED anti-racism education approaches are largely disconnected from broader anti-racism literature.

Our co-design work has led us to the following learning objectives. Learners in each session will:

- Learn about, recognize, and reflect on systemic disparities in health care policy, funding, and delivery for Indigenous peoples which impact emergency department use.
- Discuss how routine emergency department practices of care rationing and patient categorization interact with racism, cognitive biases and stereotypes to lead to disparities in care for Indigenous patients.
- Understand and reflect on how the practice context (e.g., resources, policy, education) shapes provider perceptions about the purposes of emergency care and subsequent treatment of patients.
- Improve knowledge of equity-oriented skills and strategies to mitigate biases, improve their ED, counter stereotypes, build rapport with patients, and reduce racial disparities in emergency care.
- Describe how they could apply these skills and strategies.

These learning objectives are informed by the principles below.

- Simulation lessons we developed go beyond the concept of cultural competency to focus on concepts of equity-oriented and culturally safe care, which attend to how racism functions through inequities in power and resources by ‘race’.
- Key factual learnings about systemic inequities may help providers to re-orient their perspectives on their practice.
- Simulation training should focus on systems factors disposing providers to rely on anti-Indigenous stereotypes (e.g. anchoring to prior diagnoses in ED charts, pressures to abbreviate assessment and treatment in EDs) and the role of systemic inequities in reinforcing stereotypes of Indigenous patients (e.g. lack of primary care reinforcing stereotypes of “misuse” of ED).
- Simulation should not focus on individual provider’s feelings or internal motivations, as this detracts from a focus on systems issues.
- Evaluation will focus on provider descriptions of actions they can take following the simulation training, rather than changes to their attitudes.

NEXT STEPS - Implications for policy and practice

- We have built foundations for anti-racism education in emergency care through co-design among First Nations, Métis, and non-Indigenous clinicians, researchers, educators, and health systems leaders.
- Our approach re-orients education away from a typical individualistic focus on provider psychology to focus on system factors that reinforce stereotypes and dispose providers to rely on them, without neglecting the role of cognitive processes that activate stereotypes in particular patient-provider interactions.
- Simulation training will help to improve care for Indigenous patients through providing ED clinicians with strategies for countering racist stereotypes and factors that lead to reliance on these stereotypes, thereby theoretically decreasing treatment errors and inequitable care for Indigenous patients
- Improvements to care are intended to result in improvements to healthcare system operations, through decreases in misdiagnoses and delayed diagnoses.
- With partners we have taken the opportunity to obtain a $1.75M CIHR project grant for a four-year anti-racism intervention project. This will allow us to sustain our partnerships and ensure education approaches developed through this project will inform future education efforts in EDs.
- Moreover, the intervention project will allow us to examine patient outcomes (which were beyond the scope of this education development project).
- After our scenarios and education materials are refined through testing they will be published online for use by Indigenous organizations and EDs in Alberta and beyond, with appropriate adaptations.

OUTPUTS & PRODUCTS (optional)

Output 1: 4 Simulation Scenarios.
Output 2: Extensive Pre-Brief and Debrief Scripts and Draft Facilitators' Guide.
Output 3: Scenario Evaluation tools.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Exploring the Adoption of a New Clinical Information System among Specialists in a Tertiary Hospital in Alberta

Lead researcher: Dev Menon, University of Alberta
Lead knowledge user: Sean Chilton , Decision maker, Alberta Health Services.
Team members: Rob Pauly; David Bigam; Tim Graham; Craig Kuziemsky; Melita Avdagovska; Tania Stafinski; Narmin Kassam.
Type of project: Evaluation (knowledge creation)
Research area studied: The health care workforce
Additional research area/pool: Not applicable
For more information, please contact Dev Menon at menon@ualberta.ca
Keywords: clinical information systems, electronic health records, specialists

KEY MESSAGES

- Our research advanced the Quadruple Aim and health equity by:
    - ***Establishing the Foundation***: We have underscored the critical importance of gaining an understanding of how clinical information systems capture and measure usage by healthcare providers. This foundational insight serves as a cornerstone for subsequent investigations relevant to the fourth quadrant.
    - ***Enabling Future Studies***: Our work lays the groundwork for forthcoming research endeavors. These future studies will focus formulating best practices for system implementation and continued use.
    - ***Paving the Way***: While our current study may not directly establish the included metrics as predictors of provider satisfaction, it does provide trends that can serve as catalysts for discussions and lay the groundwork for future Canadian studies in this critical domain.

What is the issue studied and why does this matter?

- Clinical information systems (CIS), which encompass electronic health record (EHR) systems, offer numerous advantages in healthcare, including easy access to real-time patient data, workflow enhancement, automation of tasks, and evidence-based care. However, their implementation has also introduced unintended negative consequences, particularly related to an increased burden on healthcare providers.
- Despite these efforts, ongoing discussions persist regarding the true impact of health information technologies, like CIS, on provider well-being and job satisfaction.
- Most existing studies on CIS come from the United States, where documentation requirements may be more weighty than in Canada. These studies highlight the impact on specialists' time, inbox management, administrative tasks, and after-hours work. Notably, much of the electronic inbox work occurs outside of scheduled hours.
- While numerous editorials and opinions suggest that health information technologies, such as CIS, might contribute to physician dissatisfaction, there is limited empirical research on physicians' perceptions of their impact on job satisfaction, especially in Canada.
- The current study addresses this knowledge gap by examining the usage metrics of Connect Care, the CIS implemented by Alberta Health Services (AHS), among specialists in Alberta. This research aimed to provide a foundational understanding of how CIS captures provider metrics in the Canadian context.

What approach was taken?

To track the evolving trends in clinical information system usage by specialists following the introduction of Connect Care at the University of Alberta Hospital, we conducted a descriptive study. Given that research utilizing Connect Care data is still in its emerging stages, we deemed this study design to be most suitable. Study sites within the UAH were selected based on the length of time that they had been using the CIS. The departments of Medicine and Surgery at the UAH were part of the first wave of the AHS Connect Care implementation.

What are the key research findings?

- In total, 71 providers were included in the analysis from 19 different specialties:
    - The implementation of Connect Care by AHS has brought significant changes to how healthcare providers capture and share information, involving modifications in workflows, processes, and charting approaches.
    - Despite the aim of uniformity, variations in system usage among participating providers were identified in the current study.
    - When analyzing time spent in different system modules, it was found that all providers allocated the majority of their time to "Notes per day." This trend aligns with existing literature, which highlights an increase in note length over the years.
    - In terms of work outside of scheduled hours, the analysis revealed differences between provider groups. The medical FTE < 0.5 group spent the most time on unscheduled days, while the medical FTE > 0.5 group dedicated more time to activities outside scheduled hours. The surgical group used Connect Care for work during unconventional hours, with "Pajama Time" being the dominant category.
    - Trend analysis indicated statistically significant increases in various metrics across all groups, including appointments per day, turnaround time, time outside scheduled hours, and pajama time. In general, the most prevalent trend was an increase in metrics over time, even though the practical significance of these increases may be minimal.
    - All providers experienced statistically significant increases in time outside scheduled hours, time on unscheduled days, time outside of 7 AM to 7 PM, and pajama time. Although our study did not identify the specific reasons for these increases, it is evident that providers are fulfilling their duties outside of their regular work hours.

NEXT STEPS - Implications for policy and practice

The study identifies several areas for future research:

1. **Exploring Provider Satisfaction and Burnout**: Future studies should investigate the correlation between the metrics used in this study and provider satisfaction and burnout related to CIS use. This would help understand how specific CIS interactions affect provider well-being.
2. **Qualitative Exploration**: Qualitative studies should delve into the individual experiences of healthcare providers concerning their use of CIS, examining the discrepancies between actual and perceived CIS use.
3. **Part-Time vs. Full-Time Providers**: Research should focus on how part-time and full-time clinical schedules influence CIS use. Understanding the differences in usage patterns between these groups can inform system optimization.
4. **Specialty Impact**: Future studies should explore how different medical specialties affect CIS usage habits. Variations in workflows and documentation needs may lead to distinct patterns of system interaction.
5. **Gender Impact**: Future studies on potential gender-based disparities in CIS use and engagement.
6. **Quality Outcomes**: Research should investigate the association between CIS usage metrics and healthcare quality outcomes. This can shed light on how effective CIS use impacts patient care.
7. **Data Quality Appraisal**: Researchers should work on establishing methods to verify data accuracy and completeness.

The study identifies highlights lessons learned:

1. **Familiarization with CIS**: Researchers should invest time in becoming familiar with the specific CIS or EHR platform they intend to study. Understanding the available data and how it is collected are essential for designing meaningful research.
2. **Data Retrieval Processes**: Clear processes for retrieving data from CIS systems need to be established. Delays and uncertainties can occur, so researchers should prepare for potential challenges.
3. **Domain Knowledge**: Collaboration with experts in healthcare practices and data processing is vital when analyzing CIS data. Specialists can identify issues with data completeness and relevance to care practices.
4. **Completeness of Data**: Researchers should scrutinize data for completeness and appropriateness of inclusion criteria for metrics. Incomplete data can lead to underestimations of the impact of CIS on workload.

This study emphasizes the importance of understanding how CIS systems capture and measure provider use. While it does not directly predict provider satisfaction or burnout, it provides valuable insights into usage trends.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE Advancing Knowledge on the Implementation of Intimate Partner Violence (IPV) Screening Programs in Trauma Care Settings in Alberta, Canada

Lead researcher: Dr. Stephanie Montesanti, School of Public Health, University of Alberta
Lead knowledge user: Dr. Nori Bradley , Health care practitioner, University of Alberta Hospital
Team members: Karen Andres, Sandy Widder, Michael Paulden, Tracy Tarapaski, Anika Sehgal, Sarah Demedeiros
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: General IHSPR Pool
Additional research area/pool: Not applicable
For more information, please contact: Stephanie Montesanti montesan@ualberta.ca or Sarah Demedeiros demedeir@ualberta.ca

KEY MESSAGES

- **Our research advanced the Quadruple Aim and health equity by generating knowledge on:** 1) how hospitalized trauma patients experience and receive care and support when admitted for intimate partner violence (IPV)-related injuries, 2) the barriers and challenges perceived by trauma care providers with IPV screening and assessment, and 3) effective screening measures and approaches to prevent further harm and healthcare utilization.
- IPV survivors' experiences should be grounded within screening tools to facilitate disclosure in a safe and supportive environment. Findings highlight the potential for intervention, support, and referrals to break the cycle of violence and facilitate pathways to recovery.

What is the issue studied and why does this matter?

- IPV is the leading cause of serious injury and the second leading cause of death among reproductive age women in Canada. IPV screening programs can benefit the health and safety of individuals who have experienced physical violence, but no screening tool has yet been evaluated in a published study of trauma patients in hospital and so there is no single screening program or approach that is recommended for Canadian trauma centres.
- The project focused on the Quadruple Aim goals for improving *provider experience* by exploring system- and clinical-level barriers with screening experienced by trauma care providers; improving *patient experience* by exploring how IPV survivors felt after their disclosure to a provider in hospital and the way it was attended to by the provider; and improving *population health* by examining measures and outcomes of IPV screening programs in trauma care that prevent further harm and reduce injury recidivism.
- The research findings support universal screening of trauma patients (traditionally targeted at women). IPV survivors/trauma patients typically represent marginalized populations who are at higher risk for violence. Thus, this work addresses health equity in their access to IPV resources.

What approach was taken?

This project was organized into four phases. **Phase 1**: conducted a rapid realist review on effective IPV screening programs from around the world. **Phase 2**: evaluated successful screening program outcomes using two implementation science frameworks. **Phase 3**: applied the cognitive task analysis (CTA) technique with Edmonton-based trauma care providers and conducted qualitative interviews with seven IPV survivors. **Phase 4**: conducted a modified Delphi consensus process to review screening tools and programs, determine implementation factors, and identify key measures. An expert panel of trauma care providers from Edmonton provided insights on the research.

What are the key research findings?

- Programs that use a comprehensive approach have greater success in increasing IPV screening and disclosure/ identification rates in acute trauma care settings than programs that focus only on screening. Phase 1 identified six central characteristics to successful screening programs: ongoing IPV training and education; IPV screening protocol and validated tools; referral protocols to IPV services and supports; institutional support; dedicated IPV teams or positions; and on-site resources and follow-up care.
- IPV survivor interviews highlighted the essential role of health care providers (HCPs) in supporting the disclosure experiences of individuals impacted by IPV. When provided opportunities to build trusted rapport with HCPs, survivors felt empowered to share IPV experiences, seek assistance, and follow up with treatment. Instances where survivors felt dismissed, judged, or unable to form a meaningful connection with their HCP hindered the disclosure of IPV and subsequent access to relevant patient care.
- Of critical concern is the lack of culturally safe care for Indigenous survivors of IPV. These experiences demonstrate the complex interplay between IPV, cultural identity, and systemic inequalities, underscoring the need for comprehensive HCP training and education.
- A shared mental model among trauma care providers was the need to utilize team members' skills and knowledge and that communication about the whole patient is a particularly crucial mechanism in IPV assessment and care.

NEXT STEPS - Implications for policy and practice

- Health care facilities providing care to acute trauma patients should implement IPV screening and support programs to provide patient centred and safe care, improve access to resources for marginalized populations, and save lives.
- At the *organizational level*, clear policies and sustainable funding is required to establish the infrastructure for comprehensive IPV screening in trauma care; at the *system level*, multi-level leadership support, resources to hire dedicated staff to support screening and referral, connection to community resources, and innovative solutions to competing priorities/time constraints of providers are required for successful IPV screening program implementation; at the *trauma program level*, local solutions are required to integrate IPV screening into routine practice and ensure appropriate action follow a positive screen.
- Findings highlighted knowledge gaps on effective standardized IPV screening tools in acute trauma care. Development and validation of a specific tool is recommended as a primary directive in future research. An effective tool should be robust to patients' unique social aspects, including language, cultural, and gender identity.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: Exploring Emergency Health Services Innovation in Rural BC

Lead researcher: Nelly D Oelke, Deanne Catherine Taylor
Lead knowledge user: John Paul Pawlovich, Policy maker, Other
Team members: Riyad Abu-laban; Lisa Bourque Bearskin; Jim Christenson; Richard Fleet; Kendall Ho; Helen Novak Lauscher; Ray Markham; Kim Williams
Type of project: Evaluation (knowledge creation)
Research area studied: Integration of care
Additional research area/pool: Not applicable
For more information, please contact Ashmita Rai; ashmita.rai@ubc.ca
Keywords*:* Rural, emergency, health services, innovation

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Evaluating rural emergency health services innovation to understand current innovations, benefits, and challenges rural communities face, such as access to emergency care, transport, and related costs.
- Providing evidence-based information on what is working and what is not working well in rural emergency health services innovation for policymakers, decision-makers, healthcare providers, and community members to improve access to emergency health services for patients and community members in rural settings.

Results suggest that social determinants of health (geographical barriers, socioeconomic status) and a lack of resources for innovation (funding, technology, manpower, infrastructure) impact rural emergency health services innovation and health equity.

What is the issue studied and why does this matter?

- This study evaluated the transformation of rural emergency health services innovations (e.g., Real-Time Virtual Support (RTVS) and emergency transport) in BC to better understand how these innovations emerged and evolved in rural healthcare and to identify what works, for whom, and in which contexts, and to develop recommendations for policymakers and decision-makers to strengthen innovative rural emergency health services.
- We focused on integrated health services delivery through the integration of primary care, emergency care, and RTVS and examined the impacts of innovative approaches to emergency health service on all components of the quadruple aim to advance health equity: patient and provider experiences, population health, and value for costs.
- The study addresses health equity associated with access to emergency health services for people living and working in rural, remote, Indigenous communities such as lack of healthcare providers and other resources, lower socio-economic status, higher incidence of chronic illnesses, and racism towards Indigenous peoples. Attention was given to participants' comments about healthcare costs.

- We built on existing relationships with the communities and strategically made efforts to connect and engage with the Indigenous community for both case studies to gather feedback on emergency health services innovation.

What approach was taken?

We used case study methods with a focus on narrative methodology (stories to make sense of events and actions) to study two rural cases in northern BC and one in the interior BC. Data were collected via 1) descriptive data on the community; 2) document review (e.g., meeting notes, other key documents outlining new innovative services delivery; 3) interviews with healthcare managers, providers (e.g., nurses, physicians, EMS, virtual support providers), policymakers; 4) focus groups/interviews with patients/family and community members; and 5) administrative data (e.g., # of patients seen, # of transported patients, # of connections to virtual support).

What are the key research findings?

Innovations like RTVS (RUDi, CHARLiE), translation apps, electronic triage and transfer systems, virtual care, LUCAS system for CPR, and on-call supports (Vocera, AIRVO) were being used to provide rural emergency health services. RTVS, in particular, developed trusting relationships with rural healthcare providers and equipped communities with additional physician support for healthcare and transfers.
Other benefits of innovations:

- Increased community members’ access to emergency health services and prevented the closure of emergency departments
- Improved patient experiences with fewer wait times and continuity in care
- Increased quality of life in the community
- Reduced unnecessary transfer of patients out of the community mitigating travel costs for community members
- Advanced knowledge and practice via continuous learning, education, and training for health providers
- Decreased stress, boosted self-confidence and job satisfaction in healthcare providers

Barriers to innovation:

- Limited resources (e.g., funding, technology, innovations for mental health services and support)
- Transportation: Inadequate ambulances, inavailability of other modes of transportation like taxis and transit systems compel patients to travel on out-of-pocket expenses
- Cross-provincial historical policies that do not accept reports from RTVS physicians for patient transfers
- Challenges with mailing services, fax, and telecommunications
- Staff shortages increased the workload for health providers causing burnout
- Lack of protocols for emergencies
- Geographic distance and weather

Recommendations:

- Increase funding allocations
- Address challenges of staff shortages
- Advance communication technology (e.g., cell phone services and internet)
- Provide training and education on existing innovations for health providers
- Increase access to and expand resources for mental health services and support
- Improve logistical efficiency and communication for lab tests, prescription renewal, transfers
- Have a streamlined process for transfers via ambulance
- Provide functional and updated equipment to facilitate accurate diagnoses
- Proactive planning for increasing population in rural communities

Our knowledge users, policymakers (MoH), decision-makers (health authorities), and provincially provided services (BCEHS, TSBC) are most impacted by these findings.

NEXT STEPS - Implications for policy and practice

Policymakers, decision-makers, health providers, and communities will be able to understand the structure, functioning, barriers, and facilitators of innovative methods of care in rural emergency healthcare. They will have the opportunity to learn about new innovations being carried out in different rural settings within the study.

Addressing the barriers to rural emergency health services innovation identified in the study can improve access to emergency health care for community members in rural BC.

Impact on Quadruple Aims:

- Patient experience (e.g., community members engagement facilitates a better understanding of patient experiences)
- Health provider experience (e.g., relationships developed between RTVS and rural providers facilitate learning; RTVS provides high satisfaction and support with the strong potential to positively impact retention and recruitment of health providers in rural settings)
- Population outcomes (e.g., better health outcomes for patients and community members).
- Costs (e.g., continued and additional funding required to advance innovations to meet the needs of the communities)

The results of this study have the potential to guide future policy decisions and practices to achieve the quadruple aim and advance health equity. This research can be a foundation for future rural health and equity projects.

Further, improving innovations in rural emergency health services will facilitate equitable access to emergency health services for people living and working in rural, remote, and Indigenous communities. Overall, innovations identified and explored in this study can be adapted and scaled to diverse rural and urban communities exploring rural emergency health services innovation across BC, Canada, and worldwide.

OUTPUTS & PRODUCTS (optional)

Output 1: New networks and collaboration established with BC Emergency Health Services, Trauma Services BC, Emergency Care BC, and municipal government

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Developing Canadian national standards for virtual delivery of mental health services within primary care

Lead researcher: Braden O’Neill (Unity Health Toronto)

Lead knowledge user: Paul Kurdyak (Mental Health and Addictions Centre of Excellence, Ontario Health)

Team members: Ngozichukwuka Ekeleme, Abban Yusuf, Monika Kastner, Karen Waite, Stephanie Montesanti, Helen Atherton, Ginetta Salvalaggio, Lucie Langford, Saadia Sediqzadah, Carolyn Ziegler, Tamara Do Amaral, Peter Selby, Martina Kelly, Elizabeth Anderson, Graeme Fry, Emily Marshall, Sagar Parikh, Steve Slade, Michelle Greiver, Tara Kiran, Osnat Melamed

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Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: National Standards for Mental Health Services
For more information, please contact Braden O’Neill, email: braden.oneill@unityhealth.to
Keywords*:* Virtual Care, Mental Health, Health Services, Telehealth, Primary Care

KEY MESSAGES

We developed national standards for virtual delivery of mental health services in Canadian primary care. These standards include guidance for primary care providers and organizations about training, practice, and how to incorporate evidence-based assessments of mental health symptoms feasibly and safely into primary care practice. They can guide service delivery and resource allocation, to support primary care for Canadians with mental health concerns. **Our research advanced the Quadruple Aim and health equity by:** Generating standards to support equitable virtual mental health care, with a particular focus on ensuring that disadvantaged groups across Canada are comprehensively supported through primary care.

What is the issue studied and why does this matter?

The COVID-19 pandemic facilitated an unprecedented, sustained proliferation of the use of virtual modalities (phone, video, and asynchronous communication such as emails) for delivery of mental health services in Canadian primary care. Despite this substantial shift in practice, there were no Canadian guidelines to support primary care providers and organizations to provide high-quality, equitable, effective virtual mental health care. We systematically developed a set of standards for virtual mental health in primary care in Canada, through a series of phases to gather information from multiple sources. We embedded all Quadruple Aim domains into each phase of our study, in the following ways: in our rapid review we extracted and analyzed data from included resources that related to Quadruple Aim domains; in our policy analyses we focused on patient and provider experiences, healthcare costs, and population health; and in the development of standards we sought to ensure that all domains were represented in the final list of standards. Health equity – including an emphasis on supporting digital literacy and necessary infrastructure for disadvantaged groups – was a key focus of our standards.

What approach was taken?

First, we conducted a rapid review of peer-reviewed international literature focused on how existing virtual mental health care guidance relates to Quadruple Aim domains. Then we reviewed two sources of Canadian policy documents: provincial/territorial medical college policies, and primary care billing codes in four provinces (British Columbia, Alberta, Manitoba, Ontario). We then summarized these findings and conducted a focus group and interviews with healthcare providers and people with lived experience of mental health concerns in several provinces. Finally, we developed draft standards and iteratively refined them through discussions and revisions among the study team, to generate our final list.

What are the key research findings?

From our first phase – a rapid review of international peer-reviewed guidance about virtual delivery of mental health care focused on the Quadruple Aim - we identified a relative paucity of information about how virtual mental health services might reduce costs when compared with in-person services; this is an important area for future research. We identified concepts related to the Quadruple Aim, and highlighted how virtual care could enhance health equity, including its potential to improve care for disadvantaged groups such as those in rural/remote areas or with mobility disabilities. There were cautionary notes about the risks of exclusion such as for those with limited internet access or low digital literacy.

Our review of primary care billing codes demonstrated marked differences in the primary care mental health services available to residents (for example, emails between patients and providers are an insured service in Alberta but not in British Columbia). This is a clear example of how primary care funding and organization in Canada needs better standardization.

Finally, our list of standards represents the above findings in addition to what we heard from focus group and interview participants who discussed their own experiences with virtual mental health care. Key knowledge users involved in our team taking up these standards include Ontario Health's Mental Health and Addictions Centre of Excellence and Population Health and Value-Based Health Systems portfolios, Unity Health Toronto (serving >50,000 primary care patients) and CAMH. The finalized list of standards aims to improve the quality of care for Canadians with mental health concerns, providing primary care providers and organizations with guidance on topics including but not limited to: delivering assessments on patient symptoms and severity, setting and managing expectations related to privacy and confidentiality and ensuring patients are able to access information detailing what virtual mental health care services are available in their province or territory.

NEXT STEPS - Implications for policy and practice

This project has identified gaps in knowledge and policy surrounding virtual primary care services in Canada in relation to the Quadruple Aim that warrant further examination (such as the lack of literature regarding the cost-effectiveness of virtual mental health services in Canada). It has also described possible vulnerabilities to population mental health (such as the variations in virtual mental health services covered in different regions). We believe that the most substantial impacts of this project will come from the list of Canadian National Standards for Virtual Delivery of Mental Health Services in Primary Care we developed.

These standards were developed through the lens of the Quadruple Aim, with direction from people with lived experience of mental health concerns, health care workers, researchers, and primary care providers. When implemented, these standards will offer policy and practice a variety of both short, medium and long-term goals to improve patient experience, provider capacity and the equitability of virtual mental health care services across Canada.

Some of our standards are straightforward and would require little to no organizational overhaul to accomplish (such as, for example, encouraging providers and patients to discuss and document what they will do if a call gets disconnected in the context of discussing traumatic events). Others (such as ensuring that all members of primary care teams receive dedicated training about how to use virtual modalities to support people with mental health concerns) will take more work to implement on the part of healthcare organizations and primary care providers. Importantly, these standards provide recommendations that can be implemented in any province or territory, allowing for a more standardized approach to delivering virtual mental health care services throughout Canada.

OUTPUTS & PRODUCTS

Output 1: Primary care virtual mental health standards - https://pcmhstandards.ca/standards-list/
Output 2: Access to virtual mental-health care uneven across Canada - https://healthydebate.ca/2023/05/topic/access-mental-health-care-uneven/
Output 3: Medical regulatory college policy overview - https://pcmhstandards.ca/policy-overview/

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

An evaluation of an Indigenous-led primary care program in the Fraser Salish region

Lead researcher: Ye Na (Janice) Kim
Lead knowledge user: Amanda Laboucane , Decision maker
Team members: Margo Pearce, Anaheit Arathoon
Type of project: Evaluation (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: Not applicable
For more information, please contact Ye Na (Janice) Kim, yena.kim@fraserhealth.ca
Keywords*:* Indigenous health, primary care, Indigenous care model, cultural safety

KEY MESSAGES

- **Our research advanced the Quadruple Aim and health equity by** evaluating an Indigenous-led primary care service delivery model in the Fraser Salish Region by gathering client and staff perspectives and data on indicators measuring health outcomes.
- Overall, client feedback on the Indigenous Primary Care Program was positive.
- Staff highlighted aspects of the Indigenous Primary Care Program that support the provision client-guided care and shared their suggestions for ways to improve care provision and cultural safety.
- Our findings warrant consideration by organizational partners, rights holders and decision-makers who will shape future Indigenous-specific programming within the Fraser Salish region.

What is the issue studied and why does this matter?

- Fraser Health Authority's Indigenous Primary Care Program is a network of Indigenous-led primary care services for Indigenous peoples (First Nations, Métis and Inuit) residing in the Fraser Salish Region. The Program is based on the Cedar Tree Care model, an innovative model developed through partnerships and with feedback from Indigenous clients, organizational partners, and clinicians. Within the Program, services are designed to be appropriate, welcoming, culturally safe, and incorporate traditional and healing practices.
- Our project aimed to apply a decolonized approach to evaluation by wholistically exploring the efficacy of the Program from client and staff perspectives and examining implementation of the service delivery model.
- Evaluation activities were shaped together with project and Program team members including Elders, Indigenous clients, and frontline staff. Engaging program users throughout the evaluation was intentional to ensure the project was mutually beneficial for clients and staff and encourages prioritization of Indigenous peoples' health and wellness needs in future program planning.

What approach was taken?

- Our evaluation took a decolonized approach to utilization-focused evaluation. Team members endeavoured to conduct culturally responsive evaluation: prioritizing relationships, presenting findings that ultimately benefit communities, and situating the evaluation within the context of recognizing Indigenous peoples right to self-determination.
- Elders, corporate leadership, and clinical managers were involved in the design and implementation of evaluation activities. Indigenous clients of the Program provided invaluable feedback on the program through questionnaires.
- The project weaves together quantitative indicators, survey findings, and qualitative findings from focus groups with staff with a focus on cultural safety and strengths-based interpretation.

What are the key research findings?

- A total of 132 Indigenous clients provided feedback. Approximately 70% of Indigenous clients were very satisfied with their care experience (n=95). Approximately 95% of Indigenous clients stated they were welcomed and treated with kindness (n=128) and reported that providers explained things to them in a way they could understand (n=125). Just under 75% of Indigenous clients indicated that they had noticed improvements in their own health, and the health and wellbeing of their friends and family since the establishment of the clinic (n=98).
- Approximately 40% of Indigenous clients recalled engaging in cultural or traditional healing practices through the Primary Care Program. Many clients showed appreciation for the opportunities to engage in such practices and a few requested cultural workshops.
- Staff revealed that the Program utilizes a whole-person and client-guided approach, considering not only clients’ health needs but also the contributing circumstances that affect clients’ capacity to seek care and maintain health and wellness. This approach is embedded in the Program’s accessible and accommodating operational structures (e.g. lengthier appointment times, wrap-around care) that enable providers to accept clients as who they are, build relationships, and support clients in their care journey.
- Staff indicated that because clients frequently request services beyond their scope of practice, connections within the health authority and to external agencies or services and flexibility to bring services into the community was important.
- Amongst staff, there was varying levels of comfort and ability to incorporate traditional and cultural healing practices.
- Staff told us that providing culturally safe care for Indigenous clients who often are impacted by traumas was hard heart work. Staff shared that they too need opportunities to debrief, connect with other members of the team, and seek support from Elders to prevent their work from becoming overwhelming.

NEXT STEPS - Implications for policy and practice

- Clinic structures that determine the organization and delivery of care and services influence staff's capacity to engage and build relationships with clients in a culturally safe manner. Policies and programming should take this into consideration, distributing the focus from being primarily on provider's competencies to also considering how operational structures can continue to remain accessible and accommodating to support staff providing culturally safe care.
- Seek and invest in opportunities to 1) offer traditional healing practices to clients and additional education on such practices to staff to strengthen program's capacity to provide traditional and cultural support; 2) explore opportunities to provide support to staff, especially after emotionally-charged appointments (e.g. debrief sessions), recognizing cultural safety includes protecting the safety and well-being of staff; 3) foster connection and collaboration amongst team members across sites.
- Indigenous-specific primary care is greatly appreciated by clients who have accessed its services. Ongoing commitment from the provincial government and the health authority is necessary for the provision and expansion of comprehensive and effective culturally safe primary care services in the region. Consider increasing funding for 1) additional primary care providers and on-site specialized practitioners to address client needs and 2) expansion of services to other identified regions of need through partnerships with Indigenous communities and organizations.
- Continued evaluation of the Indigenous-specific primary care programs utilizing clinical indicators and indicators relevant to cultural safety and humility is warranted to demonstrate the effectiveness of Indigenous-led primary care services and to identify additional areas of needed systems change to further strengthen services and sustain health and wellness for Indigenous clients in the Fraser Salish region.

OUTPUTS & PRODUCTS (optional)

Output 1: Graphic Recording of Focus Groups - link to graphic recording
Output 2: Infographic on Client Feedback – link to infographic

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: What is the potential role for public health in supporting healthcare organizations to achieve Quadruple Aim?

Lead researcher: Andrew Pinto
Lead knowledge users: Sacha Bhatia (Healthcare administrator,) Jasmine Pawa (Community leader)
Team members: Jinfan Qiang, Isabella Fortuna, Hibah Sehar, Amanda Pereira, Karen Li, Steve Durant, Joseph O'Rourke, Sara Allin, Laura Rosella, Amélie Quesnel-Vallée, Robert Schwartz, Matthew Menear, Robert Smith, Lindsay Hedden, Gaynor Watson-Creed
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Integrating upstream prevention within health care delivery settings (SDoH)
Additional research area/pool: CIHR - Institute for Population & Public Health (IPPH)
For more information, please contact andrew.pinto@untoronto.ca
Keywords*:* public health, Quadruple Aim, health services research, collaboration, population health

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by identifying five ways in which public health could help health care service organizations to achieve the Quadruple Aim, including:

- Developing and implementing strategies for using health services data with other data to develop profiles of populations.
- Building capacity within health care service organizations to engage in research, epidemiological studies and continuous quality improvement.
- Co-designing interventions, drawing on community needs and perspectives.
- Identifying unmet needs within populations, in particular amongst those made vulnerable by social and economic policies.
- Supporting health care service organizations in population health management.

What is the issue studied and why does this matter?

In Canada, public health organizations and health care service organizations predominantly remain siloed from one another. The COVID-19 pandemic demonstrated the need for collaboration, with joint action occurring in certain jurisdictions around testing and vaccinations, but this has not been sustained. As Canadian health care service organizations begin to focus on population health and a population approach, our research focused on the role that public health organizations could play in supporting efforts to achieve the Quadruple Aim. We aimed to identify studies that address the Quadruple Aim within the context of public health and health care service organization collaboration. Given the focus within public health on communities made vulnerable to social and economic policies, there is an implicit focus on equity. This was confirmed through our search, which contains a high proportion of studies focused on marginalized populations. With public health's mandate to address the social determinants of health and tackle upstream causes of illness, this work provides a piece of supporting evidence for health equity promotion drawn from the collaborative examples and impacts screened and analyzed

What approach was taken?

We conducted a scoping review, searching five scientific databases and four grey literature databases. Each citation was double-reviewed for relevance using title and abstract screening, and full texts of studies included at this stage were retrieved and double-reviewed against our inclusion and exclusion criteria. The study team met regularly and conflicts were resolved through discussion and consensus. Each included study is undergoing extraction by two team members, who meet to address discrepancies. Our data analysis approach is iterative.

What are the key research findings?

Our search generated 3,972 citations. Eighty articles were screened for full text, and 27 were included for extraction and analysis. We found that despite the breadth of the Quadruple Aim and the popularity of these goals for health systems around the world, there appears to be a paucity of research that explicitly addresses public health and health care service organizations collaboration to achieve these goals. Based on our preliminary analysis of the studies that meet our criteria, we have found that there is a nascent movement towards collaboration between public health and health care service organizations in achieving the Quadruple Aim. While this is a relatively new field and there are not yet well-established, evidence-based frameworks or strategies to guide collaboration, the literature demonstrates the potential in five areas: using health services data with other data to develop profiles of population; building capacity for research, epidemiological studies and continuous quality improvement; co-designing interventions with communities; identifying unmet needs within populations; and supporting population health management. Many of the studies that met our criteria involved collaboration between schools of public health or other academic partners. There was a focus on roles such as population-based needs identification, co-construction of research strategies, and data management for partners. Conversely, we found very few studies involving local-level examples of public health partners contributing directly to health or social interventions aligned with the Quadruple Aim. The examples we did find focus almost exclusively on the COVID-19 pandemic.

NEXT STEPS - Implications for policy and practice

We expect that our findings will be of particular relevance to health authority leaders, staff charged with population management and public health agency staff who are tasked with integration, as well as health equity through collaboration between public health and health care services. Our findings suggest a need for further research to develop a more in-depth understanding of the barriers and facilitators of successful collaborations. To this end, we will conduct a deliberate dialogue with public health and health care service organization leaders to discuss their experience with, and perspectives on collaborations to achieve the Quadruple Aim. Issues of feasibility, priority setting, opportunity costs, and equity will be key areas to explore. In keeping with the limited number of findings and conclusions in the existing literature, we also see a need that collaborations that are linked to high-quality, objective research projects and evaluations to add breadth and depth to the existing evidence base.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: What factors hinder or help clinicians use an approach to risk assessment

Lead researcher: Véronique Provencher, Université de Sherbrooke
Lead knowledge user: Heather MacLeod , Health care practitioner, Other
Team members: Dorothy Kessler; Krystina Lewis; Mary Egan; Jennifer Klein; Nathalie Veillette; Nathalie Delli-Colli; Marie-Jeanne Kergoat; Dominique Giroux
Type of project: Focused implementation (knowledge implementation)
Research area studied: Primary, home and community-based care
Additional research area/pool: Not applicable
For more information, please contact Monia D'Amours; monia.damours@usherbrooke.ca
Keywords*:* Risk assessment, home safety, clinician decision support tool

KEY MESSAGES

- **Our research advanced the Quadruple Aim and health equity by:** improving the care experience for older adults and hospital- and community-based clinicians during the assessment and management of risk.
- By determining the key barriers and facilitators to using the Living with Risk: Decision Support Tool (LwR:DSA) in practice.
- By improving the LwR:DSA and its implementation strategies to address the identified barriers and leverage the facilitators to support widespread adoption.

What is the issue studied and why does this matter?

Older adults experiencing illness, injury and/or disabilities may be at higher risk for safety concerns and the potential for adverse outcomes while living at home. The LwR:DSA was developed to address the lack of clinical guidelines for the assessment and management of risk in the context of home safety. The LwR:DSA was recently adapted to the hospital environment and validated in both the hospital and community settings. This study aimed to understand the barriers and facilitators to using the LwR:DSA in usual care in order to develop the necessary implementation strategies to support adoption. It is hoped that widespread use of the LwR:DSA in practice would continue to elicit the LwR:DSA's positive outcomes of better patient and provider experience. Older adults are often not involved in care and discharge planning conversations, nor often asked for their input in recommendations provided to them. This study addressed health equity by ensuring that they are engaged and involved in these care conversations.

What approach was taken?

This concurrent mixed-method study gathered quantitative and qualitative data from both community and hospital-based clinicians before (two surveys), during (study log) and after (individual interviews) using the LwR:DSA for eight weeks. The Consolidated Framework for Implementation Research (CFIR 1.0) guided the data collection, data analysis and the development of the implementation strategies. 26 participants consented to use the LwR:DSA during usual care for eight weeks. One participant withdrew before using the LwR:DSA, 22 participants participated in individual interviews following LwR:DSA use and 10 participants participated in focus groups following changes to the LwR:DSA and the implementation strategies.

What are the key research findings?

- **Implementation Outcome: Adoption:** 80% of the participants used the LwR:DSA in usual care at least once, 8% did not use and 12% were lost to contact. The frequency of use during the 8-week implementation period per participant ranged from once to 16 times.
- **Antecedent Assessment**: 86%, 97% and 74% of the participants rated the acceptability, appropriateness and feasibility of the LwR:DSA as high respectively.
- **Barriers and Facilitators to adoption**: Participants indicated it would be a barrier to use the LwR:DSA in practice when they had difficulty fitting the LwR:DSA into practice, when it was not a priority, when they found it too complex or not better than current practice and when they didn't have time to learn how to use it. Participants indicated that the facilitators to using the LwR:DSA in usual care included: when they worked in a collaborative and positive team environment, when their work environment valued innovation and positive impacts on care, when they wanted to do better and found the LwR:DSA better than current practice, when they figured out how to use the LwR:DSA in practice, when they found it easy to use and adaptable to their work context, when they believed in shared decision making and improving care and if they appreciated working in a systematic way.
- **Innovation Outcomes**: Using the LwR:DSA in practice had benefits for the older adult, clinician and team. The participants indicated that it improved communication, clinical thinking, decision making and the therapeutic relationship.

NEXT STEPS - Implications for policy and practice

The study's results provided key information on how to support the use of the LwR:DSA in practice. The results outlined the common barriers that need to be addressed and the facilitators that can be leveraged to support use of the LwR:DSA in both the hospital and community settings. The results provided key findings that enabled revisions to the LwR:DSA and its implementation strategies (instruction guide, worksheets and training) to make them more helpful, user friendly, clinically relevant and less complicated. The findings also supported the creation of a new worksheet, an implementation guide and a website to make the LwR:DSA easily accessible. The findings of this study uphold two of the Quadruple Aim's goals as using the LwR:DSA in practice provides a better care experience for both the older adult and the clinician when there are safety concerns. This research study improved health equity by ensuring that the voices of older adults living with frailty, normally overlooked in care discussions, are heard, engaged and included in care planning. While the research took place in the hospital and community settings, the LwR:DSA is currently being trialed in the long-term care sector and may be of benefit for other vulnerable populations, such as people living with a mental

OUTPUTS & PRODUCTS

Output 1: LwR:DSA Website and resources - https://lwrdsa-vivreaveclesrisques.recherche.usherbrooke.ca/

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Evaluation of Virtual Care for Rapid Access Clinic - Low Back Pain: Patient and Healthcare Provider Perspectives Across Ontario

Lead researcher: Y. Raja Rampersaud, University Health Network (Toronto)
Lead knowledge user: Silvi Groe , Healthcare administrator,
Team members: Andrew Courchene, Anthony Perruccio, Leslie Soever, Christian Veillette, Fiona Webster
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Integration of care
Additional research area/pool: CIHR - Institute for Musculoskeletal Health and Arthritis (IMHA)
For more information, please contact Oma Persaud, oma.persaud@uhn.ca
Keywords*:* virtual care, low back pain, shared care model, healthcare provider perspectives, patient perspectives

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Development of a hybrid patient-centred model of care for patients with LBP that includes options for virtual and in-person care
- Incorporating perspectives of clinicians who care for patients with LBP into a hybrid care delivery model that not only addresses patient need, but also patient and healthcare provider preferences; and incorporates empathy and compassion, critical for this vulnerable patient population
- Serving as a framework for translation to other patient populations
- Enabling future comparative effectiveness and cost-consequence evaluation of patient-reported outcomes of in-person, virtual, or hybrid care for LBP.

What is the issue studied and why does this matter?

Low back pain (LBP), a common, poorly managed condition is the number one cause of years lived with disability worldwide. Based on a successful 5-year pilot, in 2018, the Ministry of Health in Ontario implemented “Rapid Access Clinics - Low Back Pain” (RAC-LBP) which supports over 6400 primary care providers; and receives approximately 1500 referrals monthly. The program had a large backlog of patients in early stages of COVID-19 pandemic. We quickly pivoted to virtual care (VC) across the province. Patient feedback on VC during the pandemic was positive. However, we realized benefits and disparities associated with VC; and were aware of significant gaps in the evidence base for VC. This identified need for more in-depth evaluation of equity barriers and enablers for both VC and in-person (IP) care for LBP informed our study. Our key Quadruple Aim goal was patient and healthcare provider (HCP) experience, through both quantitative and qualitative methods. This was important to help inform an optimized patient- and provider-centric hybrid model of care that is individualized and can be delivered at scale. Our study sample includes regional variation of HCPs from across Ontario; and a range of patients from various sociodemographic and regional backgrounds.

What approach was taken?

A mixed methods design is used. Quantitative data, gathered prospectively using electronic surveys to patients and HCPs, ascertain experiences and preferences regarding VC and IP care for LBP. Qualitative one-on-one interviews are conducted via telephone with consenting patients and HCPs who have experienced both IP care and VC for LBP; as well as those who have declined/not experienced VC. We employ a member-checking process whereby we follow up with interview participants for feedback on our interpretation of their data. We plan to formulate a general theory/model based on all data related to optimization of hybrid VC-IP LBP care.

What are the key research findings?

Findings are preliminary (to date, based on HCP quantitative and qualitative data). Our HCP electronic survey for in-person and VC for LBP, yielded a 62% response rate (96/155) with representation from all Ontario regions. The three most common enablers to providing videoconference, were: reliable internet connection; access to computer with audio and video capabilities; and willingness of patients. The three most commonly reported barriers to videoconference were: patients lack technology infrastructure; patients' lack of comfort with technology; and lack of willingness of patients. Assessment delivery models for LBP initial assessment varied with restrictions related to COVID-19: 3% of respondents utilized videoconference pre-COVID, 61% during lockdown; and 39% currently. Respondents reported increasing levels of confidence in their abilities to accurately perform standardized LBP examinations: pre-COVID (31%) to current time (83%) being very confident/confident. Eight-six % of respondents strongly agreed/agreed that videoconference enabled assessment of patients with empathy and compassion. Forty-three % reported IP care and videoconference to be equally equitable.

Emergent themes including illustrative quotes from seventeen semi-structured interviews with clinicians from all regions of Ontario are:

1)Importance of Patient Choice: “Patient preference [VC versus IP care] should be respected.”;

2)Beholder of the Trump Card: “We haven't used videoconferencing…. We have a change in leadership so maybe that will come.”;

3)An Empathetic and Compassionate LBP Approach: “This is one of the most important aspects of VC…absolutely empathy, rapport, connection can all be made in a virtual setting.”;

4)Impact of Compromising One (Touch) of the Five Senses in Physical Examination: “I was a little apprehensive about [VC] because I was mostly concerned …with not being able to physically test patients.”;

5)The Ying-Yang of Technology: ”Although technology is great, it can also cause patients anxiety.”

Quantitative and qualitative patient-related data is forthcoming (September-December 2023).

NEXT STEPS - Implications for policy and practice

With additional patient-related data, we anticipate that our findings will guide and inform development and implementation of an optimal VC/IP care hybrid delivery model within a provincial model of care for LBP. This will contribute to our overall goal aimed at secondary prevention of chronic LBP. The perspectives, preferences and satisfaction of both front-line clinicians and patients, related to IP care and VC for LBP will guide both provider-centric and patient-centric models that are efficient, scalable and embrace empathetic and compassionate approaches to care for a patient population that can be marginalized due to chronic pain. Our next steps are as follows:

1) Complete data collection with respect to patients
2) Within our team, formalize a general theory/model for optimization of hybrid VC-IP LBP care delivery.
3) Our Knowledge Transfer and Exchange strategies will be end-of-grant focused and will include engagement of our patient partners, front-line clinicians, as well as LBP stakeholders, including policymakers for stakeholder meetings. The participants of the meetings will be asked to provide critical feedback on interpretation of our findings in the following objectives: i)patient and provider context for implementation of an equitable hybrid VC-IP LBP model of care; ii)layperson communication strategy to enhance patient experience and LBP care equity from a hybrid model; and iii)identification of enablers to mitigate identified barriers to delivery of equitable care. Once developed and implemented, our VC/IP care hybrid delivery model has potential for applicability to other musculoskeletal patient populations, including those living in remote areas of the country; and marginalized populations.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Access to care and the economic burden of tuberculosis in Ontario during the COVID-19 pandemic: illuminating inequities to support public health policy

Lead researcher: Beate Sander,
Lead knowledge user: Elizabeth Rea ,
Team members: Sarah Brode, Amrita Daftary, Kelly O'Brien, Christopher Pease, Lauren
Ramsay Type of project: Evaluation (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: CIHR - Institute for Population & Public Health (IPPH)
For more information, please contact lauren.ramsay@mail.utoronto.ca
Keywords*:* tuberculosis, health economics, cost of illness

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Speaking with people with TB to better understand their access to care to support a improved care and patient satisfaction
- Assessing the costs of TB borne by people with TB, the healthcare system, and society to identify inequitable economic burden to support future resource planning.

What is the issue studied and why does this matter?

Tuberculosis remains a significant health burden in Ontario, with over 600 annual cases reported. Not only are marginalized populations the most likely to be infected with TB, the economic burden of TB is also likely to impact them more severely due to socioeconomic status and labour market roles. TB care and burden has changed during the COVID-19 pandemic; COVID-19 restrictions have presented a risk of delayed TB diagnosis and treatment. These delays facilitate transmission of TB in the community, thereby increasing the health and economic burden of TB. In Ontario, we do not yet have a thorough understanding of how access to care has been impacted by COVID-19 from the patient perspective, or the economic burden of TB in Ontario specifically as it relates to equity relevant characteristics.

Our overall goal is to describe the TB patient experience during COVID-19 and to characterize the societal and health system costs of TB in Ontario, with a focus on equity. Our work will provide timely and high-quality evidence on the healthcare and societal economic burden of TB as well as inequities in access to care to equip decision-makers with the information they need to plan and implement policies to best support adults with TB disease.

What approach was taken?

We conducted patient interviews and administered patient cost-questionnaires to adults currently in treatment for TB disease and conducted a health system cost analysis using health administrative data and expert interviews. In all three studies we will applied an equity framework (Cochran’s PROGRESS) to examine inequities in health opportunities and outcomes across relevant variables (e.g., sex/gender, race/ethnicity).

What are the key research findings?

Preliminary research findings from our studies suggest that people with TB disease in Toronto experience both higher patient-out-of-pocket and direct healthcare costs as a result of having TB disease. Patients that we interviewed experienced challenges regarding their care, particularly around the time of diagnosis.

NEXT STEPS - Implications for policy and practice

This research has deepened our understanding of the experiences of people with TB with respect to their access to care and the financial burden of TB. Policy makers and TB care providers can use this information to plan TB programs and care along the care pathway. By using Cochran’s PROGRESS equity framework to plan and analyze our research, decision makers and care providers will be equipped with equity-focused data that can support the implementation of TB programs focused on reducing inequities.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Formation of Ontario Health Teams and Quadruple Aim Outcomes

Lead researcher: Sisira Sarma, University of Western Ontario
Lead knowledge user: Jillian Paul , Policy maker, Decision maker
Team members: Shehzad Ali, Kelly Anderson, Bachir Belhadji, Rose Anne Devlin, Michael Hong, Matthew Meyer, Saverio Stranges, Amardeep Thind, Walter Wodchis, Gregory Zaric, Guangyong (GY) Zou
Type of project: Evaluation (knowledge creation)
Research area studied: Integration of care
Additional research area/pool: Not applicable
For more information, please contact Sisira Sarma

KEY MESSAGES

The Ontario Ministry of Health rolled out integrated care delivery systems called Ontario Health Teams (OHTs) beginning November 2019. Using health administrative data (2018 to 2021), we investigated if the formation of OHTs improved access to primary care and mental health services, and reduced: preventable emergency department visits, hospitalizations, psychiatric hospitalizations, inpatient days designated as alternative levels of care and health care costs. Our preliminary results suggested no differences in outcomes between OHTs approved in 2019 Q4 compared to OHTs not yet approved. A longer follow-up period would allow systems to adjust and uncover any impact OHT formation on outcomes.

What is the issue studied and why does this matter?

Following the People’s Health Care Act 2019 passed by the government of Ontario in April 2019, new integrated care delivery systems called Ontario Health Teams (OHTs) were rolled out by the Ontario Ministry of Health (MOH). The main goal of the OHTs was to breakdown silos and empower patients and providers to create a system that is better connected to patients locally, enabling the delivery of better, faster, coordinated and patient-centred care. To date, the MOH has approved 57 OHTs covering 92 percent of the Ontario population. The objective of this proposal was to evaluate the following quadruple aim outcomes of 24 OHTs approved in 2019 Q4 (phase one) using retrospective population-based health administrative data spanning 2018 Q1 to 2021 Q3: (i) primary care and mental health/addiction care during regular- and after-hours, (ii) preventive cancer screening, (iii) preventable emergency department (ED) visits and first presentation to ED for mental health and addiction reasons, (iv) avoidable hospitalizations and psychiatric hospitalizations, (v) inpatient days designated as alternative levels of care, and (vi) health care costs. From the health equity perspective, available data limits our analysis to sex and individuals living in deprived areas.

What approach was taken?

We conducted both descriptive and multivariable analyses on the outcomes of OHTs following approval by the MOH. Our multivariable analyses employed a quasi-experimental study design which permitted an evaluation of the outcomes of the 24 OHTs approved in 2019 Q4 compared to the outcomes of those OHTs not yet approved in any given quarter. This approach was discussed by Zoom with knowledge users and researchers prior to starting the analyses. The preliminary descriptive and regression results were presented and discussed in Zoom meetings and the detailed results were distributed to all team members. meetings and the detailed results were distributed to all team members.

What are the key research findings?

NEXT STEPS - Implications for policy and practice

Our preliminary results showed that the formation of OHTs was not associated with improvements in the outcomes studied: primary care and mental health services during regular- and after-hours, preventable emergency department visits, avoidable hospitalizations, psychiatric hospitalizations, inpatient days designated as alternative levels of care, and health care costs. Several knowledge users provided feedback on plausible reasons, including limited interventions/initiatives undertaken at the OHT level and resource constraints faced by OHTs during the time of the study. One important contextual factor likely to have influenced our findings was the Covid-19 pandemic that began during our period of investigation (2019-2021); OHTs had to necessarily focus on Covid-19 infection control and vaccinations, hampering innovations in other outcome dimensions. We were able to study vaccination coverage (at least two doses) and found a slight increase in vaccination coverage in OHTs compared to non-OHTs. Some team members also pointed out that OHTs are voluntary networks without any authority to achieve verifiable targets, which could limit their ability to modify processes to improve outcomes. Future research on this topic is essential. All team members agreed that the follow-up period was not sufficiently long enough to detect any effects that OHT formation may have had on the outcomes under investigation. Our plan is to extend the study for two additional years (i.e., 2018 Q1 to 2023 Q3) which will help improve the ability to uncover any associations that exist between OHT formation and outcomes. Our background literature review revealed mixed evidence of integrated care, like the OHTs, on similar outcomes in non-Canadian jurisdictions.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

TITLE: Setting the foundation for the development of a Patient- and Provider-Informed Cataract Surgery Care Model

Lead researcher: Schlenker Matthew , Trillium Health Partners
Lead knowledge user: El-Defrawy Sherif, Health care practitioner, Decision maker
Team members: Campbell Robert, Ahmed Ike, Law Susan, Versloot Judith, Rosella Laura, Backo-Shannon Mira, Chaudhary Varun, Yang Mike , Popovic Marko, Punch Donna, Diemert Lori
Type of project: Evaluation (knowledge creation)
Research area studied: Integration of care
Additional research area/pool: Not applicable
For more information, please contact Diana L. Martinez – martinezd@prismeye.ca
Keywords*:* cataract surgery, access to care, wait times, prioritization, appropriateness

KEY MESSAGES

- *Our research advanced the Quadruple Aim and health equity by enhancing patient and provider experiences, streamlining cataract care access and delivery for enhanced efficiency and timely interventions.*
- *This work emphasizes patient-centered approach, integrating both clinical assessments and patient perspectives, directly impacting patient outcomes.*
- *We empowered primary eye care providers with standardized referral guidelines, resulting in more consistent and evidence-based clinical decisions.*
- *This is a critical step toward achieving health equity by highlighting barriers in cataract care access, underscoring the need for targeted interventions, particularly for vulnerable population.*

What is the issue studied and why does this matter?

We addressed the significant challenge of delayed access to cataract care, driven by the rising demand for cataract surgery and the lack of standardized way to manage waitlists, creating strain on both patients and healthcare system. Our proposed cataract care model focuses on:

1. *Determining Appropriateness: Drawing from our research and prevailing evidence, we recognized that only objective clinical criteria, like visual acuity (VA), proved insufficient. Thus, we proposed a hybrid model incorporating patient-reported outcome measures (PROMs) to capture patient-perceived visual function.*
2. *Prioritizing Patients: Current priority categories by provincial authorities lack evidence-based measures for waitlist placement. In our model once appropriateness is established, patients are prioritized based on VA. Within each VA group, further categorization is based on perceived visual function.*

Goals of Quadruple Aim:

- *Patient Experience: prioritization based on greatest need.*
- *Provider Experience: streamlining referral process.*

Health Equity:

By understanding the barriers faced by different demographic groups and considering social determinants of health in our analysis, we ensured that our proposed model is informed by needs of various populations. By merging objective measures with PROMs, we move towards a more inclusive healthcare system. Our regional wait-time analysis identified areas with disparities, guiding interventions to enhance access across Canada

What approach was taken?

A multi-methods approach was used:

- *Phase 1: Qualitative interviews with patients about barriers and factors affecting access.*
- *Phase 2: Qualitative interviews primary eye care providers (PEPs) to gather criteria use for referrals and feedback on the preliminary tool.*
- *Phase 3: Validation of the tool's clarity and pilot testing.*
- *Phase 4: Wait-time data analysis.*

This allowed for a comprehensive exploration of the barriers and criteria influencing access. Patients, PEPs, and policymakers were actively engaged throughout the research process. Patient and provider perspectives were central in refining the tool. Policymakers and knowledge users were consulted to ensure alignment with current needs.

What are the key research findings?

We identified multiple barriers hindering patients from accessing cataract care in a timely manner. These barriers included a lack of knowledge about available services, concerns about surgery risks, and financial issues. Moreover, we found that a significant variation exists among primary eye providers regarding cataract surgery referrals, ranging from objective to subjective criteria. With this absence of guidelines, a first-come, first-serve service approach is often the case.

Upon receiving positive feedback from providers and patients about our proposed tool, and after further refinement, we finalized the development of an appropriateness and prioritization tool (appendix 1) that integrates both clinical measures informed by providers and patient-reported outcomes. The tool informs:

- ***Appropriateness**: To avoid unnecessary referrals and surgeries by considering both clinical assessments and patient perspectives.*
- ***Prioritization**: To systematically rank patients based on the severity of need, ensuring timely intervention for those with greater urgency.*

Key Knowledge Users Impacted:

- *Policymakers: Providing insights for evidence-based policy modifications.*
- *Eye Care Providers: Receiving a standardized guideline for surgical referrals and a strong rationale for why surgery is not being recommended.*
- *Healthcare Institutions: Enhancing strategies for managing cataract surgery waitlists.*

Future Research:

- *Further studies are needed to validate and test the effectiveness of this appropriateness and prioritization tool across diverse settings and provinces. Additionally, understanding how these findings relate to vulnerable populations and regions with distinct challenges is key.*
- *Furthermore, giving the lack of education in eye care, it is important to consider future interventions that aim to provide information about the availability of these services to patients.*

Contextual Factors:

When implementing our findings, it's essential to acknowledge regional differences, such as, the distribution of eye care providers and specific patient demographics, as these factors might influence the tool's practical efficacy in distinct clinical settings.

NEXT STEPS - Implications for policy and practice

Key Implications of our Research:

- *Our findings spotlight the need for a comprehensive approach informing cataract care. By incorporating both objective clinical criteria and patient-perceived quality of vision, healthcare efficiency can be optimized, reducing unnecessary referrals, and benefiting those that need it the most.*

Next Steps for Policy and Practice:

- *Policy Implications: Policymakers should adopt the appropriateness and prioritization tool, potentially reshaping the dynamics of cataract care.*
- *Clinical Practice: Healthcare institutions and practitioners are encouraged to employ the proposed tool for organizing waitlists, aiding clinicians in making evidence-based decisions and aiding a patient centered approach.*

Impact on Canadian Healthcare Systems and Services:

- *This project aims to reshape the delivery of cataract care in Canada. With the potential to optimize resource allocation and streamline service delivery, promoting a more agile healthcare system.*

Impact on the Quadruple Aim Goals:

- *Our research resonates with the Quadruple Aim objectives by elevating patient and provider experiences, creating better healthcare outcomes.*

Impact on Health Equity:

- *By highlighting and addressing barriers to cataract care, especially for vulnerable populations, we aid the way for more equitable healthcare access. Secondary findings from this project like the need for targeted interventions, such as specialized eye care education and screening efforts, are recommended to mitigate socioeconomic and geographical disparities in access to care.*

Transferability Across Fields:

- *Other sectors of Canadian healthcare facing similar challenges in waitlists and patient prioritization can adapt our findings, as we foresee its potential for widespread applicability across Canada.*

Appendix 1.

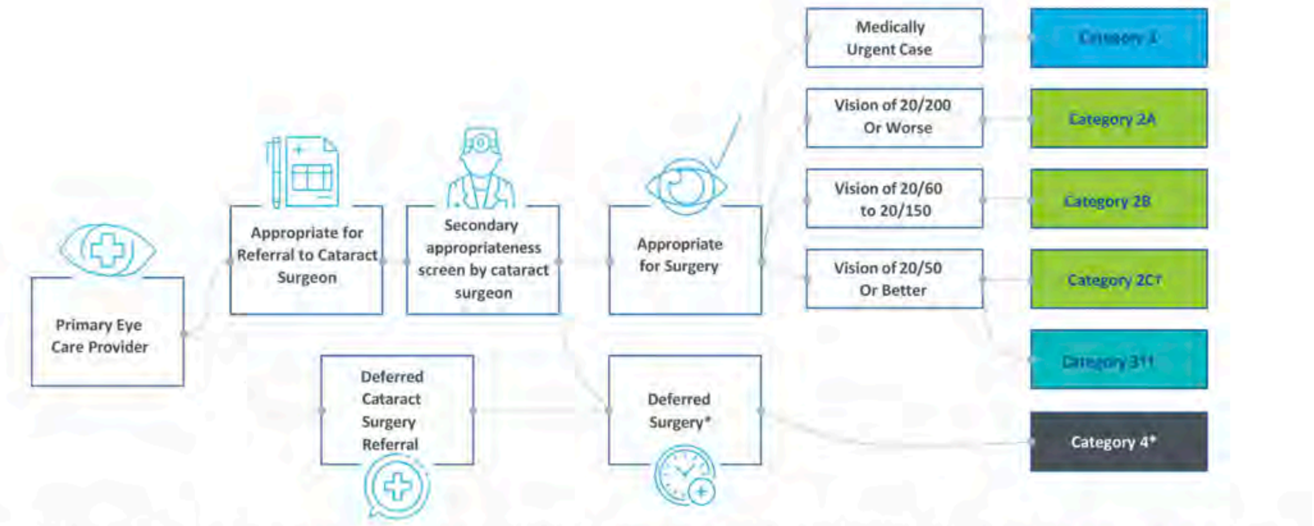


Fig. 1—Cataract surgery appropriateness and prioritization toolkit: an algorithmic approach to categorizing cataract surgery patients using patient-reported outcome measures and visual acuity.

* Patients included in 'Category 4 — deferred cataract surgery referral/deferred cataract surgery' if vision of 20/25 or better AND no signs of visual disability on rapid cataract triage tool. They should continue to follow-up with their referring physician or optometrist.

† Patients included in 'Category 2C' If vision is better than or equal to 20/50 AND signs of significant visual disability on rapid cataract triage tool.

†† Patients included in 'Category 3' if vision is better than or equal to 20/50 AND some signs of significant visual disability on rapid cataract triage tool.

BLUE Box = High Priority, GREEN Boxes = Moderate Priority, TEAL Box = Low Priority and GRAY Box = Deferred Cataract Surgery Referral/Deferred Cataract Surgery.

Patients are first screened by their primary eye care provider to determine referral appropriateness:

- If patients have 20/25 or better vision with no signs of visual disability on the abridged questionnaire → referral should be deferred, and patients should continue follow-up with their primary eye care provider (category 4).
- At least some signs of visual disability on the questionnaire and/or any visual acuity diminishment → appropriate for referral.

The surgeon repeats the appropriateness screen for referrals → Those appropriate for surgery will subsequently be categorized into the groups in Fig. 1

Patient Reported Visual Function abridged 3- item questionnaire

1. Are you satisfied or dissatisfied with your present vision?
   - Very dissatisfied
   - Fairly dissatisfied
   - Fairly satisfied
   - Very satisfied
   - Cannot decide

2. Do you have difficulty recognizing faces?
   - Yes, very great difficulty
   - Yes, great difficulty
   - Yes, some difficulty
   - No, no difficulty
   - Cannot decide

3. Do you have difficulty recognizing prices of goods when shopping?
   - Yes, very great difficulty
   - Yes, great difficulty
   - Yes, some difficulty
   - No, no difficulty
   - Cannot decide

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Implementing Online Mindfulness for People with Multiple Sclerosis

Lead researcher: Robert Simpson, Sunnybrook Research Institute
Lead knowledge user: Nanette Lai, Individual in a patient group, Individual in a patient group
Team members: Sarah Munce, Mark Bayley, Anthony Feinstein, Andrea Furlan, Monika Kastner, Michelle Nelson, Jiwon Oh, Abhimanyu Sud
Type of project: Evaluation (knowledge creation)
Research area studied: Integration of care
Additional research area/pool: National Standards for Mental Health Services
For more information, please contact robert.simpson@uhn.ca
Keywords: Multiple sclerosis, Stress, Mindfulness, Implementation, Integrated knowledge translation

- **Our research advanced the Quadruple Aim and health equity by:**
- *Using integrated knowledge translation methods to ascertain and contextualize key stakeholder views, needs and preferences for delivery of online Mindfulness-based interventions (MBIs) for people with multiple sclerosis (PwMS) across Ontario*
- *Determining the necessary conditions to provide timely and reliable access to a safe, effective, affordable, scalable, and sustainable online MBI will address key unmet needs and access barriers faced by PwMS, and help mitigate against some of the complex health systems challenges MS clinicians face in providing effective care for their patients*

KEY MESSAGES

What is the issue studied and why does this matter?

- *People with multiple sclerosis (MS) experience disproportionate stress which has profound implications for their wellbeing as well as for health care expenditure. Currently, access to specialist and mental healthcare for people with MS in Canada is disparate and constrained. People with MS (PwMS) express a preference for behavioural stress management programming. Our recent evidence syntheses have identified Mindfulness-based interventions (MBIs) as a feasible, acceptable, and effective strategy for managing stress in PwMS. Our preliminary analyses also identified potential barriers and facilitators to implementation, but a more comprehensive evaluation is required prior to scaled investment. Using mixed research methods and an integrated knowledge translation approach, this research project has sought to identify key stakeholder implementation needs and priorities for scaled implementation of MBIs for PwMS across Ontario.*

What approach was taken?

An integrated knowledge translation panel comprised of key stakeholders (a person with MS, MBI instructor, MS clinician, and a senior level health care leader) was established at the outset of the project. The panel met on a regular basis to provide feedback on study relevance and quality. An exploratory sequential (qual->quant) mixed-methods approach was used. Phase 1 involved semi-structured qualitative interviews with key stakeholders (People with MS [PwMS], caregivers of PwMS, MS clinicians, MBI instructors, health service policymakers) to identify implementation priorities for MBIs. The findings were used to develop the Phase 2 online survey being administered to a larger subset of key stakeholders.

What are the key research findings?

- *Phase 1, four major thematic findings:*
    - *Understanding mindfulness as a co-constructed experience*
        - *Participants across knowledge user groups described mindfulness phenomenon that resulted from shared efforts and experiences.*
    - *Managing accessibility through advocacy and clinical governance*
        - *The importance of accessibility of MBIs was discussed across knowledge user groups. Avenues and preferences for accessing these types of interventions primarily derived from an interaction between advocacy and clinical governance. PwMS cited a need for clinical guidance for awareness and accessibility.*
    - *Cultivating collective mindfulness sessions*
        - *Majority of PwMS expressed a preference for online MBIs delivered as live sessions with a group of participants. MS clinicians, MBI instructors, and care partners also valued having MBIs delivered online. This was particularly cited for accessibility purposes (e.g., not needing transportation), feasibility considerations and complexity of MS symptoms. Care partners further expressed that it would encourage them to participate in mindfulness with their loved ones due to ease of access.*
    - *Resource-driven pathways to progress*
        - *Participants across knowledge user groups discussed the importance of resources that emphasized knowledge about accessing (e.g., webinars), facilitating (e.g., workbooks) and sustaining MBIs (e.g., apps). Resources that were made available across the continuum of care created a pathway for making positive progress for PwMS participating in MBIs.*
    - *These findings will inform a toolkit for program developers to build MBIs that are attuned to the needs of the PwMS under their care*

- *Phase 1 also provided the following direction for the Phase 2 survey:*
    - *Surveys attuned to PwMS, MS clinicians and MBI instructors*
    - *Investigating the co-construction of mindfulness and MBIs across care settings*
    - *MBI preferences related to accessibility, accountability, inclusivity and safety*
- *Phase 2 data will provide deeper insights into the differences and similarities in MBI preferences across knowledge user groups*
    - *These findings will inform a toolkit for program developers to build MBIs that are attuned to the needs of PwMS*

NEXT STEPS - Implications for policy and practice

- *An implementation toolkit targeting existing barriers, outlining a business plan, intake processes, delivery strategies, and outcome measurements for program developers and peer leaders in the MS population seeking to implement online MBIs for PwMS addresses a key knowledge gap of implementing an acceptable, clinically and cost-effective solution to addressing the healthcare needs of PwMS*
- *Findings suggest that MBI implementation is a long, convoluted process, that there is a need for health advocacy both by patients and their clinicians, and if implementation is to be backed at a Provincial level, high quality trial based evidence of clinical and cost effectiveness is required.*
- *Policymakers have identified several barriers to successful implementation, namely that MS is viewed in non-specialist settings as being of low prevalence, that disability can act as a barrier to community-based programming, and that in order for MBI implementation to be funded, other services will have to be cut.*
- *Policymakers see the best opportunity for implementation of MBIs for PwMS within a bundled care model, in a specialist healthcare setting, but with wide reach through online programming.*
- *An online model of care allows increased access and accessibility, particularly those with disabilities that have transportation/travel barriers, as well as those living rurally who have less access to specialized care*

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: What is the effect of new virtual care financial incentives on the delivery mental health care services?

Lead researcher: Nibene Somé
Lead knowledge user: Branka Agic
Team members: Bahram Rahman, Sisira Sarma, Samantha Wells, Claire de Oliveira, Kelly Anderson, and Shehzad Ali
Type of project: Evaluation (knowledge creation)
Research area studied: Integration of care
Additional research area/pool: National Standards for Mental Health Services
For more information, please contact Nibene Habib Somé, Nibene.Some@camh.ca
Keywords*:* Virtual care, mental health, financial incentives, primary care

KEY MESSAGES

TBD – This part will be completed after we run the in-depth analysis.

What is the issue studied and why does this matter?

The Ontario Ministry of Health (MOH) implemented incentive payments to encourage the delivery of virtual mental health care services by primary care physicians (PCPs) and improve access to mental health care. The compensation received by PCPs for virtual mental health services depends on their payment models. The MOH needs to understand how and to what extent this policy has affected virtual and in-person mental health services delivery during regular- and after-hours across payment models. Which payment model maximizes virtual and in-person mental health care provision?

Our study evaluates how the new incentive policy enacted by the MOH might improve access to PCPs' mental health services for patients in need. This evaluation is important to understand whether financial incentives can be used to successfully integrate virtual care and mental health care into primary care settings.

We focused on mental health services provided by PCPs to their patients diagnosed with mental health and addiction problems to assess improvement to access to care for all those in need. An in-depth evaluation of the impact of virtual care on equity of access to care and health outcomes needs more research funds to collect and analyze patient-level data and involve diverse patients

What approach was taken?

Before and after framework will be used to evaluate the virtual care incentive payment policy (implemented from 2020 to 2022) on longitudinal health administrative data from 2010-2022. A two-stage estimation strategy will be used to estimate the impact of the virtual care incentives on physician provision of virtual and in-person mental health care services delivered to rostered

What are the key research findings?

This is still a work in progress. We have the descriptive results that we chose not to present and wait to run the in-depth analysis. We have experienced a delay in accessing ICES data due to administrative constraints. All issues are now solved and the NPA have been granted access to the data from September 2023 to September 2024. We expect to have the key results before the end-of-grant meeting on November 21, 2023.

The key knowledge users are the MOH, Ontario College of Family Physicians and Ontario Medical Association.

NEXT STEPS - Implications for policy and practice

We hope that our research findings will inform the MOH which payment model maximizes virtual and in-person mental health care and inform MOH policy activities and decisions regarding the integration of virtual care and mental health care into primary care settings via financial incentives.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

EVALUATION OF VIRTUAL PHYSICIAN CARE IN LONG-TERM CARE IN A BC HEALTH AUTHORITY

Lead researcher: Janice Sorensen, Long-Term Care & Assisted Living, Fraser Health Authority.
Lead knowledge user: Akber Mithani , Decision maker, Long-Term Care & Assisted Living, Fraser Health Authority.
Team members: Valorie Crooks, Tyler Cole, Sherin Jamal, Lillian Hung, Maria Montenegro, Jeremy Snyder, Long-Term Care & Assisted Living Research Partners Group
Type of project: Evaluation (knowledge creation)
Research area studied: Long-term care
Additional research area/pool: CMA Foundation (virtual care)
For more information, please contact Janice Sorensen, janice.sorensen@fraserhealth.ca
Keywords: long-term care, virtual care, physician, telehealth, COVID-19 pandemic

KEY MESSAGES

- Our research advanced the Quadruple Aim and health equity by: co-production and co-mobilization of knowledge with diverse knowledge users in long-term care (LTC) homes.
- Residents and family caregivers lacked awareness of virtual physician care and along with LTC staff, often faced barriers of poor access and insufficient training in technologies.
- Inequities in virtual care infrastructure and digital literacy differentially impacted access.
- Widespread adoption of virtual care increased workload and expanded roles of LTC staff.
- Physicians' job satisfaction increased from virtual care efficiencies and flexibility, although in-person care was valued to build rapport with residents, family and LTC staff.

What is the issue studied and why does this matter?

Rapid adoption of virtual physician care across LTC homes during the COVID-19 pandemic has revealed knowledge gaps for evidence-based approaches to virtually deliver physician care in LTC. These gaps include understanding how such care can facilitate health equity for all residents and achieve key goals of the Quadruple Aim in LTC homes (i.e., improved resident, family, physician, and staff experience; increased value in the LTC sector and health system; and resident health outcome). There is a timely need to generate evidence through a robust evaluation of the pandemic rollout of virtual physician care in LTC homes to inform best practices and policy for equitable virtual physician care that is person- and family-centred, coordinated, and value-based.

What approach was taken?

We undertook a utilization focused evaluation of the uptake of virtual physician care in LTC during the COVID-19 pandemic in Fraser Health, British Columbia. Interviews and focus groups were conducted with residents, family caregivers, physicians, and staff to explore their experiences and preferences for virtual physician care in LTC. Engagement of diverse knowledge users in LTC in conducting the evaluation enabled integrated knowledge mobilization and developing actionable tools aimed at different knowledge users on best-practices and policy for virtual physician care.

What are the key research findings?

We identified three main themes: (1) digital literacy issues and training needs; (2) poor physical infrastructure for virtual care; and (3) the views of different knowledge user groups on appropriate use of virtual care. Physicians typically require LTC staff support to facilitate virtual care for residents. Some staff felt overwhelmed to support virtual care due to a lack of training on software and hardware. They also noticed family caregivers that could benefit from training and improved virtual care access. The four main infrastructure concerns identified included: (a) poor internet connections hindering virtual care; (b) LTC homes lacking electronic medical records affecting access to complete, up-to-date medical records; (c) insufficient access to physical devices (e.g., tablets, phones) in many LTC homes; and (d) some LTC homes without dedicated physical spaces for virtual care leading to issues, such as lack of privacy. Views on appropriate use of virtual care differed between knowledge user groups. Residents and family caregivers were often unaware of virtual care occurring and generally preferred in-person physician care. Virtual care was viewed as supplementary or complementary, particularly for family not able to visit the care home. Staff regarded virtual care as appropriate for prompt follow-up to straight-forward health concerns and less so for complex health issues, physical assessments, or delicate conversations. Reduced physical presence of physicians and over reliance on virtual care sometimes put staff in uncomfortable situations beyond their typical scope of practice and workload. Physicians valued in-person care to establish relationships with residents, family and LTC staff. They were more eager than the others groups to adopt virtual care and saw several advantages for efficiencies in providing care for several residents, saving time travelling, reducing risk of illness transmission, improved access to physicians in rural settings, and increased job satisfaction.

NEXT STEPS - Implications for policy and practice

Our findings highlight a need to address disparities in digital health literacy and inequities in virtual care infrastructure and access between LTC homes as well as within and across knowledge user groups. These inequities could be addressed through widespread implementation of evidence-based standards for access to and training on information and communication technologies in LTC homes. For example, the Health Standards Organization’s *CAN/HSO 21001:2023 – Long-Term Care Service* standard provides evidence-informed guidance on information and communication technology for optimal working conditions and high-quality, resident-centred care in LTC homes.

Knowledge mobilization initiatives aim to produce timely, relevant actionable tools to support best practices and policy on virtual physician care in LTC. These initiatives take in consideration the unique needs of different knowledge user groups to support equitable care delivery, e.g., a briefing for decision maker knowledge users to guide adoption within and beyond Fraser Health; an infographic, short video or other resource co-developed with and for physicians and LTC staff as well as residents and family caregivers including guidance, such as optimal balance and application of virtual *versus* in-person physician care in LTC homes.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE Supporting the Retention of Women Health Professionals

Lead researcher: Abi Sriharan, MSc, DPhil,
Team members: Whitney Berta, Sylvain Boet, Audrey Laporte, Gillian Strudwick, Savithiri Ratnapalan
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: The health care workforce
For more information, please contact abi.sriharan@utoronto.ca
Keywords*: healthcare workforce*, *women*, *retention*, *talent management*, *health human resources*

KEY MESSAGES

Several factors at personal, professional, and organizational levels impact the decision of frontline clinical healthcare workers, particularly women, to leave their jobs. In situations where women must balance caregiving responsibilities at home, they are more likely to remain employed in organizations that offer a supportive and accommodating work culture. However, if they encounter negative drivers such as poor work culture, unsupportive leadership from immediate supervisors, and inadequate incentives, they may be inclined to consider leaving the organization.

What is the issue studied and why does this matter?

In Canada, the majority of healthcare workers are women, with 43% of physicians and 91% of regulated nurses being female. Despite their professional diversity, women in healthcare often experience burnout caused by work culture issues such as incivility, bullying, gender biases, discrimination, and sexual harassment, along with high job demands and inadequate compensation. These challenges are particularly felt by women of color, LGBTQ2+ individuals, women with young children, official language minority groups, and early career professionals. Shockingly, half of healthcare workers in Ontario, who are predominantly women, are considering leaving their jobs, retiring early, or no longer providing direct patient care. If these issues are not addressed, patient care will suffer.

What approach was taken?

In our research, we utilized a two-stage sequential mixed-methods study design to delve into the experiences of female healthcare workers. Our study included a scoping literature review and qualitative key informant interviews, with the goal of gaining a comprehensive understanding of the obstacles that women face in the healthcare sector and identifying potential workplace

What are the key research findings?

In healthcare, as in many other fields, women often face stereotypes and biases suggesting that they cannot balance long hours, unpredictable schedules, and high-stress environments with their personal lives. However, our research challenges this assumption and demonstrates that the factors contributing to women leaving frontline healthcare roles are complex.

Our study reveals that women depart from clinical positions due to three interrelated factors: personal, professional, and organizational. Personal factors are outside the control of employers when it comes to retaining women in frontline clinical care. However, organizations can invest in strategies, culture, and leadership that create an environment that supports women.

When employees experience high levels of job satisfaction, achieve balance between work and personal life, and receive significant support from management, they are less likely to consider leaving their current roles and more likely to demonstrate strong commitment to their organizations.

NEXT STEPS - Implications for policy and practice

Canada and other countries worldwide face significant health system challenges due to the global health human resource crisis (HHR). Meeting the demands of the healthcare system's human resource needs is crucial to meet the quadruple aim of improving the patient experience of care, enhancing the healthcare provider experience, ensuring the population's health, and advancing value for money and health equity. While investments in training and recruitment are important, they are not enough if healthcare organizations fail to retain their existing and newly-hired health workers. Therefore, healthcare organizations and health systems must prioritize sustainable work environments for health professionals, with particular attention paid to women, who make up four out of every five paid healthcare workers worldwide.

Our research team's initiatives to disseminate knowledge have captured the attention of healthcare organizations committed to enhancing talent retention strategies at the organizational level. The research team is currently collaborating with organizational stakeholders to develop research partnerships and improve organizational and leadership capacity to address talent management as a leadership challenge rather than a human resource function.

Digitizing Integrated Care – Aligning Technology to Values

Lead researcher: Carolyn Steele Gray, Sinai Health & University of Toronto
Lead knowledge user: Jennifer Major , Decision maker, Other – Healthcare Excellence Canada
Team members: James Shaw (Co-PI); Marissa Bird (Co-PI); Payal Agarwal (Co-I); Onil Bhattacharyya (Co-I); Shivani Chandra (Co-I); Dara Gordon (Co-I); Monika Kastner (Co-I); Andrew Levy (Co-I/Knowledge User); Ciro Muiruri (patient partner); Andrew Pinto (Co-I); Tara Sampalli (Co-I/Knowledge user); Ambreen Sayani (Co-I); Ross Upshur (Co-I); David Wiljer (Co-I); Walter Wodchis (Co-I); Jocelyn Bennet (Knowledge User); Helen Angus (Knowledge User); Mark Casselman (Knowledge User); Shiran Isaackz (Knowledge User); Alies Maybee (Patient Partner); Louise Binder (Patient Partner); Leah Stephenson (Community Partner); Nick Zonneveld (International Collaborator); Ted Palen (International Collaborator)
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Integration of care
For more information, please contact Carolyn Steele Gray; Carolyn.SteeleGray@sinaihealth.ca
Keywords: digital health, integrated care, values, implementation, deliberative dialogues

Key Messages:

Our research advanced the Quadruple Aim and health equity by:

- Developed an understanding of the relationship between Quadruple Aim and health equity related values and the use of technology in models of integrated care representing multi-perspectives (patients, caregivers, clinicians, decision-makers, industry partners) relevant to the delivery of integrated care.
- Established the Value-Aligned Digital Health Consortium who has begun creating a set of guiding questions to help decision-makers and implementers critically assess technologies in relation to Quadruple Aim and health equity related values.
- Identified critical unanswered questions requiring exploration to ensure Quadruple Aim and health equity related values can be supported when implementing digital health solutions in integrated models of care.

What is the issue studied and why does this matter?

Health care systems across Canada and internationally are undergoing significant transformation to meet the needs of a growing population of individuals with complex health and social care needs requiring multi-disciplinary care. This new way of working, referred to as delivering “integrated care” is intended to help providers from both health and social care work better together with each other and with their patients to meet different patient physical and mental health, and social needs. Integrated models of care are inherently intended to achieve Quadruple Aim and equity outcomes.

Digital health solutions, like Electronic Medical Records (EMRs), virtual care (e.g. video consultations), patient portals, and mobile apps to monitor symptoms and health can be a significant enabler for integrated models of care. However, with more rapid adoption of technology there have been rising concerns about increasing clinician burnout, poor patient experiences, and exacerbating of health inequities.

By bringing together community partners, seldom-heard from populations (through an equity consultation), health and social care providers, system leaders, industry partners and researchers we have begun developing an actionable tool that will guide implementation to ensure technologies meet Quadruple Aim and health equity related values.

What approach was taken?

From January-May 2023 we ran 8 deliberative dialogue sessions with 9 patient/caregiver/community partners and 10 health and social care provider, system leader, industry and research partners. Sessions built on each other over 5 focus areas: 1) exploring values that drive integrated care; 2) mapping values to models of integrated care; 3) aligning technology to models; 4) building value-based prompts to drive implementation; and 5) exploring tensions between values and interests. We also engaged in an equity consultation with the Engaged Equity-Moblizing Partnerships in Community (EMPaCT) group to ensure perspectives of diverse members of the community were included in the dialogues.

What are the key research findings?

Our primary output was the establishment of the Value-Aligned Digital Health Consortium made up of the project team and dialogue members. In addition to the Consortium, this project further developed knowledge on the relationship between values, technology and integrated care, generated two key outputs, and identified several new areas of exploration.

Knowledge development: We advanced our understanding of the role of values in delivering integrated models of care, by building on internationally developed set of values to apply to an Ontario context. A number of additional equity-related values were identified including new values like social justice, trauma-informed, and strengths-based. We additionally did a deep dive exploration into the intersection between values and interests as drivers of health system transformation broadly. Strategies were identified regarding how values have the potential to disrupt interests as a means to help ensure values meaningful to communities, providers, and organizations can be upheld.

Our two key outputs include a set of integrated care archetypes and an initial set of value-based prompts.

Integrated Care Archetypes: Archetypes of models of integrated care were developed to understand key components of different models, while offering structure or scaffolding to help identify values and technologies that could be connected to models of integrated care. The team led a targeted literature search followed by consultation with Consortium members through meetings and in the dialogue sessions to develop 5 archetypes of integrated care. This work is being written up into a manuscript for publication.

Value-based prompts: Through the series of dialogues, EMPaCT consultation, as well as through a workshop delivered at the International Conference on Integrated Care (Belgium, May 2023), we have developed a preliminary set of over 50 value-based prompts. These prompts can be used alongside implementation and change management activities to help embed values into the technology implementation process.

Next steps – Implications for policy and practice

This project revealed the critical role that values can play in the implementation of integrated care. In particular, if we're seeking to advance the Quadruple Aim and Equity imperatives, we need to attend to competing interests and processes that may make this a challenge. Implementation and Change Management tools can be helpful as we seek to adopt new technologies into models of integrated care, but without explicit acknowledgement of shared and competing values of actors in the system, there is a risk that implementations might fail, or worse, lead health systems further away from Quadruple Aim and Equity targets.

The Consortium agrees this is the start of a long journey but has set a critical foundation to move forward. The group identified several additional questions that need to be addressed as well as next steps we will take as a group.

New Questions:

- How can we think about shared decision-making processes, and where would we inject these questions into those processes?
- What is the relationship between different levels of both values and interests (personal, organizational, network), and how do these get balanced?
- When we set out to establish a common set of values in an integrated care model, do we have the right participants around the table? How do we ensure we've got the right group of perspectives together of individuals and organizations to help us have that "disruption" effect?

Next Steps:

- Refining and validating the prompts through a consensus/Delphi process
- Test and validate prompts through proof of concept pilots
- Develop a toolkit to help implementers and decision-makers use the prompts
- Expand partnerships with cross-provincial groups (e.g. Patient Advisors Network)
- Develop a website that would make the prompts and toolkit accessible.

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

A cross-provincial comparative analysis of opioid use disorder treatment in primary care

Lead researcher: Dr Abhimanyu Sud, University of Toronto
Lead knowledge user: Dr Samuel Hickcox , Policy maker, Nova Scotia Health
Team members: Dr Sara Allin; Dr Michelle Brousson; Dr Kellia Chiu; Lisha Di Gioacchino; Sean LeBlanc; Dr Sarah Liskowich; Dr Ashley McInnes; Kady Myers; Dr Lara Nixon; Robert Parker; Dr Sheryl Spithoff; Dr Mikhail Torban; Dr Jason Vanstone
Type of project: Comparative Policy Analysis (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: Not applicable
For more information, please contact: Dr Abhimanyu Sud (abhimanyu.sud@utoronto.ca)
Keywords*:* opioid use disorder, opioid agonist therapy, methadone, health policy

KEY MESSAGES

- **Our research advanced the Quadruple Aim and health equity by: understanding how different provinces/territories deliver opioid use disorder treatment, thus enabling policy learning for decision makers across Canada to improve the delivery of, and access to care.**
- We identified substantial variation across the country regarding prescribing requirements for treatment, with Western provinces exhibiting tighter regulations than Eastern provinces.
- After a federal policy change was introduced aiming to increase prescribers' ability to provide treatment, we noted positive changes in some provinces and potentially negative effects in others.
- Given within-country variation, contextually appropriate policy responses are needed to address the different rates and drivers of opioid-related harms.

What is the issue studied and why does this matter?

- Opioid-related harms (including opioid use disorder) and its policy responses vary across Canada; there is a need to compare and understand the range of policies across provinces/territories.
- Opioid agonist therapy (OAT) is an effective treatment and a key policy response; however, medications used for OAT are highly regulated, often with numerous prescribing restrictions that vary by province/territory.
- Until recently, prescribers had to obtain a federal exemption to prescribe methadone for OAT, in addition to following additional provincial/territory regulations. To reduce this complexity and improve OAT access, the federal exemption requirement was removed in May 2018.
- Given the multilevel and complex nature of methadone regulation, we used the removal of the methadone exemption as an opportunity to examine regulatory policy responses for OAT prescribing across Canada.
- Our findings offer opportunities for cross-jurisdictional policy learning for decision makers to improve access to treatment for people with opioid use disorder, and encourage more prescribers to provide OAT.
- We included all provinces/territories provided that data were available. While much of the current discussion around opioid-related harms has focused on provinces experiencing fentanyl-related harms, we recognize that other jurisdictions also face unique challenges around opioid use and require policy responses relevant to their context.

What approach was taken?

- We did a comparative analysis of provincial/territorial OAT prescribing regulations.
- First, we looked at publicly available policies, guidelines, and education/training materials; we found documents for all jurisdictions except NT and NU.
- We documented all changes relevant to methadone prescribing requirements, before and after the removal of the federal exemption. These were reviewed by clinical and policy experts with OAT expertise from each province (except YT).
- Any references to another province's policies were also mapped to identify cross-jurisdictional patterns.
- Finally, we quantitively assessed the impact of removing the federal exemption on the number of overall OAT prescribers and number of methadone prescribers.

What are the key research findings?

Methadone prescribing regulations (Table 1)

- Before the removal of the methadone exemption, all provinces/territories required prescribers to undergo initial methadone prescribing education/training, and college registration.
- Western provinces (e.g. BC, AB, SK, MB) showed tighter education and preceptorship regulation compared to Eastern provinces (e.g. QC, NB, NL, NS).
- After removing the exemption, provinces in the east (ON, NB, NL, NS, PE) removed all or most of their pre-exemption requirements; in the west (BC, YT, AB, SK, MB), there was little to no change in requirements.

Cross-jurisdictional referencing of policy content (Figure 1)

- BC and ON were the two major 'nodes' for other provinces; generally, BC acts as a reference node for Western provinces, and ON for Eastern and some Western provinces.
- SK and NB explicitly adopted another province's standards (AB for SK, QC and NS for NB); these occurred within geographically regionalized West and East networks.
- Removing the federal exemption had minimal impact on cross-jurisdictional referencing; in only NS and NL, the requirement for physicians to undertake CAMH training downgraded to a recommendation at the same time as the exemption removal.

Impact on removing the federal methadone exemption on the number of OAT prescribers

- There is a wide range in the number of OAT prescriber across provinces; normalized to the population size, there was a 7.5-fold difference between the highest (BC) and lowest (SK) provinces.
- For all provinces, there was an overall trend of significant increase over time in the number of OAT prescribers.
- There is substantial variability in the magnitude of this change, with the highest growing province (AB) growing at 5.4-fold the rate of the slowest province (MB).
- There were very distinct responses to the removal of the methadone exemption across the provinces, with some displaying clearly positive increases, to some that displayed possibly negative effects.

NEXT STEPS - Implications for policy and practice

Data reporting and sharing

- While documenting OAT prescribing requirements and policies, and investigating the impact of the federal exemption removal on the number of OAT prescribers, we noted the lack of availability and consistency in data across the country.
- Further work is needed to understand the underlying dynamics leading to differences in data collection and reporting.
- A pan-Canadian mechanism or body could be established to be responsible for ensuring consistency with regards to reporting epidemiological data and policy responses.

Recognizing variation across Canada

- The national discourse often refers to a *Canadian* drug toxicity crisis; however, there are important differences between provinces/territories, particularly in the rates of drug-related harms, drivers of harms, systems of OUD care, and regulations for OAT prescribing.
- Understanding and accounting for these differences and contexts is essential in federal policies responding to opioid-related harms, to maximize intended benefits and avoid unintended negative consequences.

Diversifying policy and knowledge networks

- Therefore, developing more diverse policy and knowledge networks (beyond the East/West division) may facilitate more appropriate policy responses.
- Intermediaries could be used to facilitate cross-jurisdictional policy learning:
    - ON, as a populous, central, and ‘intermediate’ province with a balance of policy restriction and relaxation.
    - Federal institutions, such as the Federation of Medical Regulatory Authorities of Canada, the Canadian Research Initiative on Substance Misuse, or Health Canada’s federal Opioid Response Team.

Future research

- Building on these comparative findings, we aim to develop a more nuanced understanding of the political, health system, and sociocultural drivers of treatment policy across a range of provinces.
- A closer examination of health systems and the role of primary care is particularly important to ensure patient outcomes and provider experience can be improved.
- This will also provide further insights for policymakers to respond to opioid-related harms in their context.

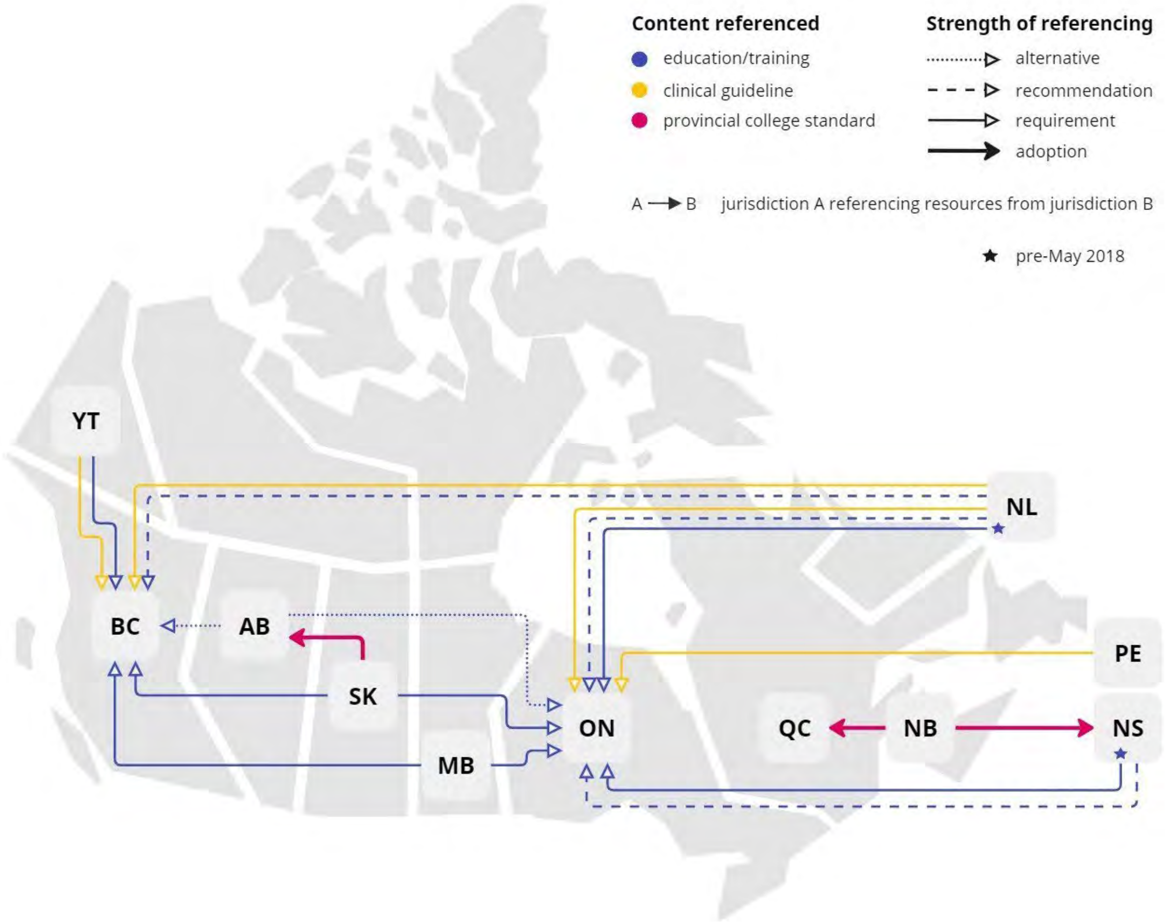
Tables and figures

Table 1. Requirements for methadone prescribing regulation pre- and post-removal of the federal Section 56 exemption

Jurisdiction	**Initial education and training**		**Mentorship or preceptorship**		**Regular renewal or continuing education and training**		**College registration**		**Auditing or practice review**	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
British Columbia[a]	•	•*	•	•*	•		•	•*		
Yukon	•	•	•	•	•	•	•	•		
Alberta	•	•	•	•	•	•	•	•	•	•
Saskatchewan[b]	•	•	•	•	•	•	•	•	•	•
Manitoba	•	•	•	•	•	•	•	•	•	•
Ontario[c]	•		•		•		•	•	•	•
Quebec[d]	•						•			
New Brunswick	•		•		•		•			
Newfoundland and Labrador	•		•		•		•			
Nova Scotia	•		•		•		•		•	
Prince Edward Island	•	•			•		•		•	

• Indicates required to prescribe in jurisdiction
[a] Removed requirement for section 56 exemption in 2016
[b] Requires continuing medical education with no regular renewal
[c] Removed education/training requirements in March 2021
[d] Required to name a mentor willing to support if necessary
*Applies only to those with no previous section 56 exemption prior to removal or no prescribing within the past 3 years

Figure 1. Cross-jurisdictional referencing of policy content



OUTPUTS & PRODUCTS

Output 1: Table 1 – Describing provincial/territorial methadone for OAT prescribing requirements
Output 2: Figure 1 – Mapping cross-jurisdictional referencing of OAT policy content

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: Implementing and evaluating health system changes to support primary-care based integrated care: The ELEVATE Innovation

Lead researcher: Joan Tranmer
Lead knowledge user: Kim Morrison , Decision maker, Health care practitioner
Team members: Investigators: Catherine Donnelly, Mary Kate Gazendam, Jacqueline Galica, Michael Green. Collaborators: Elaine Ma, Morgan Slater, Megan Jaquith, Jennifer Loshaw, Mike Rodgers, Helen Cooper, Paul Holyoke
Type of project: Focused implementation (knowledge implementation)
Research area studied: Integration of care
For more information, please contact Genevieve Pare: Genevieve.pare@queensu.ca:
Keywords: integrated care, primary care, older adults, discharge co-ordination, aging at home

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Comprehensively planning and developing primary-care-based system changes to support integrated care for older adults with complex health needs.
- Identifying facilitators to local system change such as a supportive regional platform (FLA-OHT), engaged partners, and system changes that were feasible, evidence informed and co-designed.
- Identifying key barriers to local system change such as existing health sector boundaries, regulations and funding.
- Recommending the need for regional organizational structure with operational governance and structural authority to support inter-sectoral care and health human resource sharing.
- Optimizing and enhancing embedding care coordination roles and activities in primary care teams. Enhancing the patient experience by providing integrated care embedded in the health home should continue to be a priority and anchor system changes.

What is the issue studied and why does this matter?

Integrated care, conceptualized as systematic organization of services to support access, quality, user satisfaction and efficiency, is associated with improved patient and system outcomes. However, heterogeneity of strategies and contexts and the lack of primary care-based strategies presents challenges to successful implementation within the current Canadian healthcare system. This is particularly important for older adults who may have multiple chronic conditions and/or are facing health challenges related to aging. With the recent introduction of the Ontario Health Teams (OHT there are opportunities and a platform for systematic implementation and evaluation of evidence-informed strategies that support integration.

The overall aim of this project was to evaluate the implementation processes, structures and outcomes of primary care-based innovations to support integrated transitional care and aging in place for community dwelling older adults.   Our study focused on the local implementation and evaluation of system changes within two primary care practice sites in the Frontenac Lennox & Addington Ontario Health Team (FLA-OHT). The FLA-OHT provided the local platform for the planning and evaluation activities related to the proposed system changes within each practice site. The system changes focused on strategies to support integrated and equitable care for older adults.

What approach was taken?

We employed an embedded single case design wherein the FLA-OHT was the case and two embedded units were two primary care practice sites: a family health organization (FHO) and a family health team (FHT). These sites were selected as they had different funding models and geographical locations. Our targeted population included older adults residing in the community.   Consistent with case study design we are collecting data from multiple sources: patient survey, patient and provider interviews, meeting notes and EMR data.

Each site co-designed different system changes to support integrated care for their targeted population. The "ELEVATE" innovation targeted key components of integration including: 1) systematic identification of a sub-population (older adults with complex health needs) 2) embedded home and community care coordination within primary care, 3) interdisciplinary patient reviews and assessment, 3) development and implementation of a person-centred therapeutic (management) plans, 3) proactive follow-up and monitoring, and 4) coordinated transitions (e.g., hospitalization).

What are the key research findings?

Within the context of complex intervention implementation research and the ongoing status of the project we have identified key facilitators and barriers to designing and implementing system change. These include: *context, intervention design and fidelity, implementation processes and organizational governance and funding.*

Context: This project took place within the FLA-OHT which has a robust established organizational structure including a Partnership Council encompassing the three partnered hospitals and a diverse range of partners from the municipalities, community (including Indigenous), primary care and academic settings. The targeted priorities of the FLA-OHT are moved forward through working groups that support 4 priority sub-populations. Our project group worked within the two working groups – Aging Well at Home and Coordinated Transitions and Discharge – focusing on older adults living in the community and individuals with complex chronic conditions. Each Working Group consists of health professionals and patient advocates and are led by a clinical and evaluation lead. The formalized structure to support the activities of this project was a key facilitator.

Co-designing the intervention: The primary care based integrated care innovations were co-designed by two FLA-OHT Working Groups, one focused on aging at home and one focused on coordinated discharge and transition. These groups, consisting of membership from multiple community organizations and across sectors, meet monthly or more to plan activities related to design, implementation and evaluation, and are supported administratively by the FLA-OHT. All system changes were systematically and comprehensively developed in collaboration with all key stakeholders, including patients. Role descriptions and activities were clearly articulated and supported by the local practice sites. This approach was a facilitator.

Intervention fidelity: The Aging at Home working group targeted home care modernization and created system changes to optimize the home care coordinator role within the health home to support patient access to home care support services based on assessed need. Three sub-populations of older adults were identified. "Minimal Support" patients were age 65+ and individuals who were living well in the community and currently receiving no formal home care supports. These individuals were supported by an Aging at Home Advocate who facilitated information about and access to preventive and wellness programs and community resources to support health and wellness at home. The "Moderate" and "Maximal" Support patients were currently receiving long term HCCSS services, with Maximal Support patients representing those at greatest risk of requiring LTC. The moderate support group were supported by an embedded home and community care coordinator. The maximal support group were further supported by a health and social integrator, who provided direct individual support and provided further navigation to access community support services outside the home care basket of services. The targeted population for this project included rostered patients who were existing HCCSS clients *and* patients who became eligible for home care over the project timeline. The system changes included: 1) creation of the advocate role, which required a refocusing of the occupational therapist on the primary care team to older adult care, 2) embedding and integrating the HCCSS care coordinator into the primary care practice site and 3) creation of the monthly Aging Well rounds, where community programs attended to further support program navigation and access. There were three levels of integration – linkage or navigation for patients with minimal needs; coordination for patients with moderate needs; and integration of additional services and one-on-one care within the home for patients with maximal needs.

The Coordinated Discharge Working Group proposed a pilot project to support transition to and from the hospital for older adults through creation of an embedded Health Home Care Navigator role (HHCN). The HHCN supported communication and coordination between the primary care practice site, hospital and community. A detailed position description and role was developed. In Fall 2022, the Victorian Order of Nurses, offered secondment of one of their members for this role; this person resigned in February 2023.

All system changes in both working groups were systematically and comprehensively developed in collaboration with all key stakeholders, including patients. This co-design approach was a facilitator.

Organizational governance and funding: The lack of operational funding and regional organizational governance to support these system changes hindered or delayed implementation, as all changes in personnel roles were to be accomplished by persons in existing positions. While the FLA-OHT structure is intersectoral, the current governance and operational structure does not easily allow for integration of services across the hospital – home care – primary care sectors. This is a barrier.

NEXT STEPS - Implications for policy and practice

Our implementation and evaluation activities are ongoing and evolving. This reflects the iterative process of system changes. Within this context, there are practice and evaluation research implications.

Health care system change to promote integrated care across historical boundaries of sectors is complex. Our early feedback suggests that there are successes such as early follow-up of frail elderly patients post discharge, positive patient and family experiences, and enhanced capacity to age well at home. However, access to timely information (e.g., discharge records, home care notes), integration of medical records, and ease of communication with partners remains a challenge despite our targeted activities.

System changes need to be tailored to the local context. In our project, the two practice sites differed; the FHT had access to more team-based supports in comparison to the FHO. Different roles and activities were proposed and implemented to support care coordination for older adults. The FLA-OHT provided the platform for comprehensive planning. However, to ensure equitable access to integrated and coordinated care this platform should include a governance and funding structure to support local changes across different practice models.

We can address the Quadruple Aim goals with system changes that support integration of health services across sectors of care. Our case study highlights how local stakeholders actively engage with the planning and evaluation of evidence-informed, co-designed changes. We know “what to do”; there is a need to ensure equitable access to supports and resources to accomplish the desired goals.

EVIDENCE BRIEF
Catalyst Grant: Quadruple Aim and Equity (2022-2023)

Northern, rural, and remote learning health systems

Lead researcher: Brianne Wood, PhD, Thunder Bay Regional Health Research Institute and NOSM University
Lead knowledge user: Kelly Meservia-Collins , Healthcare administrator, Thunder Bay Regional Health Sciences Centre
Team members: Kristine Hart, MA; Erin Cameron, PhD; Christopher Mushquash, PhD; Andrea Raynak, MPH; Bonnie Nicholas
Type of project: Knowledge Synthesis (knowledge creation)
Research area studied: Integrating upstream prevention within health care delivery settings (SDoH)
Additional research area/pool: CIHR - Institute for Population & Public Health (IPPH)
For more information, please contact Kristine Hart (khart@nosm.ca)
Keywords*:* learning health systems, social accountability, northern, rural, and remote health systems

KEY MESSAGES

Our research advanced the Quadruple Aim and health equity by:

- Recognizing that northern, rural, and remote learning health systems have different understandings and priorities of Quadruple Aim and health equity outcomes
- Strengthening collaboration and knowledge sharing among northern, rural, and remote researchers and knowledge users across Canada
- Emphasizing the importance of a clear, common language related to learning health systems, social accountability, Quadruple Aim and health equity

What is the issue studied and why does this matter?

Canadian health organizations and systems are adopting the *learning health system* model to help achieve better outcomes. This approach involves rapid knowledge generation and dissemination that leverages existing data infrastructure, research capacity, and a continuous improvement culture. Though theoretically appealing, there is limited evidence that learning health systems actually lead to improved outcomes, including those of the Quadruple Aim. We asked: **1. What are the contextual factors and outcomes that matter in northern, rural, and remote learning health systems? 2. What contextual factors affect change in these learning health systems?** Our project investigated Quadruple Aim and health equity indicators that are relevant for northern, rural, and remote learning health systems.

What approach was taken?

Our Northwestern Ontario project team included researchers, health care administrators, clinicians, a patient-centered care leader, and research trainees. Our project included two studies: (1) A review of learning health systems and social accountability context and outcome indicators, and (2) a meeting to build consensus around contextual factors and outcomes that matter in northern, rural, and remote learning health systems.

What are the key research findings?

- There is little research on social accountability and learning health system outcomes in northern, rural and remote settings. Contextual factors are not described
- Quadruple Aim and health equity are helpful frameworks to identify outcomes that matter, but they are not comprehensive. There needs to be a balance between contextualization and standardization for assessment in northern, rural, and remote health systems
- At our meeting, we collectively identified indicator themes for contextual factors and outcomes for *socially accountable learning health systems*. (1) Holistic health; (2) Nature of relationships and communication within and across systems; (3) Adaptability of the systems; (4) Transparent and equitable resource allocation; (5) Efficient, transparent governance of data and knowledge; (6) Local definitions and acknowledgement of cultural histories, traditions, and knowledges ("Two-Eyed Seeing"); (7) Multiple dimensions of sustainability, including climate sustainability.

NEXT STEPS - Implications for policy and practice

- Determine a common language and understand our why. We need to work with knowledge users from multiple perspectives to use consistent, concise, accessible and meaningful language around these concepts. We must be clear on *why* this work is important.
- Understand specific examples of socially accountable learning health systems. Conduct an environmental scan to understand practical examples or cases. Future research in learning health systems needs to examine contextual factors and differences across cases.
- Share knowledge on northern, rural, and remote learning health systems. Generate, share, and amplify empirical evidence from northern, rural, and remote settings, especially for those making decisions at the provincial and federal level.
- Continue our community of practice. Strengthening networks of researchers and knowledge users in northern, rural, and remote settings across the country is valuable for amplifying our priorities, accomplishments, and challenges. We have different priorities and ways of working together that require different outcome indicators.

OUTPUTS & PRODUCTS (optional)

Output 1: Community of practice – northern, rural, and remote learning health systems

EVIDENCE BRIEF

Catalyst Grant: Quadruple Aim and Equity (2022-2023)

PROJECT TITLE: How has vascular health in the population changed since the pandemic?

Lead researcher: Dr. Amy Y X YU, University of Toronto, Sunnybrook Research Institute, ICES
Lead knowledge user: Ms. Shelley SHARP, Policy maker, Other: CorHealth Ontario
Team members: Patrice Lindsay, Peter C Austin, Cynthia Jackevicius, Moira K Kapral, Nadia Khan, Douglas S Lee, Candace McNaugton, Manav V Vyas
Type of project: Evaluation (knowledge creation)
Research area studied: Primary, home and community-based care
Additional research area/pool: Not applicable
For more information, please contact Dr. Amy Y X Yu (amyyx.yu@utoronto.ca)
Keywords: hypertension, diabetes, pharmacy, mortality, COVID19

KEY MESSAGES

- Our research advanced the Quadruple Aim and health equity by generating new information on vascular health. Although population rates of stroke and heart attacks are currently stable, we found that more people are newly starting medications for hypertension and diabetes. We showed that telemedicine is an effective tool for vascular care that is complementary to in-person care. Nevertheless, emergency departments are crowded and the proportion of people leaving without being seen has doubled.
- Our findings inform health services planning for the prevention of vascular events in primary and specialty care settings as well as for acute disease management in emergency departments.

What is the issue studied and why does this matter?

- Cardiovascular disease is a leading cause of death and disability in Canada. The continuum of vascular care ranges from prevention to acute management to rehabilitation and reintegration into the community and requires an integrated system of care that needs to be iteratively monitored and refined to respond to the changing needs of the population, updates in best practice standards, and health system structures. The COVID19 pandemic has changed the population's health, health behaviors, and health-seeking behaviors. It has also changed the health system as we are witnessing challenges in primary and acute care, a crisis in health human resource, and emergency department crowding.
- We studied the temporal changes in vascular risk factors in the population and hospitalizations for vascular events comparing the pre-pandemic baseline to the "new normal" post-pandemic. We also evaluated emergency department left-without-being-seen rates and the use of telemedicine for stroke prevention. Our work has generated new information on the current vascular health of the population while also shedding light on the vulnerabilities of the healthcare system. These results will inform ongoing efforts to improve systems of care to optimize vascular health.

What approach was taken?

The work was conducted by a multidisciplinary team led by Dr Amy Yu (lead researcher), stroke neurologist and health services researcher, and Ms Shelley Sharp (lead knowledge user), senior strategist at CorHealth Ontario. The project was developed in consultation with knowledge users to ensure that our results will inform the ongoing work of provincial and national agencies and that our objectives were in line with the strategic priorities of policymakers. We used linked large administrative health datasets to study changes in the health of the population of Ontario, Canada.

What are the key research findings?

We made several important observations that will inform health services planning for the management of vascular disease.

- First, we found a brief reduction in hospitalizations for strokes and heart attacks in the first few weeks immediately after the pandemic declaration, but this was short-lived and event rates have returned to baseline. Fortunately, rates are so far stable, and have not further increased in the population overall, nor by age-sex stratified subgroups.
- Second, telemedicine uptake in stroke prevention clinics has been swift and effective in ensuring stable access to stroke specialists, stroke investigations, medication renewals, and importantly, there was no increase in stroke recurrence.
- Third, vascular risk factors are on the rise in the population. Rates of new users of medications to treat diabetes and hypertension were decreasing in the five years pre-pandemic, but since March 2020, these trends have reversed: incident users of these medications are increasing. This increase has been sustained for over two years into the pandemic suggesting a decline in the population's vascular health. The underlying reasons are likely multifactorial and include complications related to COVID19 infection and changes in the population's health behaviors and health-seeking behaviors. Given this observation, ongoing surveillance of vascular events is needed.
- Finally, the emergency department (ED) is the first point of contact for emergencies like strokes and heart attacks, but ED crowding has worsened during the pandemic. The proportion of patients leaving the ED without being seen has doubled. We are pursuing further work to understand health outcomes after leaving the ED without being seen.

NEXT STEPS - Implications for policy and practice

Cardiovascular disease is the second leading cause of death in Canada. Vascular events are largely preventable. Our work has shown that the pandemic has had serious negative consequences on the cardiovascular health of the population.

- We observed that there are more people requiring medications for diabetes and hypertension. There is an urgent need for renewed public health interventions for prevention of vascular disease, including promotion and support for exercise, healthy diet, and smoking cessation. Policies beyond healthcare are also needed to ensure an equitable access to environments that support optimal vascular health, including food safety, housing, socioeconomic stability, education, air quality, and neighborhood walkability. If left unmitigated, the increase in diabetes and hypertension in the population could have severe consequences on future vascular event rates, including stroke, heart attack, limb ischemia and amputation, retinopathy, nephropathy, and more. These complications are associated with increased patient morbidity and mortality, are costly to the health system, and will contribute to increased utilization of the health systems at all levels of care: inpatient, outpatient, home care, assisted devices, etc.
- When patients do experience a vascular event, such as a stroke or heart attack, there are effective treatments to help them recover. We found that health systems have also changed during the pandemic. The addition of telemedicine as a complementary health service position tool was a welcomed changed. On the other hand, emergency department and acute care hospital crowding, and health human resource limitations continue to be important challenges. Dedicated work on improving the robustness of our health systems, including enhancing acute care hospital flow to help emergency departments respond to medical emergencies, while redirecting non-emergent care to primary care or other rapid access clinics, is necessary. The burden of navigating the health system should not fall on patients and their caregivers.

SYNTHÈSE EN BREF

Subvention Catalyseur : Quatre objectifs et équité en santé (2022-2023)

ENGAGEment des aîné.es recevant des soins à domicile et de leurs proches dans les décisions en partenariat avec les équipes cliniques

Chercheur principal : France Légaré, Université Laval
Utilisateur des connaissances principal : Guy Thibodeau, Décideur, Centre intégré universitaire de santé et de services sociaux de la Capitale-Nationale
Membres de l'équipe : Emmanuelle Aubin, Marie Cimon, Nouha Ben Gaied, Julie Gilbert, Nancy Chénard, Isabelle Violet, Mélanie Gingras, Julie Emond, Julie Bickerstaff, Michèle Morin, Virginie Blanchette, Patrick Archambault, Anik Giguère, Amédé Gogovor, Ali Ben Charif
Type de projet : Application spécifique (mobilisation des connaissances)
Domaine d'étude : Soins de première ligne, soins à domicile et soins communautaires
Autre domaine de recherche/classe : Sans objet
Pour plus d'informations, veuillez contacter : Sabrina Guay-Bélanger
Mots clés *[maximum de 5 pour faciliter le filtrage/tri pour les recherches sur le Web] :* décision partagée, soutien à domicile, outil d'aide à la décision, aîné.es, interprofessionnel

PRINCIPAUX MESSAGES

- **Notre recherche a fait avancer les quatre objectifs et l'équité en santé comme suit :**
- La prise de décision partagée (PDP) améliore les expériences de soins et les issues de santé des aîné.es, car elle leur permet de prendre des décisions éclairées en fonction de ce qui est important pour elles et eux, favorisant leur autonomisation et leur bien-être.
- La PDP améliore l'efficience des systèmes de santé puisqu'elle contribue à réduire les effets délétères des options dont l'efficacité n'est pas démontrée, évitant le gaspillage en santé ainsi que les effets délétères possibles. Enfin, elle améliore de l'expérience des équipes cliniques.
- Nous savons que les aîné.es dans le contexte du soutien à domicile (SAD) sont les personnes les moins exposées à la PDP. Par conséquent, notre projet réduit ces iniquités.
- La PDP est justifiée d'un point de vue éthique, autant sur le plan téléologique que déontologique.

Quelle est la question étudiée et pourquoi est-elle importante?

Depuis 2007, nous travaillons avec les utilisateur.trices des connaissances et ce projet a été développé en réponse aux besoins exprimés. Nous avons réalisé une enquête en ligne pancanadienne qui a démontré que les aîné.es recevant du SAD étaient les moins engagé.es dans les décisions en santé. Aussi, notre équipe a réalisé trois sondages pancanadiens auprès d'aîné.es recevant du SAD, proches aidant.es et professionnel.les de la santé. Ces enquêtes ont démontré que les aîné.es font face à plusieurs décisions difficiles qui relèvent de trois domaines : le milieu de vie, les options de traitement et les soins de fin de vie. Ces constats ont permis de développer ce projet afin de répondre aux besoins exprimés pour soutenir la PDP chez les aîné.es qui reçoivent du SAD. Ce projet a pour objectif de prioriser des outils d'aide à la décision spécifiques au SAD. Les outils prioritaires seront ensuite adaptés au contexte québécois et intégré dans une formation interprofessionnelle.

Ce projet vise à améliorer l’engagement des ainé.es qui reçoivent du SAD dans les décisions en santé. Ceci contribuera à améliorer leurs expériences de soins et leurs issues de santé, et favorisera leur autonomisation. Il contribuera à l’équité en favorisant l’engagement de cette population dans les décisions en santé, puisqu’il a été démontré qu’elle était celle qui était le moins exposée à la PDP. Enfin, il contribuera au bien-être des équipes cliniques et à l’amélioration de l’efficience du système de santé.

Quelle a été l’approche adoptée?

Nous avons complété une revue systématique qui a identifié 33 outils d’aide à la décision spécifiques au SAD. Avec un comité de pilotage (aîné.es, proches, professionnel.les de la santé, et décideur.ses avec expertise en soutien à domicile), nous avons procédé à un vote et retenu 10 outils en fonction de l’importance de la décision visée. Nous avons réalisé une enquête en ligne (eDelphi) auprès de 42 participant.es (aîné.es, proches aidant.es, professionnel.les, gestionnaires, expert.es en outils) dans la province de Québec afin de prioriser au maximum 3 des 10 outils précédemment sélectionnés. Nous utiliserons ensuite des méthodes centrées sur l’utilisateur.trice afin d’adapter les outils jugés prioritaires au contexte québécois et développer une formation interprofessionnelle en partenariat avec le comité de pilotage.

Quelles sont les principales conclusions de la recherche?

Depuis le début du projet, toutes les parties prenantes se sont engagées et demeurent enthousiastes à y contribuer. Les 10 outils qui ont été sélectionnés par le comité de pilotage concernent les décisions suivantes : milieu de vie (maintenir l’indépendance dans les activités quotidiennes; arrêter ou non la conduite automobile), gestion des conditions de santé (malnutrition; options pour nourrir les personnes atteintes de démence; options de soins pour la dépression), soins de fin de vie (arrêter ou non les traitement qui maintiennent en vie), soutien aux proches aidant.es (substitut pour prendre les décisions pour une personne en perte d’autonomie; options pour soutenir les proches aidant.es) et soutien aux aîné.es avec troubles de mémoire (maintenir les capacités mentales; options pour assurer la qualité de vie et le confort). Nous avons complété le 1er tour de l’enquête dans lequel nous demandions aux participant.es de prioriser les outils selon des critères relatifs au point de décision (fréquence, difficulté, valeurs et préférences) et à l’outil (mise à jour des évidences scientifiques). 42 participant.es ont complété le questionnaire : aîné.es (14,3%), proches aidant.es (28.5%), professionnel.les (31.0%), gestionnaires (16,7%), membres d’organismes communautaires (4,8%) et expert.es en outils (4,8%). La majorité sont des femmes (85,7 %), âgées de 35 à 54 ans (50,0 %), résidant en ville (53,7 %) et ont des études universitaires (42,9 %). Les deux critères les plus souvent identifiés comme étant important par les participant.es sont la difficulté de la décision et les valeurs et préférences. Après le 1er tour, 6 outils ont été sélectionnés et inclus pour le 2e tour. Les participants devront prioriser ces outils selon les mêmes critères que pour le 1er tour. Enfin, le protocole de la recherche a été publié : https://pubmed.ncbi.nlm.nih.gov/37889512/.

Ce projet fournira des outils pertinents et adaptés aux aîné.es qui font face à des décisions difficiles et à leurs équipes de soins au Québec. Les résultats pourront être utilisés par un ensemble diversifié de parties prenantes : aîné.es recevant du SAD, proches aidant.es, professionnel.les de la santé, gestionnaires, représentant.es d’organismes communautaires et décideur.ses des politiques publiques.

PROCHAINES ÉTAPES – Implications pour la politique et la pratique

Les prochaines étapes seront d'analyser les résultats du 2^{e} tour de l'enquête en ligne auprès d'aîné.es, proches aidant.es, professionnel.les de la santé, gestionnaires et expert.es en outils afin de sélectionner jusqu'à 3 outils qui seront adaptés au contexte du Québec. Cette adaptation se fera en utilisant des méthodes centrées sur l'utilisateur.trices notamment en révisant les évidences scientifiques et les options disponibles pour les points de décision identifiés. Finalement, ces outils seront intégrés dans une formation interprofessionnelle de la PDP.

Une fois ces étapes terminées, les outils et la formation seront dans un premier temps rendus disponibles aux équipes de soutien à domicile de deux organisations de santé avec lesquelles nous avons un partenariat dans le cadre de ce projet. Ce projet permettra de soutenir les aîné.es recevant du soutien à domicile et leurs proches pour prendre des décisions éclairées en ce qui concerne leur santé, contribuant ainsi à améliorer leurs expériences de soins et leurs issues de santé. Il pourra aussi doter les professionnel.les de la santé et les organisations de santé d'outils pour mieux répondre aux différents besoins des usager.es qui reçoivent du SAD, et ainsi améliorer la prestation de soins et services dans ce contexte.

Ensuite, il est envisagé que nous puissions proposer une seconde étape de mise à l'échelle des outils au sein de l'ensemble du système de santé québécois afin de rejoindre les aîné.es de toutes les régions. Les responsables des politiques publiques (Ministère), de même que les équipes cliniques qui offrent du SAD, sont engagé.es et déterminé.es à soutenir l'autonomisation des aîné.es en contexte de SAD. Cette recherche est une preuve de concept qui permettra de démontrer qu'il y a un appétit qui demeure pour développer des outils afin d'engager les usager.es dans les décisions en santé et ainsi favoriser leur autonomisation. Ce projet aura également permis de fédérer les forces vives afin de développer d'autres outils qui seront nécessaires dans le contexte de SAD. Enfin, la méthodologie utilisée dans ce projet pourra servir de preuve de concept pour réaliser des démarches similaires auprès de populations différentes.

RÉSULTATS ET PRODUITS (facultatif)

Résultat 1 : Développement de nouvelles collaborations et partenariats avec des organisations qui offrent du SAD aux aîné.es et proches aidant.es.
Résultat 2 : Liste des outils d'aide à la décision jugés prioritaires, dont trois outils adaptés pour le Québec
Résultat 3 : Renforcement des capacités (formation de la relève et des professionnel.les)